

FEELINGS EXPERIENCED BY NURSING TEAMS AFTER THE OCCURRENCE OF MEDICATION ERRORS

Cibele Leite Siqueira¹, Kemilys Marine Ferreira², Thamyres Caproni de Souza³, Liliane Bauer Feldman⁴

ABSTRACT: The present study aimed to identify the feelings experienced by nursing teams regarding medication errors and the strategies used to prevent them. Exploratory and descriptive study carried out in a hospital in Minas Gerais, Brazil, in 2014. Data was collected through semi-structured interviews. Semi-structured interviews were conducted with the eleven participants. Four categories emerged from thematic analysis: 1) inadequate conceptualization of error, 2) negative feelings associated to the error, 3) Nurses' responses to medication errors; and 4) strategies for preventing medication errors. Inability to define error was observed; perception of a feeling of fear not related to punishment; the existence of skills/competences, responsibility and communication in response to error, and the use of barriers and strategies recommended for the prevention of errors. The implementation of continuous awareness of safety as a strategy to improve learning, disseminate assertive behaviors of the professionals and promote actions to mitigate the feelings of those involved in medication errors is suggested.

DESCRIPTORS: Emotions; Medication errors; Safety management; Nursing care; Patient safety.

SENTIMENTOS EXPERIMENTADOS POR EQUIPES DE ENFERMAGEM ACERCA DOS ERROS DE MEDICAÇÃO

RESUMO: O objetivo foi conhecer os sentimentos experimentados por equipes de enfermagem acerca dos erros de medicação e quais estratégias utilizadas pelos profissionais para preveni-los. O estudo foi exploratório qualitativo, realizado num hospital em Minas Gerais, Brasil, em 2014. Participaram onze profissionais de enfermagem que responderam entrevista por meio do instrumento semiestruturado. No resultado da análise temática emergiram quatro categorias: 1) deficiência na conceituação do erro, 2) sentimentos negativos associados ao erro, 3) condutas adotadas perante erro de medicação, e 4) estratégias de prevenção contra os erros de medicação. Constatou-se fragilidade na conceituação do erro; a percepção do sentimento de medo não relacionado à punição; a presença das competências, de responsabilidade e de comunicação usadas frente ao erro e a aplicação de barreiras e estratégias preconizadas para prevenção do erro. Sugere-se a implantação da sensibilização contínua focada em segurança como estratégia para alcançar aprendizado, disseminar as condutas assertivas dos profissionais e promover ações para aliviar os sentimentos dos envolvidos.

DESCRIPTORIOS: Emoções; Erros de medicação; Gerenciamento de segurança; Cuidados de Enfermagem; Segurança do paciente.

SENTIMIENTOS EXPERIMENTADOS POR EQUIPOS DE ENFERMERÍA ACERCA DE LOS ERRORES DE MEDICACIÓN

RESUMEN: Fue objetivo del estudio conocer los sentimientos experimentados por equipos de enfermería acerca de los errores de medicación y cuales son las estrategias utilizadas por los profesionales para prevenirlos. Es un estudio exploratorio cualitativo, realizado en un hospital en Minas Gerais, Brasil, en 2014. Participaron 11 profesionales de enfermería que contestaron entrevista por medio de instrumento semiestructurado. Resultaron del análisis temático cuatro categorías: 1) deficiencia en la concepción del error, 2) sentimientos negativos asociados al error, 3) conductas adoptadas delante del error de medicación, y 4) estrategias de prevención contra los errores de medicación. Se constató fragilidad en la concepción del error; la percepción del sentimiento de miedo no relacionado a la punición; la presencia de las competencias, de responsabilidad y de comunicación usadas delante del error y la aplicación de barreras y estrategias preconizadas para prevención del error. Se sugiere la implantación de la sensibilización continua enfocada en seguridad como estrategia para alcanzar aprendizaje, diseminar las conductas asertivas de los profesionales y promover acciones para aliviar los sentimientos de los involucrados.

DESCRIPTORIOS: Emociones; Errores de medicación; Gestión de seguridad; Cuidados de Enfermería; Seguridad del paciente.

¹Nurse. PhD in Health Sciences. Professor at Pontifícia Universidade Católica de Minas Gerais. Poços de Caldas, MG, Brazil.

²Nurse. Specialist in Occupational Health Nursing. Nursing Supervisor at the General Intensive Care Unit of Hospital Santa Lúcia – Hospital do Coração. Poços de Caldas, MG, Brazil.

³Nurse. Pontifícia Universidade Católica de Minas Gerais. Nurse of Hospital Santa Lúcia – Hospital do Coração. Poços de Caldas, MG, Brazil.

⁴Nurse. PhD in Sciences. Professor at Centro Universitário São Camilo Pompeia. São Paulo, SP, Brazil.

Corresponding author:

Liliane Bauer Feldman
Centro Universitário São Camilo Pompeia
R. Traipu, 704 - 01235-000 - São Paulo, SP, Brasil
E-mail: lilianedoutora@gmail.com

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● INTRODUCTION

Nursing is a relevant profession as it provides care to patients and strives for full-time quality. However, due to various types of incidents, such as organization failures, mistaken care processes, excessive number of tasks, among others, it only deserves the attention of the media in emblematic situations⁽¹⁾.

The medication error is an adverse event that harms the patient, which is induced or results from inappropriate use of the medication, and is preventable. It can be related to prescription, dispensing, preparation, application and/or any step of the process conducted by physicians and pharmacists⁽²⁾.

Adverse events results in several implications for patients, hospitals and the environment. They cause personal, material and moral harm, and may have a negative impact on the careers of the involved workers⁽³⁾; lead to longer hospital stay and increase exposure to risks⁽⁴⁾. Also, increased costs are generated to the health system, and decrease in quality and patient safety indicators is observed⁽⁴⁻⁵⁾. Regarding the professionals involved, they are likely to face punishments and dismissals, may feel less confident on their skills, experience emotional imbalance and feel misunderstood and unhappy as a result of the event^(3, 5).

In order to prevent and reduce such occurrences, on April 1st, 2013, the Brazilian Ministry of Health established Ordinance No 529 -Programa Nacional de Segurança do Paciente- PNSP (National Program of Patient Safety), aimed to minimize the occurrence of adverse events and improve care training in all health facilities in Brazil⁽⁶⁾.

Therefore, according to the PNSP, hospital managers must implement safety protocols, hire qualified personnel and give autonomy to these workers⁽⁶⁾. An action plan must be drawn for the management of risks and implementation of preventive barriers in the processes of reporting of errors, as well as feedback^(3,6), communication and involvement of patients in the care process⁽⁷⁾.

Thus, in order to promote an educational and preventive, not punitive intervention, medication errors must be reported⁽⁸⁾. Error reporting is also necessary to disseminate the use of risk management tools for analysis and support in strategic, tactical and operational decisions in order to achieve greater success⁽⁹⁾.

However, the authors of this article realized, superficially, in their respective services, many failures during the care process, such as: the incident not always caused harm; reporting was not made; workers were afraid of punishment, among others.

In 1997, the National Center for Health Statistics, in the United States, showed that 44,000 patients died because of adverse events⁽¹⁰⁾. A study conducted in 36 North American hospitals reported the most frequent medication errors, as follows: medication administered at incorrect time (43%), omission (30%), inappropriate medication dose (17%) and administration of medication not authorized (4%)⁽¹¹⁾.

In view of the aforementioned, the guiding question is: What are the feelings experienced by the nursing team after the occurrence of medication errors and what are the barriers used by nursing to prevent these feelings?

Thus, the present study aimed to obtain knowledge on the feelings experienced by the nursing team when medication errors occur and what are the strategies used by these workers to prevent these errors.

● METHOD

Exploratory and descriptive study on the relationships, representations, beliefs, perceptions, views of the subjects, and on how they perceive themselves and their thoughts⁽¹²⁾. The site of the study was a mid-sized private hospital located in a city in southern Minas Gerais, accredited by the National Accreditation Organization (ONA), with Level 1 certificate⁽¹³⁾.

The subjects were nursing professionals who performed their duties in medical and, surgical

units and first-aid care, because these workers participate more directly in the process of medication administration. The population was selected by convenience sampling and inclusion criteria were, as follows: respondents working in the hospital for more than six months, present in the hospital at the moment of the interview, available and who agreed to participate in the survey. Prior to data collection, authorization for research purposes was obtained and contact was made with the responsible nurse. The period of data collection was then established: October 6-17, 2014, at seven o'clock in the morning, immediately after a shift change, the objectives of the study were informed and anonymity was ensured.

Data were collected through recorded, semi-structured interviews, conducted in a private room in the workplace. The number of participants was determined during the collection period by data saturation⁽¹²⁾. So, the sample was composed of 11 professionals: three nurses and eight technicians who signed the Free Informed Consent Form.

A guide with two parts was developed for the survey. The first part concerned the profiles of the subjects and the second part, data on the theme. The interviews lasted in average 15 minutes.

Descriptive statistics was used to describe the characteristics of the subjects used in the analysis for characterization of the subjects. After fully transcribing the interview contents, qualitative data were subjected to thematic analysis, according to the following steps: pre-analysis, material exploration and processing and interpretation of data⁽¹²⁾. The meaning units led to the identification of categories and subcategories, contributing to the understanding of the phenomenon investigated in the present study.

The theoretical framework used in the discussion was based on the London Protocol. This protocol recommends system analysis for the investigation of incidents. It suggests that error investigation comprises the entire organization, from senior management to the professionals directly involved in care, because there is a direct correlation between the way in which the individuals communicate and interrelate and the safety culture. The referred protocol stresses the importance of identifying active failures, which are unsafe acts or omissions by the nurses that may be lapses, minor mistakes and very rarely, intentional errors. It is also important to identify the factors related to aspects that impact care practice beyond human error, such as physical and mental health of health workers, psychological conditions of the patient, financial limitations of the institution, speed of decision-making by management, among others. The protocol should be used as a guide for the investigation, i.e., analysis of incidents should observe a systematic and well-structured approach, in order to increase the opportunities of success⁽¹⁴⁾.

The subjects were coded by letter (N) for nurses and (T) for nursing technicians, followed by the number of the interview including their respective statements. The project was approved by the Research Ethics Committee under No 652.430/2014.

● RESULTS

The sample was composed of 11 subjects, and three of them (27.27%) were nurses and eight (72.72%) were nursing technicians. Regarding gender, only one respondent (9.09%) was male and ten (90.91%) were female individuals. The age group ranged from 20 to 40 years. Regarding professional practice time, five subjects (45.45%) had five to ten years in nursing practice; three (27.27%), two to five years; two (18.18%) more than ten years; and only one (9.09%) had less than one year in nursing practice. Regarding the number of patients under their care, six subjects (54.54%) took care of two to five patients, and five professionals (45, 45%) had more than ten patients under their care.

The exploration and interpretation of the data allowed to identify the meaning units and resulted in four main categories of understanding: 1) Inadequate conceptualization of error, 2) Negative feelings associated to the error, 3) behaviors adopted by nursing professionals after medication error, and 4) Strategies for preventing medication errors.

The statements related to category 1) Inadequate conceptualization of error, generated two subcategories: 1a) Examples used to explain the concept of medication error, and 1b) Medication error as a synonym for harm or injury.

The subjects describe a situation in which a medication error has occurred, as seen in the statement of E-07 related to subcategory 1a:

A medication error occurs when an incorrect time for administration of the drug is written on the patient's prescription. So when the time is wrong, we have a medication error (E-07).

In sub-category 1b, the conceptualization of error as a synonym for patient harm is reported in the statements of E-07, E-11 and T-05, as follows:

All professionals can make mistakes, except nurses, because our errors may lead to death, right? (E-07)

Medication error, any medication that when incorrectly administered causes harm to patients. (E-11)

An error occurs when the administration of a medication is delayed for too long [...] because of other duties, and there is nothing we can do [...] or when the medication is prepared in the wrong place [...]. (T-05)

In category 2, negative feelings were associated to errors. Asked about the feelings experienced in that situation, most respondents reported that fear was the most common feeling experienced by them. T-04 and T-10 express such feeling:

I experienced a feeling of fear. Although it did not happen to me or my colleagues, I was afraid [...]. (T-04)

Ah, it was more like a feeling of fear, fear of a serious consequence. (T-10)

Feelings of helplessness, inaptitude and worry were expressed by the group of professionals who faced medication errors.

[...] We really feel helpless, don't we? (T-02)

This is so sad, that we feel depressed, not knowing what to do.. it's a bad feeling. We do everything right, and suddenly something goes wrong. It is not fair, because sometimes we work really hard [...]. We really feel fear and worry because of the many consequences of the error for us and for the patient... And if we commit another error, then... [...] (T-09)

Feelings of worry and responsibility are also reported by E-08:

[...] I felt responsible for the error, along with the technician, so the burden of the medication error fell upon me too, and I felt very worried about it. The technician who was with me when the error occurred was not aware of this burden. So I felt responsible for the error. (E-08)

Multiple checking of the medication to be administered is one of the responses resulting from fear, as reported by T-01, below:

[...] even when I know that the drug is correct, I confirm this with one or two other colleagues in order to be really sure of it. Lives are involved, right? We cannot be careful enough with these things. So, I need to pay close attention to this procedure to make sure nothing goes wrong. So sometimes I have to be a little annoying [...]. (T-01)

Category 3 shows the subjects' responses to medication errors.

The professionals employed in this hospital are advised to report the incident occurred to their supervisors, as shown in the statements of T-03 and T-10:

[...] I have already committed an error, I realized it when I skipped one of the nine rights of medication. So I reported the error to the nurse, then we reported it to the doctor. We observed the patient, but nothing happened to him/her. (T-03)

Well, I don't remember having seen such things here, [...] the first thing I would do would be reporting the error to my supervisor, because that is what we are advised to do aqui. (T-10)

The fourth identified category: strategies for prevention of medication error points to safety measures to be taken by nursing and pharmacy professionals in the workplace.

A series of preventive checks is essential in the management of risks for errors and incidents in

procedures involving medication administration, such as the checking of five rights, of nine rights and double-checking by the nursing team, as follows:

[...] checking several times before; whenever I administer a drug I carefully read the instructions on the label. After aspiration, I read them again and usually keep the ampoule until the time of administration. (E-11)

[...]We observe the nine rights. If we do this, we don't commit errors. The nine rights are: right patient, right drug, right route, right time, right dose, right documentation, right action, right form, right response. If we observe all these steps, we will hardly commit errors.. (T-01)

[...] The nine rights, ok? I always check the prescription when I prepare the medication, and also check the time when I'm heading to the patient's room. Also, I administer a medication to one patient at a time[...]. (T-02)

[...] the nurse schedules the time for drug administration, checks the time, then another nurse double-checks it, in the next shift, right? [...]. (E-07)

The pharmacy, i.e., the pharmaceutical supply center (CAF) is a unit responsible for receiving, storing and dispensing materials and drugs for use in the hospital as a preventive strategy or barrier, as reported by the professionals:

I think that pharmacy checking is the most important step because when checking is performed there, the probability of administering a wrong dose is very low.(T-01)

Ah, I think that the CAF, in the pharmacy, is crucial in the prevention of errors. It provides a preventive because everything is checked before the medication is dispensed. (T-06)

● DISCUSSION

Identification of meaning units resulted in four main categories: 1) Inadequate conceptualization of error, which led to two sub-categories 1a) Examples used to explain the concept of medication error and 1b) Medication error as a synonym for harm; 2) Negative feelings associated to the error; 3) Nurses' responses to medication errors; and 4) Strategies for preventing medication errors.

Inadequate conceptualization of error

The respondents were not aware of the concept of medication error. Medication error is any preventable event resulting from inappropriate use or application of a drug that may cause harm to the patient. These errors can be related to prescription, dispensing, preparation, administration, among other processes⁽²⁾.

One study with nursing workers⁽¹⁵⁾ obtained similar results. In the referred study, none of the professionals was aware of the definition of medication error recommended by the National Coordinating Council for Medication Error Reporting and Prevention⁽¹⁶⁾. However, they provided logical and relevant definitions of the reasons for occurrence of medication errors, contributing to the improvement of professional education and cooperating to minimize these events.

As it was observed, for the respondents the concept of error was directly associated with harm. Harm is defined as impairment of structure or function of the body and/or any deleterious effect arising there from. Harm includes disease, injury, suffering, disability and death⁽⁶⁾.

Adverse event concerns a preventable and unexpected incident that results in damage to health⁽⁶⁾. There is a correlation between the literature concepts and the concepts expressed by the subjects. It should be noted that the literature indicates that we are still far from reaching a consensus on the terminology related to medication errors in health facilities around the world. However, some authors report that "the definition of error in the context of patient safety should be based on common protocols, control measures, solutions and problems"^(14:5).

They also claim that intention and error are inseparable, or else, the term error can only be applied to intentional actions, characterized by failures in execution and failures in planning⁽¹⁰⁾. Besides, the concept of error in the legal sphere: error originated from negligence, imprudence and lack of skill should also be considered^(3,10).

Regarding the term event, taxonomy of the World Health Alliance says it is "something that happens to or involves the patient, causing harm" ⁽¹⁷⁾. This concept is extended to health services, although the event may have moral and ethical implications, in addition to causing damage to property, and may comprise the institution, the professional, the user and/or the environment ⁽³⁾.

Negative feelings associated to errors

The subjects reported experiencing negative feelings regarding medication errors, such as fear, inaptitude, helplessness, worry and responsibility.

Fear is often an adaptive reaction with the legitimate and useful purpose of protecting the individuals from potentially dangerous situations ⁽¹⁸⁾. It is perceived as an instrument of social control in the institutions, although it might be used as a powerful lever for improvement of health performance ⁽¹⁹⁾.

In this regard, we stress the causal organizational accident model and the structure of contributing factors, where the London Protocol explains that people are influenced by the work environment, both in physical aspects, but also regarding their perceptions and work performance ⁽¹⁴⁾.

Although it is sometimes easy to identify a particular action or omission as the immediate cause of an incident, closer analysis that identifies active failures and contributing factors usually reveals a series and events of departures from safe practices⁽³⁾.

The feeling of guilt, the fear of punishment and concerns with the severity of an error may lead the individuals to underreport the incident. To change this situation, it is necessary to promote the education of nursing professionals, through courses, recycling and training⁽⁴⁾, with case studies and real-life situations ⁽³⁾.

When the incident is properly evaluated, respondents tend to perceive the process as less threatening than the traditional check. The structured method aims to promote an atmosphere of openness and trust, without finger-pointing and blaming⁽¹⁴⁾ and mitigates the feeling of fear and punishment.

To improve patient safety, in addition to being aware of scientific evidence and consensus, it is necessary to understand the specificities of the organization, of the service, analyze the work setting, team factors, the organizational environment, the complexity of the task, among other factors, in order to emphasize practical suggestions and be aware of the behaviors to avoid.

Fear, which is the most powerful feeling expressed by the respondents, is directly associated to the fear of causing harm to patient and/or with fear of career-threatening disciplinary actions. In this context, this is about the fear of causing harm to others, rather than the fear of punishment or dismissal, which can be explained by the strong safety culture experienced by the institution.

The dissemination of a safety culture emphasizes organizational learning and improvement, engagement of nursing professionals and patients in the prevention of incidents, with focus on safe systems, and avoiding individual responsibility and accountability ^(3,9-10). This and other strategies are part of the National Program on Patient Safety ⁽⁶⁾.

The other negative feelings related to errors were experienced because for these workers, committing errors is unacceptable. So, they blame themselves rather than the organization. Regarded as tools for the promotion of health and maintenance of life by users, these workers believe they cannot fail, although they are aware of human vulnerability ^(5,10).

The respondents usually reflect about their feelings associated to the errors because these errors are preventable.

When an adverse event occurs, helplessness and guilt tend to increase, since this event poses

an additional, unexpected and unpleasant risk to the patient. It is also associated with carelessness because of the harm caused. Some studies showed that worry is a major cause of the nursing staff, which is triggered by the intense conflict between what should and what could have done⁽²⁰⁾.

The responsibility stated by subject T-08 in category 2 can be understood as a feeling mostly experienced by supervising nurses because they feel responsible for the errors committed by their team, under their supervision. It should be noted that in legal actions, individuals co-responsible for the event must provide their testimonies to the judge⁽³⁾, or else, in the emotional and in the legal spheres important issues that intertwine competence and responsibility are involved.

The valuation of feelings provides a broad space for the establishment of more affectionate bonds between the professionals and the organization, reflecting greater safety and support^(5,10,21).

Nurses' responses to medication errors

It was found that, immediately after the occurrence of a medication error, the individuals performed their usual strategic measures many times to attempt to minimize the event, e.g. by checking medication several times, which is typical of fear, a feeling that lowers the risk of relapsing.

The hospitals should not neglect errors, but rather use them as a justification to plan preventive strategies and foster the adoption of a culture of transparency, with the creation of policies that encourage communication of errors⁽²⁰⁾, contributing to the achievement of a more assertive resolution, with less damage.

One study showed that most of the nursing professionals interviewed shared the event with another coworker in order to seek help regarding the decisions to be made, and to mitigate the unpleasant feelings that arise after the event⁽²²⁾. One of the most effective ways to obtain information from workers and people involved in adverse events is through interviews. These should be performed as soon as possible, in order to systematically explore the contributing factors⁽¹⁴⁾ and provide an effective cooperation between the professionals in the feedback process and resolution of risks.

The nursing professionals were prepared to respond to medication errors, because they were aware of the appropriate attitudes to be adopted. These included, communicating the incident to the supervising nurse. The use of such communication results from the culture of safety implemented in this hospital that was accredited by the National Accreditation Organization (ONA) with Level 1 certificate.

Strategies for the prevention of medication errors

Regarding the barriers used in the prevention of medication errors, the nursing professionals reported their main approaches: simple conference of medication and the nine rights, double-checking in medication administration and the pharmaceutical supply center, or CAF, as it is called by the hospital staff.

Single-checking of medications is the action of checking drug name, package, dose and concentration, as well as checking if the drug is stated in the prescription, and then checking again these items after preparation and before administration.

Safe medication administration occurs when nursing professionals focus on what they are doing and prior to administration make sure in many ways that everything is right, by collecting information from patients, their families, checking patient's bed number or patient wristband identification, i.e. the several recommended barriers⁽²²⁾.

The nine rights considered in medication administration are as follows: right patient, right drug, right route, right time, right dose, right documentation, right action, right form, right response. Observation of the nine rights does not guarantee that errors will not occur, but these barriers may significantly prevent adverse events, improving the process of safe medication use⁽²³⁾. The participants reported that the institution recommends and provides the conditions for observation of the nine steps in the

medication preparation sites, which contributes to prevent neglect and failures.

Double-checking was another strategy reported by the subjects and consists in two professionals monitoring the process of medication preparation, administration and checking independently and simultaneously⁽²⁴⁾.

The procedure of double-checking in medication administration is standardized by the hospital where this study was conducted, as a prevention barrier. However, it is not always possible to carry out this procedure due to daily complications such as excessive demand, limited staff, emergencies and/or excessive workload. Thus, nurses should monitor the system, act and intercept any failure as soon as possible.

The CAF receives, stores and dispenses materials and drugs in the hospital, and, according to the subjects, it provides a barrier to prevent errors and harm. The institution apparently complies with the protocol of the Ministry of Health, which determines that the CAF is responsible for ensuring safe and appropriate practices to prevent accidents and errors in the storage and distribution of medications⁽²⁴⁾.

Therefore, health institutions must establish a safety policy that reinforces the attitude of not punishing nurse professionals in case of medication error^(15, 25); uses the cases of medication errors in training events; disseminate assertive behaviors⁽³⁾; reinforce risk management with preventive behaviors and effectively provide active communication of ideas and innovations; and promote an environment that favors adverse event reporting, without fear.

● FINAL CONSIDERATIONS

The present study shed light on the feelings experienced by nursing professionals and the lack of consensus on the concept of error. The interviews showed that the subject provided examples of errors, but failed to define it. Fear appears in the statements and is experienced after patient harm, not being related to punishment. Responsibility and communication were the competences used by the subjects in response to medication error.

One limitation of the study concerns the determination of the time for data collection, which has made it impossible for nurses from the afternoon shift to participate in the study. A further study is being done to broaden the perspective of the issue in the institution.

It is recommended that the subjects use some strategies recommended by official bodies and barriers established by their health facilities, in order to minimize the occurrence of errors. The implementation of awareness raising or continuing education focused on safety is suggested as a means to obtain more in-depth knowledge on the concept of error, harm and other aspects inherent to risk prevention and to a safety culture in the institution.

It is expected that the present study contributes to the development of measures aimed to prevent medication errors and supports the implementation of actions and learning activities on the mitigation of the feelings of the nursing professionals involved and on the importance of assertive behaviors by health professionals.

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