



Journal of Nursing

Revista de Enfermagem

UFPE On Line

ISSN: 1981-8963

REFLECTIVE ANALYSIS ARTICLE

CONTRIBUTION OF JAMES REASON TO PATIENT SAFETY: REFLECTION FOR NURSING PRACTICE

CONTRIBUIÇÃO DE JAMES REASON PARA A SEGURANÇA DO PACIENTE: REFLEXÃO PARA A PRÁTICA DE ENFERMAGEM

CONTRIBUCIÓN DE JAMES REASON A LA SEGURIDAD DEL PACIENTE: REFLEXIÓN PARA LA PRÁCTICA DE ENFERMERÍA

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ABSTRACT

Objective: to reflect on the contributions of James Reason to patient safety culture and its implications in the development of a safe nursing care. **Method:** descriptive study, reflective analysis-type, approaching the reading of works of Reason and other experts in the field in order to support the reflection. **Results:** patient safety culture has been progressively established as a subject of general interest in the area of health. When approaching the topic, the model proposed by James Reason is often referred to and widely accepted by professionals in the field. Mistakes observed in the systems approach must be seen as consequences rather than causes, since they originate not in human nature, but in systemic factors. **Final remarks:** achieving a safe nursing care requires an alliance between professionals and managers, and it should be treated not as an option but as a need. **Descriptors:** Safety; Safety Management; Risk Control; Nursing.

RESUMO

Objetivo: refletir sobre as contribuições de James Reason para a cultura da segurança do paciente e suas implicações na construção de um cuidado seguro em enfermagem. **Método:** estudo descritivo, tipo análise reflexiva, no qual se procedeu a leitura de obras de Reason, além de outros especialistas no assunto, para fundamentar a reflexão. **Resultados:** a cultura da segurança do paciente vem se constituindo progressivamente em um assunto de interesse geral na área da saúde. Ao falar no tema, o modelo proposto por James Reason é frequentemente referido e amplamente aceito pelos profissionais da área. Ao visualizar o erro na abordagem do sistema, esses devem ser vistos como consequências e não causas, tendo sua origem não tanto na natureza humana, mas sim em fatores sistêmicos. **Considerações finais:** o alcance de um cuidado seguro em Enfermagem requer uma aliança entre profissionais e gestores, devendo ser tratado não como uma opção, mas como uma necessidade. **Descritores:** Segurança; Gerenciamento de Segurança; Controle de Risco; Enfermagem.

RESUMEN

Objetivo: reflexionar sobre las contribuciones de James Reason a la cultura de la seguridad del paciente y sus implicancias para construir un cuidado seguro en enfermería. **Método:** estudio descriptivo, tipo análisis reflexivo, en el que se procedió a la lectura de obras de Reason, además de otros especialistas en la temática, para fundamentar la reflexión. **Resultados:** la cultura de la seguridad del paciente viene constituyéndose progresivamente en asunto de interés general del área de salud. Al hablarse del tema, el modelo propuesto por James Reason es referenciado frecuentemente y ampliamente aceptado por los profesionales del área. Al percibirse errores de abordaje del sistema, los mismos deben verse como consecuencias, no como causas, originados no sólo en la naturaleza humana, sino también en factores sistémicos. **Consideraciones finales:** el alcance de un cuidado seguro en Enfermería requiere de una alianza entre profesionales y gestores, debiéndoselo tratar no como opción, sino como necesidad. **Descriptores:** Seguridad; Administración de la Seguridad; Control de Riesgo; Enfermería.

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INTRODUCTION

The individual willingness and commitment to do good and to use the best available knowledge are essential care factors; however, they are not sufficient to ensure safe and efficient care today.¹ Thus, patient safety culture has been progressively becoming a subject of general interest in the healthcare area.²

Health professionals, in turn, aim to provide the best possible care. However, such behavior does not prevent failures and accidents from occurring during the care provided.¹ Recently, failures associated with care have been considered as unavoidable responses to modern medicine or even a misfortune caused by poor providers of these services.³ These ideas begun to change after 1999, through the publication of the report "To Err Is Human" (Kohn, Corrigan, & Donaldson, 1999) by the Institute of Medicine (IOM), which estimated that between 44,000 and 98,000 Americans die annually due to health care errors.⁴ The high number aroused great attention from the media and the population towards the issue of patient safety.^{1,3}

Patient safety may be defined as the reduction and mitigation of unsafe acts within the health care system, as well as the use of best practices aiming to achieve optimal results for the patient.⁵ Patient safety is focused not only on health care that is free of damage, but that is also conducted at the right moment, in an impartial and efficient manner, based on the best scientific information and on the integral and individual needs of both patients and their families.⁶

Unlike what occurs in other areas, such as aviation and nuclear energy generation, errors in health care specifically affect individuals in an isolated manner and in a wide variety of health care institutions, and are rarely openly discussed.⁷ Thus, it is necessary to discuss how errors occur so that efficient ways to avoid them may be implemented in order to make the care safer.

When talking about patient safety, the model proposed by James Reason is often referred to and widely accepted by professionals in the field.⁸ Reason was a professor of psychology at the University of Manchester from 1977 to 2001, where he graduated in 1962, obtaining a Ph.D. in 1967. His main research interest was the human and organizational factors that contribute to the breakdown of complex, well-defended systems. He has written about distraction,

human error, human factors in aviation, management of organizational accidents risks and, more recently, about the management of errors in maintenance operations. His work is referred to in airfields, railways, nuclear energy generation, maritime security, oil and gas exploration and production, mining, chemical industry, road safety, banking, and health care. In 2002, he received acknowledgment from the University of Aberdeen for his contributions to patient safety.⁹

His global importance with regard to patient safety raises two questions: What are the contributions of James Reason to patient safety? How can such contributions influence nursing care?

In this context, this study aims to reflect on the contributions of James Reason to the patient safety culture and its implications for the development of a safe nursing care.

METHODS

A descriptive study methodology using reflective analysis of a reading of two of the main works of the author: *Human Error* (1990), and *Human Contribution: unsafe acts, accidents and heroic recoveries* (2008), as well as a search of scientific articles produced by Reason, available in electronic databases, and correlating with other authors in the area.

RESULTS

• Human error: defining concepts

When addressing patient safety, a number of terms are used, often in a wrong, indiscriminate, and even confusing way. Therefore, it is necessary to be aware of what the authors present as their definitions.

Error may be defined as "failure of the actions planned to achieve the intended objective."^{11,57} There are two ways in which the error may occur: 1) execution failure, in which the plan is appropriate but the planned actions do not occur as expected. These are called lapses or slips; and 2) intent failure, where the actions occur according to the plan but the plan was not appropriate to achieve the intended objective.⁹⁻¹²

These errors, irrespective of the type, involve a type of deviation. In the cases of slips and lapses, the failure occurs at the execution level, and is usually due to distractions and concerns during the automatic execution of a routine task. In the second case, the failure is at a higher level, related to the mental processes involved in the problem solving, judgment, and planning.^{9,11-3}

In turn, violations are deviations in the safe operational practices, procedures, standards, or rules. They differ from errors in that they result mainly from informational problems (omission, negligence, incomplete knowledge) and occur in an individual manner, while violations are usually more associated with motivational problems (low morale, poor supervision, lack of concern, penalties applied for noncompliance) and occur in a general context.^{9,11-3}

Failures may be divided into active and latent. The former are considered unsafe acts (errors and violations) committed by those who are at the “sharp end” of the system, whose actions may have immediate adverse consequences (such as anesthetists, surgeons, nurses). The latter result from decisions made at the higher levels of the organization. Their harmful consequences may remain latent for a long period of time, becoming evident only when they are combined with triggering active failures and local factors to violate the defense system. In the health care service, active failures are usually committed by those who are in direct contact with the patient, while latent failures occur within the organization and management spheres.^{9,11-13}

Such concepts explain how complex the questions involving errors can be. Each type of failure committed has intrinsic causes and explanations. Thus, specific barriers to each one of them must be used, as one barrier that minimizes the occurrence of lapses is probably not efficient in the reduction of the occurrence of a violation, for example.

Questions regarding the penalties applied in the event of an error may also be raised by the concepts under discussion. An individual who commits an undesirable act is usually punished for its consequences, regardless of the type of error and the factors involved in its essence. Active and latent failures represent another point that should be discussed, since usually the former are more frequent and, consequently, those who commit them suffer more severe and immediate penalties. In practice, people at the higher levels of management and of the organization of the health care sector are hardly punished for their violations.

● “The Swiss cheese model”

The human error problem can be seen in two ways, from the perspective of the person and from the perspective of the system. The former is an ancient and generalized idea based on unsafe acts (procedural violations and errors) of nurses, doctors, surgeons, anesthetists, pharmacists, and so on. Such an

approach considers these unsafe acts to be the result of aberrant mental processes, such as lack of attention, negligence, poor motivation, and imprudence. Its supporters tend to consider the errors as a moral issue. Naturally, the associated countermeasures are mainly driven towards the reduction of the undesired variability in the human behavior.¹²⁻¹³

In the systems approach, according to the same author, the basic premise is that human beings are fallible and that errors may occur even in the best organizations. Errors are seen as consequences instead of causes; they do not originate in human nature but in systemic factors. In this case, countermeasures are based on the assumption that although we cannot change the human condition, we can change the conditions under which human beings work. The central idea is the defense of the system, because all attempted technologies present barriers and safeguards. When an adverse event occurs, the important question is not who committed the error, but how and why the defense failed.¹²⁻¹³

The model proposed by Reason has endured for more than two decades. Still, the association of the occurrence of an error with the responsibility of an individual remains the prevailing culture. Initially the feeling of guilt arises in the person who committed the undesired act, and the person faced possible penalties. Subsequently, managers need to determine who is guilty for such errors in order to apply the penalties deemed reasonable. Thus, the current context of health care and nursing safety is still based on preventing errors in order to avoid personally suffering its consequences, rather than aiming to deliver damage-free care to the client.

Defenses, barriers, and safeguards have a key position in the systems approach. High-technology systems have many defensive layers: some are engineered (such as alarms, physical barriers, automatic shutdowns), others rely on people (such as surgeons, anesthetists, pilots, control room operators), and others depend on administrative controls and procedures. Their function is to protect potential victims from local hazards. They are generally efficient, but there are always weaknesses.

Ideally, each defensive layer should be intact. In reality, however, they are more like slices of Swiss cheese, having many holes—though unlike in the cheese, these holes are continuously opening, closing, and changing their locations. The presence of holes in any slice usually does not cause a bad result. An

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undesirable result may only happen when these holes occur in many layers and remain momentarily lined up, giving a trajectory of accident opportunity, bringing risks into harmful contact with victims. The holes in the defense arise due to the active and latent failures previously mentioned.¹²⁻¹³

Holes in health care will always exist. Therefore, it is necessary to seek ways to prevent these holes from coinciding and affecting the client. Nursing, which is at the "sharp end" of the system, in direct contact with the patient, should entail a special attention, as its holes can reach the cared individual more quickly and with greater impact.

Thinking of the defensive barriers as Swiss chess slices may be an alternative to facilitate an understanding of the problems involving human error, but it may also reduce the complexity involved. It is necessary to be particularly cautious when adopting such concepts in the search for patient safety, observing the fact that all professionals involved in the process have similar understandings of the questions and can use defensive barriers in an efficient and impartial manner, minimizing the conjunction of the holes.

● **Error management and safe care**

Just like "health," the understanding of the word "safety" is unbalanced. We know much more about its momentary absence than about its enduring presence. It is better to describe, understand, and quantify the occasional deviations in this status as materially expressed through accidents, injuries, losses, and incidents than to try to explain what "being safe" means.⁸

In recent decades, researchers into human factors have been concerned about the development of tools for the management of unsafe acts. Error management has two components: limitation of the incidence of hazardous errors—which will never be fully efficient—and the creation of systems that are better able to tolerate the occurrence of errors and contain their harmful effects. While the supporters of the "person approach" direct most of their resource management into ensuring that individuals are less unreliable or wayward, the supporters of the systems approach strive for a comprehensive management program intended to address several different targets: the person, the team, the task, the workplace, and the institution. A system that intrinsically has "safe delivery of health" as a

goal is able to withstand operational dangers and yet still achieve its objectives.¹³

Making nursing care safer should be seen not only as an option, but as a necessity. By adopting an error management based on the person approach, health organizations contribute to the underreporting of errors and/or adverse events, because professionals who have committed such errors will attempt to suppress it for fear of retaliation and punishment. Adopting the systems approach primarily means admitting that all human beings, by nature and without any exception, are subject to errors. From this idea, actions to make health care safe should be driven towards changes in the work system of these professionals, since the fallible nature of the human being cannot be changed. Thus, it is necessary that health managers become aware of such ideas and realize that this change must begin from them.

Professionals are not exempt from liability in the search for safety. In an increasingly complex and dynamic environment, nursing professionals should also continuously seek out technical-scientific knowledge that supports the decision making process in their practice so that they can provide damage-free care.

We must also emphasize that one of the problems that threatens safety and hinders the achievement of the desired results in health care is related to the constant operational failures of systems, which divert the actions of nurses attempting to momentarily fix such difficulties, and prevent them from practicing the kind of nursing that they learned and apply to patients and their families. Nurses have not been able to consistently concentrate their actions on attention to the individuality and integrity of the human being, factors that distinguish nursing and make it unique compared to other professions within the area of health. This situation may result in loss of identity and professional status, because it is not possible to establish a therapeutic relationship with the client and complete the several actions designed to meet their needs and preferences.¹⁴

FINAL REMARKS

The contributions of James Reason to patient safety are undeniable, considering that from the disclosure of his concepts and models the discussion about error and human behavior began to take a new direction. The existence of fear when admitting that human beings are fallible should not be necessary.

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This is the first step in the search for a safe standard of care. In nursing, due to the hierarchical division in its work process, this ancient culture of fear may take on larger proportions.

Due to the extent and complexity of his work, this study did not aimed to exhaust Reason's ideas, but when reflecting upon his thoughts, we made note of the theme that the implementation of safe care requires changes in ancient universal concepts. By stating that even the best people may commit the worst errors, Reason withdraws a significant part of the liability for safe care away from the individual and places it in the spheres of the organization and management of health systems.

There is no way to change the fallible nature of human beings, but it is possible to change their workplace so that errors are avoided. Technological innovations such as computerized medication systems, electronic medical records, and reports of errors and/or adverse events, as well as traditional issues of nursing such as reduction of working hours and approval of the wage floor, are efficient ways to avoid both active and latent failures.

Achieving safe care in nursing requires an alliance between professionals and managers. It is necessary that both are committed to the purpose and aware of their share of liability in this process. Therefore, research on how managers and professionals see their own importance in the search of patient safety is necessary.

The questions involving patient safety that have emerged in recent decades tend to solidify more and more, becoming a constant concern in the health sector, and consequently generating concerns in researchers in the area. Studying how human error occurs in order to prevent it is essential; however, it is also necessary to observe that the concept of safety should not simply be associated with the non-occurrence of error. It must involve a broader social context, evoking discussions about the human being in a global manner.

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<http://www.scielo.br/pdf/ape/v22n4/a01v22n4.pdf>.

Submission: 2013/03/06

Accepted: 2014/05/31

Publishing: 2014/07/15

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