

## Fraud Prevention System with Whistleblowing System in Health Services: A Systematic Review

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**Abstract:** The objective of this study is to ascertain the strategies employed in mitigating fraudulent activities within the realm of health services through the utilization of a whistleblowing mechanism. Methods: The present study employed a systematic review approach to examine relevant literature by utilizing specific keywords such as "whistleblowing system" and "fraud Healthcare." These keywords were then used to search for publications in the Scopus database, focusing on journals that mostly relied on secondary data. The search was conducted using the publish or perish tool. 8. Subsequently, a curation of scholarly publications and articles was conducted, employing a criterion centered on the thematic relevance of their titles. The selected publications have the objective of mitigating fraudulent activities within the healthcare industry and other interconnected industries that contribute to research endeavors. The findings of this study suggest that the implementation of a fraud reporting system is vital inside an organization, particularly within the context of health services. To enhance the caliber of healthcare services, internal healthcare staff and participants may report well, it is imperative to establish a system that ensures the preservation of reporter confidentiality, hence facilitating an increase in the volume of reports.

**Keywords:** fraud; whistleblowing; Health Service; Bibliography.

### INTRODUCTION

Efficient and effective health services are expected in a health insurance system, but there are challenges with fraud that can increase the cost of health services (Sunarti et al., 2020). An efficient healthcare system requires the development of effective ways to detect fraud (van Capelleveen et al., 2016). According to the findings of the 2018-2019 audit conducted by the BPKP (Financial and Development Supervisory Agency), instances of fraudulent activities have been identified within the JKN (National Health Insurance) program, specifically regarding health services. Unfortunately, the JKN programs also suffer from service concerns. Participation, service quality, out-of-pocket drug availability, and fraud are difficulties. ICW's (Indonesia Corruption Watch) monitoring of JKN

services in 2017, 2018, and 2019 discovered 49 possible frauds by participants, BPJS, healthcare professionals, and medicine and health device suppliers. Hospitals, BPJS, and participants committed fraud, according to the BPKP audit reported to the legislative. BPJS received recommendations on health services claim participation, fee collection, and fraud prevention. Also recommended are cleaning up troublesome participant data and upgrading participation data.

Patients' needless medical payments cost BPJS Rp.10 trillion annually, according to KPK. Hundreds of hospitals commit fraud by paying higher classes, costing the BPJS Rp. 6 trillion. The BPJS currently has 221 million participants, making the total impressive. BPJS Health Management's report is excellent given the fraud's high loss rate. BPJS saved the state Rp.10,5 trillion in 2019. State funds saved from improper claims are its worth. adopting digital governance and transparency measures, BPJS saved Rp.1 trillion in 2019 from possible fraud. The contract between the hospital and BPJS Health employing prices for higher-class hospitals caused Rp.819 billion in inefficient service claim payment. This hospital service claim we record is in 94 hospitals spread over 14 provinces, JKN-KIS policy should be adjusted from goal, rates, benefits, system, fraud prevention, and hospital category. Other claims include Rp.172.18 million for hospitals with missing or replacement physicians. These fraudulent activities include the manipulation of medical actions to inflate service costs, as well as the deliberate misrepresentation of service episodes for services that do not align with medical indications (Djamhari et al., 2020). The data shows that there are opportunities for various stakeholders in fraud. Therefore, a whistleblowing system is needed to reduce the level of fraud in health services (Ciasullo et al., 2017).

The whistleblowing system serves as a formal channel via which individuals can disclose instances of criminal activity that have taken place or are anticipated to occur within their company (Wang & Zhan, 2022). This mechanism is designed to accommodate complaints regarding employees and other individuals involved in the business while ensuring that the whistle-blower is not implicated as a participant in the reported crime (Makowsky & Wang, 2018). Internal auditors are faster in discovering or detecting fraud in entities, management support, and attribute audits (Hamed & Konstantinidis, 2022). It is a widely recognized principle that internal auditors do not typically disclose instances of fraud or corruption. Within the healthcare industry, it is common for nurses to report instances of substandard practice or service delivery when they are detected (Jackson et al., 2014). According to (Abdallah et al., 2016), the incorporation of measures aimed at preventing and detecting fraud serves as an effective means of safeguarding against fraudulent actions.

According to (Othman et al., 2015), whistleblowing systems are regarded as a fundamental strategy for preventing fraud and offer a highly efficient and economical means of controlling fraudulent activities within an organization. The factors encompassed in this category consist of an ethical organizational culture, a heightened level of fraud awareness among staff, vendors, and

customers, an effective internal control framework that facilitates regular vendor evaluations, data mining, and analysis capabilities, as well as internal and external reporting mechanisms such as hotlines, bias, and internal reporting. According to (Abdallah et al., 2016), there is a rising trend in the number of losses, although the frequency of complaints is down.

Extensive studies have been conducted on fraudulent activities within the healthcare sector. This research seeks to enhance existing studies that utilize a violation reporting system to combat healthcare fraud. It does so by conducting a literature review to examine fraud prevention techniques involving a whistle-blower system, which enables the exposure of fraudulent activities in healthcare services. Additionally, the study investigates the consequences faced by whistle-blowers who disclose instances of fraud in healthcare services. This literature review examines the healthcare fraud prevention system, including fraud disclosure procedures, who may expose fraud and fraud exposure experiences in prior studies, and how fraud-detection affects fraud rapporteurs. Fraud prevention can be ensured by implementing policies regarding the review of documents published in different formats and references by the whistleblower system. To provide dependable evidence and practical information for the health care practice and fraud prevention literature, a systematic literature review is therefore essential.

## **METHOD**

This study employed a qualitative method by conducting a systematic review. The systematic review in this study was sourced from the Scopus-indexed journal database using the Publish or Perish 8 tool, this tool simplifies the gathering of bibliographic metadata (except full-text PDF) from scientific literature in many fields. It assists authors in finding, obtaining, and assessing references from research journals, thereby improving their scientific writing process. A comprehensive search was conducted for relevant scholarly material, including journals, articles, and literature reviews, with specific keywords such as "Whistleblowing System" and "Healthcare Fraud data" spanning the period from 2005 to 2022, from the search using the application, a total of 202 articles related to the searched title were found. The process of selecting an article was conducted by pre-established criteria for the article. The inclusion criteria for this study encompass papers that specifically address the topic of fraud prevention in healthcare through the utilization of whistleblowing systems. Additionally, articles that are publicly accessible and have undergone review solely based on their abstracts (rather than full-text review) are considered for inclusion. Out of the assortment of articles, a total of 11 articles were deemed appropriate and pertinent to the present investigation. The flowchart and article selection are depicted using a prism flowchart in Figure 1.

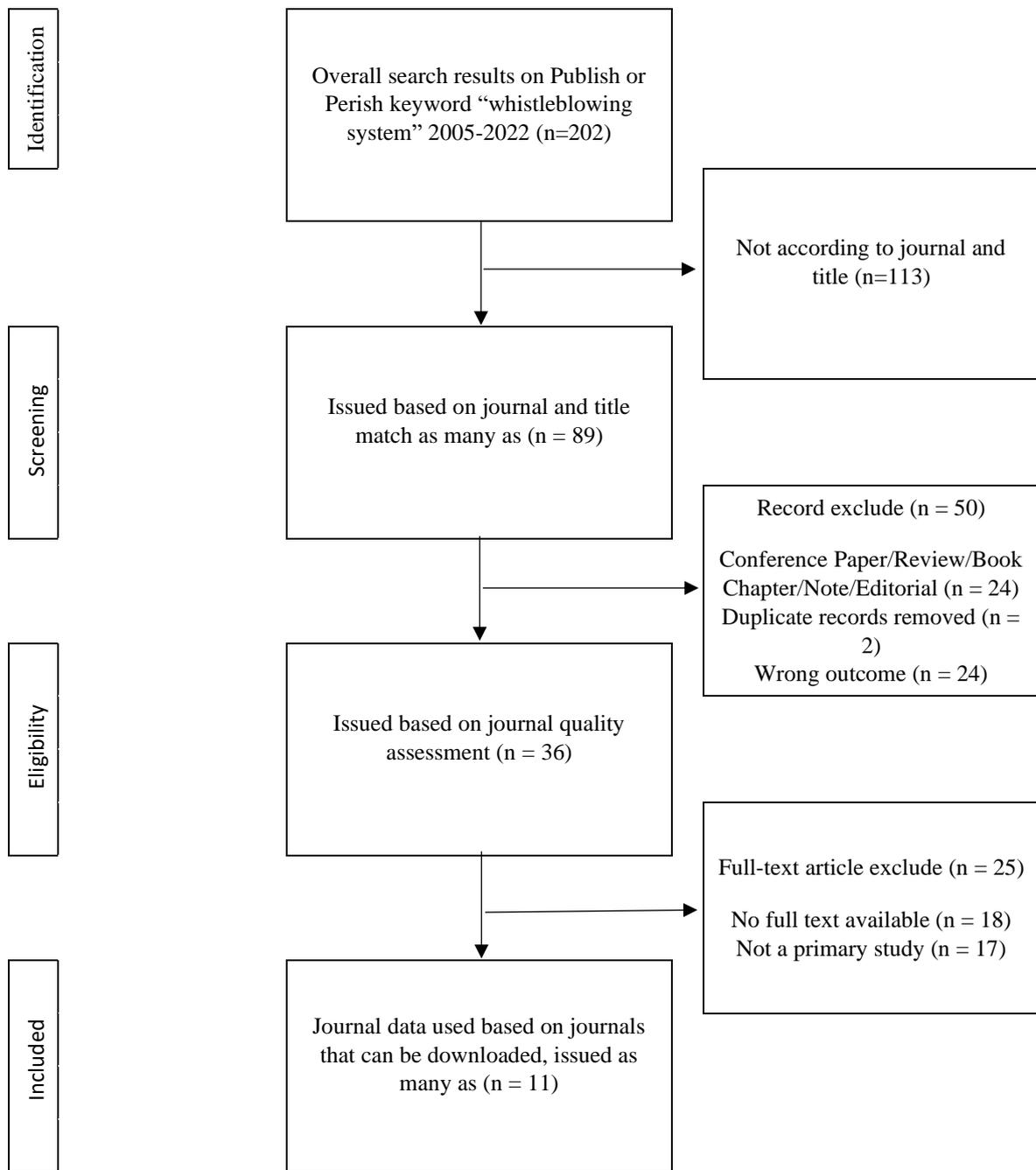


Figure 1 Article Selection Process

## RESULTS

The present literature research reveals that a total of 11 publications have been identified, which delve into the topic of fraud detection in health services and other domains through the utilization of a whistleblowing system. The extracted data from the chosen research is summarized in Table 1.

**Table 1 List of Synthetic Articles**

<b>Researcher</b>	<b>Country</b>	<b>Title</b>	<b>Type of Research</b>	<b>Place of Research</b>	<b>Methods</b>	<b>Findings</b>
(Jackson et al., 2014)	Australia	<i>Whistleblowing: An integrative literature review of data-based studies involving nurses</i>	Qualitative	Hospital	Literature Review	Nurses play a key role in setting standards of practice and reporting unacceptable care, despite its impact on nurses that raises unbearable concerns.
(Mannion & Davies, 2015)	USA	<i>Cultures of Silence and cultures of Voice: The role of whistleblowing in healthcare organizations</i>	Qualitative	Hospital	<i>Systematic Review</i>	The act of whistleblowing is gaining significance within numerous healthcare systems as a method for identifying and addressing concerns related to the quality and safety of care.
(Yung et al., 2016)	Taiwan	<i>Nurses' attitudes and perceived barriers to the reporting of medication administration errors</i>	Quantitative	Hospital	Questionnaire - Nurse	Fear is the main thing that keeps people from reporting, so less of it happens. Managers of nursing homes should set up a way for nurses to report problems anonymously and offer therapy classes to make the workplace safer, lower nurses' fears, and encourage them to report problems.

(Rauwolf & Jones, 2019)	USA	<i>Exploring the utility of internal whistleblowing in healthcare via agent-based models</i>	Quantitative	Hospital	Questionnaire - Nurse	The adverse effects of whistleblowing regarding substandard patient care may be attributed to inefficiencies within the organization.
(Vrbnjak et al., 2016)	Slovenia	<i>Barriers to reporting medication errors and near misses among nurses: A systematic review</i>	Qualitative	Hospital	Systematic Review	It can be hard to report mistakes because of things like organizational culture, reporting systems, and the way managers act, as well as personal issues like fear, responsibility, and the way nurses are naturally wired. To get past problems, you need to create a culture that doesn't punish, doesn't feel bad, and doesn't fear management. Nurses need reporting methods that are anonymous, effective, simple, and quick, and they also need to be able to trust the way managers act. Nurses are in charge of making sure patients are safe, which is why they need to be trained and skilled at handling mistakes.

(Pamungkas et al., 2017)	Indonesia	<i>Determinants of fraudulent financial reporting and whistleblowing system: Applying the theory of planned behavior</i>	Quantitative	State-Owned	Questionnaire - Accounting Manager	As a moderating variable, the whistleblowing system has been shown to diminish the correlation between the intention of managers to commit financial reporting fraud and their actual financial reporting fraud behavior.
(Wahyudi et al., 2019)	Indonesia	<i>Whistleblowing system and fraud early warning system on village fund fraud: The Indonesian experience</i>	Qualitative descriptive research	Village	Interviews - Village officials and community	This research reveals that residents' bravery in their villages is largely responsible for reporting instances of village funds being stolen. One potential approach to mitigating fraudulent activities involves the implementation of a whistleblowing system within the community. This proactive technique aims to deter the misappropriation of village finances by providing opportunities for individuals to report any suspicious activities.
(Wahyudi et al., 2021)	Indonesia	<i>Village apparatus competence, individual morality, internal control system, and whistleblowing system on</i>	Quantitative	Village	Interviews - Village officials	The effectiveness of internal control systems, individual morality, violation reporting systems, and the competency of

		<i>village fund fraud</i>				village officials all contribute to the reduction of financial theft.
(Pamungkas et al., 2017)	Indonesia	<i>The effects of the whistleblowing system on financial statements fraud: Ethical behavior as the mediators</i>	Descriptive research	Student of the Faculty of Economics	Survey - College Students	Recognizing the good influence of the whistleblowing system in deterring instances of financial reporting fraud is deemed appropriate. The assertion that the whistleblowing system exerts a favorable influence on the prevalence of financial fraud by promoting ethical conduct is untenable.
(Mohd Noor & Mansor, 2019)	Malaysia	<i>Exploring the Adaptation of Artificial Intelligence in the Whistleblowing Practice of Internal Auditors in Malaysia</i>	Quantitative	Public sector institutions	Questionnaire - Internal Auditor	The impact of whistleblowing procedures will offer more proof to support internal control procedures and systems, as well as enhance accountability and openness in the public sector.
(Handoko & Amelia, 2021)	Indonesia	<i>Implementation of good corporate governance, internal audit, whistleblowing system for fraud prevention in state-owned enterprise</i>	Quantitative	State-Owned	Annual reports and corporate governance perception index (CGPI)	The implementation of fraud prevention measures is of utmost importance in upholding a favorable corporate culture and cultivating a more robust connection between management efficacy and stakeholder concerns. Additionally, this

mechanism has the potential to enhance internal well-being and contribute to overall business performance.

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## DISCUSSION

### Whistleblowing System in Health Services

The practice of whistleblowing in the healthcare sector exhibits distinct characteristics when compared to its implementation in private enterprises. There exists a divergence of opinion about the extent to which patient care is enhanced when healthcare professionals are empowered, inclined, and adequately supported to report instances of substandard care inside their respective organizations. In a study conducted by (Rauwolf & Jones, 2019), it was found that whistleblowing behavior is adversely affected by the presence of stronger sociocultural workplace dynamics and a heightened sense of loyalty towards colleagues. The reluctance of employees to expose instances of poor practices can frequently be deemed justifiable, given the potential consequences whistleblowers may encounter, including intimidation from colleagues, adverse mental and physiological impacts, and the risk of losing their employment. Nurses demonstrate a notable awareness of the severe repercussions associated with whistleblowing, frequently opting against engaging in such actions due to apprehension regarding potential retaliatory measures and doubts regarding the effectiveness of reporting. The suggestion is that heightened protection will inevitably result in an escalation in whistleblowing activities, subsequently leading to a decrease in substandard practices and yielding advantages for both patient care and employee welfare.

Whistleblowing is a phenomenon that is often subject to stigmatization and concealment, resulting in significant repercussions for all involved parties (Jackson et al., 2014). The act of whistleblowing entails many dangers that can be categorized into three distinct dimensions: professional repercussions, physical and emotional consequences, and effects on the whistleblower's personal life (Jones, 2016). A more comprehensive comprehension of the role of nurses as advocates for patients is necessary. Nurses who engage in whistleblower activities perceive their actions as deviating from their professional nursing responsibilities. Protection strategies refer to the measures implemented by governing bodies to address whistleblower concerns. The fraud reporting strategy for participants and internal employees associated with health care using JKN allows for both offline and online reporting. Offline channels include direct complaints to the complaint center, while online channels include reporting through a website, email, WhatsApp, or SMS. In both cases, evidence of fraud, as well as detailed information and the identity of the reporter, are kept

confidential by the fraud complainant management. These strategies typically entail the establishment of criteria for whistleblowers to substantiate the veracity of their claims, ensuring that the information provided is done so in good faith. Additionally, protection plans encompass safeguards aimed at preserving the anonymity of whistleblowers and shielding them from any acts of reprisal.

The efficacy of the whistleblowing system's deployment is evidenced by the quantity of fraud detected and the expedited duration for prosecuting fraud allegations. According to (Handoko & Amelia, 2021), the primary purpose of the whistleblowing system is to identify instances of fraudulent activity, particularly those that involve breaches of the code of ethics, corrupt practices, asset transfers, and financial misstatements. Ombudsman RI received 700 complaints concerning the 2021–2022 JKN program. Inconsistent behaviors, discrimination, disregard of legal responsibilities, procedural irregularities, and transparency of public information were found by the Ombudsman. Citizens continue to grumble, as shown in the press and social media. Discrimination, denial of health treatment, and ransoming of prescribed drugs outside the hospital are among the allegations. The many complaints and fraud results are identical. Attend the hospital but do not comply. Some Base data difficulties include misreading, upcoding, duplicate claims, dead participant claims, and non-active participant claims. Other examples include his SOP and code. Also frequently from the code side. Greater attention should be allocated to the reporting of wrongdoing and its possible benefits, as this aids in the acquisition of crucial information necessary for the development of an efficient system. The presence of an anonymous reporting system has been identified as a significant determinant in shaping the inclination of whistleblowers to engage with the whistleblowing mechanism (Vrbnjak et al., 2016). The findings of this study suggest that the implementation of a fraud reporting system is vital inside an organization, particularly within the context of health services.

## **CONCLUSION**

The Health Insurance Organization (BPJS Health) is often discussed. From the rise in BPJS costs to the large number of delays to the ongoing National Health Insurance (JKN) issues, the peace started. JKN program fraud audits most often include using other members' identities, misdiagnosing diseases, and upgrading inadequate healthcare facilities to get huge claims. JKN provides comprehensive, fair, and equitable health insurance as a state program. JKN has improved health care access, particularly for the poor.

The prevention of potential fraudulent activities can be achieved by adhering to key values such as transparency, fairness, accountability, responsiveness, internal control, external control, and independence. Enhancing both internal and external oversight mechanisms for health service

providers is recommended in order to mitigate the risk of potential fraudulent activities. The audit committee consistently oversees the internal and external control mechanisms. The present study focuses on the practical execution of measures aimed at preventing, detecting, and resolving instances of fraudulent activities. This encompasses the establishment and operation of a whistleblowing system, which serves as a channel for the public to report concerns related to fraudulent behavior. Additionally, the study examines the subsequent actions taken in response to these complaints. One effective internal control mechanism for mitigating fraud within a health service is the establishment of a violation reporting system. By implementing such a system, employees and other relevant parties who may be inclined to engage in fraudulent activities are likely to have a heightened sense of reluctance due to the presence of an efficient and comprehensive fraud reporting mechanism. The whistleblowing system serves as a framework that enables employees and other individuals to effectively disclose indications of fraudulent activities.

Fraud resolution in the JKN program is difficult and collaborative. Implementing suggestions or enhancing inter-agency collaboration may help governments perform their best. Start other improvements by improving awareness and knowledge of National Health Insurance fraud. Stop allowing corruption in Indonesia and lead change. To avoid fraud files from filing with the KPK, the Minister's follow-up must be regulated, especially against punishments. Fraud or a proclivity to fraud has been recognized in-depth and effectively. Strengthen standard operating procedures and internal monitoring to avoid fraud and limit system misuse. Health institutions, particularly sophisticated ones, and non-compliant participants do that. For fraud prevention, BPJS Health is designing an early detection system. The fraud prevention mechanism is organized and thorough. The system includes fraud prevention, detection, and handling. BPJS Health additionally develops information technology tools to prevent and identify fraud, forms a use management and Anti-Fraud working unit, and forms a branch-wide Fraud Prevention Team.

## REFERENCES

- Abdallah, A., Maarof, M. A., & Zainal, A. (2016). Fraud detection system: A survey. *Journal of Network and Computer Applications*, 68, 90–113. <https://doi.org/10.1016/j.jnca.2016.04.007>
- Ciasullo, M. V., Cosimato, S., & Palumbo, R. (2017). Improving health care quality: The implementation of whistleblowing. *TQM Journal*, 29(1), 167–183. <https://doi.org/10.1108/TQM-06-2016-0051>
- Djamhari, E. A., Aidha, C. N., Ramdlaningrum, H., Kurniawan, D. W., Fanggidae, S. J., Herawati, Ningrum, D. R., Thaariq, R. M., Kartika', W., & Chrisnahutama, A. (2020). Defisit Jaminan Kesehatan Nasional ( JKN ): Mengapa dan Bagaimana Mengatasinya ? *Cetakan 1*, 67–68.

- Hamed, M. M. M., & Konstantinidis, S. (2022). Barriers to Incident Reporting among Nurses: A Qualitative Systematic Review. In *Western Journal of Nursing Research* (Vol. 44, Issue 5, pp. 506–523). SAGE Publications Inc. <https://doi.org/10.1177/0193945921999449>
- Handoko, B. L., & Amelia, R. (2021). Implementation of good corporate governance, internal audit, whistle-blowing system for fraud prevention in state-owned enterprise. *ACM International Conference Proceeding Series*, 305–310. <https://doi.org/10.1145/3481127.3481144>
- Jackson, D., Hickman, L. D., Hutchinson, M., Andrew, S., Smith, J., Potgieter, I., Cleary, M., & Peters, K. (2014). Whistleblowing: An integrative literature review of data-based studies involving nurses. *Contemporary Nurse*, 48(2), 240–252. <https://doi.org/10.1080/10376178.2014.11081946>
- Jones, A. (2016). The role of employee whistleblowing and raising concerns in an organizational learning culture – Elusive and laudable? Comment on “Cultures of silence and cultures of voice: The role of whistleblowing in healthcare organisations.” *International Journal of Health Policy and Management*, 5(1), 67–69. <https://doi.org/10.15171/ijhpm.2015.182>
- Makowsky, M. D., & Wang, S. (2018). Embezzlement, whistleblowing, and organizational architecture: An experimental investigation. *Journal of Economic Behavior and Organization*, 147, 58–75. <https://doi.org/10.1016/j.jebo.2017.12.024>
- Mannion, R., & Davies, H. T. (2015). Cultures of silence and cultures of voice: The role of whistleblowing in healthcare organisations. *International Journal of Health Policy and Management*, 4(8), 503–505. <https://doi.org/10.15171/ijhpm.2015.120>
- Mohd Noor, N. R. A., & Mansor, N. (2019). Exploring the Adaptation of Artificial Intelligence in Whistleblowing Practice of the Internal Auditors in Malaysia. *Procedia Computer Science*, 163, 434–439. <https://doi.org/10.1016/j.procs.2019.12.126>
- Othman, R., Aris, N. A., Mardiyah, A., Zainan, N., & Amin, N. M. (2015). Fraud Detection and Prevention Methods in the Malaysian Public Sector: Accountants’ and Internal Auditors’ Perceptions. *Procedia Economics and Finance*, 28(April), 59–67. [https://doi.org/10.1016/s2212-5671\(15\)01082-5](https://doi.org/10.1016/s2212-5671(15)01082-5)
- Pamungkas, I. D., Ghozali, I., & Achmad, T. (2017). The effects of the whistleblowing system on financial statements fraud: Ethical behavior as the mediators. *International Journal of Civil Engineering and Technology*, 8(10), 1592–1598.
- Rauwolf, P., & Jones, A. (2019). Exploring the utility of internal whistleblowing in healthcare via agent-based models. *BMJ Open*, 9(1), 1–12. <https://doi.org/10.1136/bmjopen-2018-021705>
- Sunarti, S., Ghozali, M. T., Haris, F., Rahman, F. F., Rahman, R. A., & Ghozali. (2020). Preventing fraud and deficit through the optimization of health insurance in Indonesia. *Systematic Reviews in Pharmacy*, 11(7), 228–231. <https://doi.org/10.31838/srp.2020.7.36>
- van Capelleveen, G., Poel, M., Mueller, R. M., Thornton, D., & van Hillegersberg, J. (2016). Outlier detection in healthcare fraud: A case study in the Medicaid dental domain. *International*

*Journal of Accounting Information Systems*, 21, 18–31.  
<https://doi.org/10.1016/j.accinf.2016.04.001>

Vrbnjak, D., Denieffe, S., O’Gorman, C., & Pajnkihar, M. (2016). Barriers to reporting medication errors and near misses among nurses: A systematic review. In *International Journal of Nursing Studies* (Vol. 63, pp. 162–178). Elsevier Ltd. <https://doi.org/10.1016/j.ijnurstu.2016.08.019>

Wahyudi, S., Achmad, T., & Pamungkas, I. D. (2019). Whistleblowing system and fraud early warning system on village fund fraud: The Indonesian experience. *International Journal of Financial Research*, 10(6), 211–217. <https://doi.org/10.5430/ijfr.v10n6p211>

Wahyudi, S., Achmad, T., & Pamungkas, I. D. (2021). Village apparatus competence, individual morality, internal control system and whistleblowing system on village fund fraud. *WSEAS Transactions on Environment and Development*, 17(6), 672–684. <https://doi.org/10.37394/232015.2021.17.65>

Wang, D., & Zhan, C. (2022). Why Not Blow the Whistle on Health Care Insurance Fraud? Evidence from Jiangsu Province, China. *Risk Management and Healthcare Policy*, 15, 1897–1915. <https://doi.org/10.2147/RMHP.S379300>

Yung, H. P., Yu, S., Chu, C., Hou, I. C., & Tang, F. I. (2016). Nurses’ attitudes and perceived barriers to the reporting of medication administration errors. *Journal of Nursing Management*, 24(5), 580–588. <https://doi.org/10.1111/jonm.12360>