

## APPROACHING MEDICAL SCIENTIFIC RESEARCH BY THE INTERVIEW METHOD

Oprea-Valentin BUȘU<sup>1</sup>, Cristina ANDREI<sup>2</sup>, Mihai-Narcis POPESCU<sup>3</sup>

### **Abstract**

*The current medical practice is no longer limited as in the past strictly to the application of curative treatment. It focuses on the information provided by the patient, the way s/he describes the symptoms, as well as the patient's wishes regarding the results of the treatment to be applied. The patient's perception of the medical record is especially important because it guides the doctor in choosing an appropriate treatment plan, but it also helps him/her adopt a behaviour that is shaped by the patient's temperament and personality. Establishing the medical history is the first step to be taken during the first visit to the medical centre, it is necessary to be renewed yearly, because changes can occur both in the systemic health plan and at the psycho-socio-behavioral level. Achieving this through the interview is an effective method of psychoanalysis, having a number of advantages, including: the analysis of the verbal and non-verbal communication of the patient, the strengthening of the doctor-patient relationship through the active exchange of information, flexibility. However, for a good accuracy of the information collected after the interview it is recommended to combine it with the questionnaire method. The combination of the two methods has the role of eliminating the subjectivism that can arise during the discussions and has the advantage of giving the clinician the possibility to build a database that can be accessed by both the medical staff and the patient.*

**Key words:** *Psychoanalysis, Interview method, Psychotherapy, History, Clinical research.*

### **Collecting patient data in a medical centre**

A phenomenon that occurs frequently in the case of beginner doctors, who do not have extensive clinical experience, is the omission of the patient's history (Popescu, 2013, p. 11). They consider it essential to apply the treatment, thus minimizing the importance of the information that can be collected through the observation sheet. At the same time, they overlook the fact that anamnesis is the medical-legal document (Nanu, 2011), which mentions the patient's acceptance or

---

<sup>1</sup> Junior Lecturer, PhD, Teaching Staff Training Department, University of Craiova, Romania, e-mail address: valentin\_busu@yahoo.com, corresponding author.

<sup>2</sup> Student, Faculty of Dentistry, University of Medicine and Pharmacy of Craiova, Romania, e-mail address: andreicristina2201@gmail.com.

<sup>3</sup> Student, Faculty of Dentistry, University of Medicine and Pharmacy of Craiova, Romania, e-mail address: mihnap@icloud.com.

refusal regarding the procedures performed by the attending physician. The patient record is complex and covers a number of fields:

The personal details of the patient (name, surname, age, sex, address, telephone, occupation, family background, GP to which s/he is registered).

Hereditary history: it refers to the systemic disorders suffered by the close family members and which present the risk of genetic transmission. The most common hereditary diseases are represented by diabetes, heart disease, mental disorders such as schizophrenia and cancers whose incidence is increasing in Romania.

The personal physiological and pathological antecedents bring to the foreground both the minor diseases of the patient, as well as the major ones such as surgical interventions or the corneal diseases that require a long-term or permanent treatment. Often, patients with chronic illnesses may develop psychological disorders such as depression or anxiety over time. The appearance of these disorders is also triggered by the lack of involvement of the clinician, alongside the absence of the psychotherapy program (David, 2006, p. 128).

Living and working conditions: it is a point of the anamnesis that is not given due importance, being treated superficially. Often, a physician at the beginning of his career fails to make a correlation between the patient's lifestyle and the actual condition of the person (Popescu, 2013, p. 27). The profession of an individual suggests the risks to which s/he is exposed both from the point of view of systemic diseases that can appear, as well as regarding the psychological aspect of stress.

Also, lifestyle can have a major impact on the health of the individual. If an unsuitable lifestyle is detected, it is advisable for the doctor to collaborate with a psychotherapist in order to follow some sessions of cognitive psychotherapy (Iorgulescu, 2017). Subsequently, after the anamnesis has been completed, the objective clinical examination is mentioned, in which the doctor mentions all the changes that have occurred at the physical level and at the behavioral level. For the clinical examination to be complete it is recommended that anamnesis should be accompanied by paraclinical investigations such as blood tests, radiographs, CT, MRI. In the end, the patient will receive a document in which s/he will have to express his/her acceptance or refusal of the treatment proposed by the doctor.

### **Design of medical research in the contemporary society**

Scientific research in the medical field is of particular importance, being the one through which treatment solutions can be found in the case of incurable diseases, as well as in the discovery of behaviors, genes or microorganisms that can trigger the disease state.

The objectives of medical research are represented by: exploration, description of phenomena and explanation (Babbie, 2010, p. 135). The exploration of a pathological phenomenon or of a patient begins by establishing an optimal doctor-patient relationship, being necessary to familiarize the researcher with either the patient under observation or the phenomenon s/he is investigating. Also, this stage of exploration is important in the case of persistent or recurrent situations.

It is important that a particular case should be investigated from multiple perspectives. For example: in the case of the increased incidence of cardiovascular disease, it is advisable to seek opinions from both physicians regarding the determinants and risk factors that led to the spread of the disease in a certain period of time, and from the patients regarding the adopted lifestyle, vicious habits. It is often the case that the results of scientific research do not provide the desired answers to the research questions, and they are often more suggestive than definitive (Babbie, 2010, p. 139). This situation can be generated by the representativeness of the group or phenomenon studied. The concept of *representativeness* implies the existence of a sample of persons or of a number of cases having common characteristics. For example: if in the case of a study on the incidence of tooth decay among adolescents there is a sample of over 90% of adolescents, it may be considered to be correct, but if the sample of patients examined has a higher share of adults it is wrong, and the results will not be conclusive and will not bring any benefits.

The second objective of health research is the description of the case. Of course, this situation is based on a scientific observation of the subject, being objective, clear and correct, leaving no room for interpretation. The interview method also proves to be useful in this case, thus carrying out a qualitative evaluation (David, 2006, p. 103). Using the interview allows both people (clinician, patient) to develop an active conversation that allows the doctor to observe the patient's verbal and non-verbal behaviour, and gives the patient the opportunity to express himself/herself freely.

The issue of research organizing is often more complicated than we initially expect. In order to carry out the research process, the following aspects must be considered:

- Establishing a concrete date for starting and completing the research;
- Costs;
- Human resources involved in the research process;
- Providing the necessary tools;
- Selection and training of the medical staff involved in the process (Rotariu, 2006, p. 232).

### **The ethics of scientific research**

Ethical issues must be considered from the early stages of the medical research process. Participants in the research carried out must be informed of its advantages and disadvantages and the potential risks to which they can be exposed (McQueen, 2006, p. 258). One aspect that needs special attention is the preparation of the documents to obtain the informed consent of the patient, in which s/he expresses his/her agreement or refusal on the research. One of the most well-known initiators of the interview method is Jean Piaget, who used this technique, calling on the subject to be exposed to a particular problem, the difficulty being to find his/her perception of the exposed problem (Moscovici, 2007, p. 204). To this end, the seriousness of the exposed problem was not important, but the way in which the patient approached it and his/her vision of life. At this stage, the manner in which

the questions are addressed is very important (Moscovici, 2007, p. 204). The questions addressed to the subject must have a certain logical chronology, in order to highlight all the important details.

Among the characteristics of the interview, we mention:

- Obtaining clear, objective answers;
- The possibility of being able to analyze the subject in full progress and his/her mode of action and thought;
- Flexibility through dialogue; using a technique based on the monologue can lead to the omission of vital information;
- Opportunity to collect both quantitative and qualitative information;
- The clinician is the one who has the control regarding the order of the questions, which leads to an increase in the accuracy of the information collected;
- The recording of interview dates is important, as comparisons can be made and the degree of evolution or involution can be assessed.

There are also several types of interviews:

- **Structured interview:** this type of interview is characterized by a minimal intervention of the clinician. The interview implies that there is a list of exact questions, yet it is quite rigid (Moscovici, 2007, p. 211). Inflexibility is a disadvantage of the interview which causes it to disregard important aspects of the patient, which can be exploited to a great extent in order to establish an adequate diagnosis and treatment plan. Frequently, this type of interview is used by clinicians who do not have much experience.
- **The semi-structured interview:** it is the type of interview used most frequently, being very flexible. In this type of interview a list of precise questions is used, not being altogether devoid of structure. Practically, precise questions have a role in guiding the practitioner, allowing the patient not to answer them in a strict order, but according to the conduct of the conversation (Moscovici, 2007, p. 213).
- **Free interview:** this technique does not have a list of questions. It is based on the dynamics of the conversational flow (Moscovici, 2007, p. 213), having as main disadvantage the omission of elements of vital importance due to the lack of organization. However, this method maintains a relaxed climate for both the doctor and the patient. The absence of a rigorous organization can lead to the application of an incorrect treatment, because sufficient data have not been collected to allow for a good diagnosis. Another problem that may arise in this case is the approach of the medical staff to the patient who may be misunderstood, because, on the one hand, the clinician will not show appropriate involvement, and the patient will feel very relaxed and thus may not specify important aspects.

**The stages of interview design are:**

- Choosing the technique

The choice of the observation technique for the medical subject or phenomenon is influenced by a number of factors such as: material resources, time, human resources. The method of dialogue is predominantly chosen, being easy to implement, while also offering the possibility to collect multiple data. However, the technique of dialogue requires a good methodological training of the clinician and extensive professional experience in order to be able to achieve the objectives proposed through the questions provided. Other methods include recalling unpleasant past experiences or investigating how the subject responds to a particular situation (Quivy, 1988).

- Structuring the interview

The interview is structured in three parts: the introductory part, the descriptive part and the interview itself, which consists in applying the questions (Moscovici, 2007, pp. 217-218). The introductory part is essential, as it is that part that contributes to motivating the subject to accept the dialogue and establish a good doctor-patient interaction. It is very important to gain the confidence of the subject so that s/he can provide the doctor with useful information about his/her health. In order to gain the patient's confidence, it is necessary: to obtain the informed consent regarding the medical act to be applied, to respect confidentiality, to offer the patient the opportunity to obtain a second medical opinion on the case or if s/he is not satisfied with the proposed treatment plan. Also, the doctor must also consider the patient's expectations regarding the results of the treatment requested. Often, if after a medical intervention the functionality of an organ is restored, but the aesthetic aspect is not to the level of the patient's expectations, it will consider the entire treatment a failure.

The descriptive part of the interview is the one that guides the clinician from the beginning phase if the subject is in the focused research group, practically to fulfill the characteristics of the sample of individuals in which s/he will be included. The interview itself consists of a series of questions whose chronology is established by the doctor depending on the purpose of the study and the aspects of the case.

The development of questions is an important element, as they play a role in guiding the physician and achieving the proposed research objective. It is advisable to avoid questions that may be ambiguous or which may give rise to erroneous interpretations by the patient. The questions must be clear, concise in order to be able to objectively analyze the problem. In the dialogue, it is recommended to eliminate the language commonly used for written questions (Moscovici, 2007, p. 218). Also, language containing words or expressions from slang / jargon or mismatch should be avoided.

The questions can be addressed by means of the "split question" technique, which is characterized by an initial question in the general way, and depending on the subject's answer to the initial question, the following questions will be derived from it. Also, the general initial question should be simple, so it can be quickly

answered. Questions with a high degree of difficulty or sensitive nature can only be asked after a doctor-patient relationship based on mutual trust has been established.

Exposure of an interview model performed in a dental practice, combined with the questionnaire method:

***Patient history:***

The 52-year-old patient accuses physiognomic disorders of the presence of dark colored tartar of a nicotinic nature, as the patient smokes about two packs of cigarettes a day. Another problem reported by the patient is the shortening of the teeth due to abrasion caused by bruxism.

*Question number 1:*

How often do you go to the dentist and when was your last visit?

A: I used to go every year, but due to my health, my last visit was three years ago.

*Question number 2:*

Apart from the problems related to denture, what other problems of the state of general health do you face?

A: I am undergoing a psychiatric treatment and I also have cardiovascular diseases.

*Question number 3:*

Have you experienced any discomfort or have had previous unpleasant experiences in the dental practice?

A: Frequently, because most doctors are reluctant to give me dental care when they find out I am under psychiatric treatment. They probably think we have unexpected reactions.

*Question number 4:*

Do you follow strict psychiatric treatment?

A: Yes. Daily.

*Question number 5:*

What are your aesthetic expectations for dental treatment?

A: First of all, I want teeth whitening and removal of tartar. And I do not know how the size of the teeth can be adjusted, because they have reduced their height.

Doctor: The height of teeth is reduced due to bruxism. Bruxism is also a psychological condition caused by intense stress. Therefore, in this situation I will refer to a specialist doctor for prescribing miorelaxative medication that will eliminate the grinding of the teeth during sleep. Dental scaling and bleaching are procedures that can easily be performed in two sessions.

Conclusion of the presented case: a very high percentage of physicians refuse to provide care to patients diagnosed with psychological disorders, because they do not possess good knowledge of the psychological techniques needed, and they consider it a risk because the patient can have unpredictable reactions they can't handle properly.

### **Interpretation of the interview**

The interpretation of the interview is a post-interview stage and comprises two phases:

*1. Transcription*

*2. Interpreting the interview according to the proposed purpose.*

The first phase, the transcript, consists in the existence of a tape on which the entire interview is recorded. This idea may initially seem pointless, but in the end it will prove to be of great significance, because as time passes, an amount of information is lost. By re-listening to the dialogue the collected data is updated and a more detailed analysis of the problem exposed by the patient can be done. The transcript also aims to eliminate unnecessary elements and focus on the major issues that play a role in diagnosing the condition (Atkinson, 2006, pp. 95-99).

In the second phase, the interpretation of the interview according to the proposed purpose is much more complex and involves establishing the meaning and validity of the statements reported by the subject. For this stage a good professional training of the clinician is necessary, so as to avoid subjectivism. The ability of the physician to establish the meaning of the patient's statements is influenced by a number of factors such as: the degree of trust of the doctor-patient relationship, the theoretical perspective chosen by the doctor for interpretation, the psychic and emotional structure of the doctor may have an impact on the interpretation mode, because it reflects his/her personal experience of certain aspects of life and the way in which s/he has approached them (Atkinson, 2006, p. 102).

### **The quality of the interviews recorded with the help of a recorder**

The quality of the interviews recorded with the help of a recorder depends on a number of indications:

- Use of a recorder that is not in the patient's visual area, as it can bring important changes in the answers;
- The recording must include the interview in its entirety, without missing paragraphs. Gaps occurring during a recording can distort the reported situation;
- The patient will be informed that the interview is recorded and s/he will be explained the purpose of the recording;
- The patient must be assured of the confidentiality of the therapeutic act, and the information cannot be used without expressing his/her consentment;
- The patient has the right to interrupt the recording at any time;
- The existence of a record player does not mean that notes may not be taken; these are necessary in order to outline the condition and to orientate it towards a correct intervention plan;
- We should be prepared to understand that there are subjects on whom the recording of the interview may have an opposite effect than the expected one, because it may produce an internalization of the interview, a certain fear in the expression of symptoms or the reporting of experiences;

- In general, this record has a beneficial effect on most individuals, considering that the doctor will attach greater importance to the ones reported by the patient and will not omit useful information;
- It is important for the notes to describe the elements of the non-verbal language.

**Advantages of recording:**

- The notes cannot fully cover the interview data, and by comparing the notes with the recording one can obtain a useful set of information;
- Writing a research paper is considered more credible if quotations of the subjects are inserted in its content;
- The subject is encouraged to listen carefully to the clinician's advice and to respond broadly;
- The recording makes it possible to listen to it also by the other members of the research team;
- It increases the quality of eye contact between doctor and patient;
- By using the notes, the visual contact is lost, which can lead to the loss of the conversational ideas (Agabrian, 2004, p. 95).

**Disadvantages of recording:**

- Existence of a category of individuals who become suspicious about how the recording of the interview may be used;
- In some cases it may happen that the doctor's attention is reduced, because s/he already knows that the information is stored in the recorder (Agabrian, 2004, p. 95).

**Recommendations for an optimal interview:**

- Use of communication techniques that do not worry the patient in the case of questions regarding intimate or unpleasant aspects;
- Encouraging the patient to communicate freely with the doctor, without feeling constrained;
- The doctor should share his/her personal experience when the situation is appropriate;
- There should be both closed and open-ended questions that allow for a greater flow of information;
- The doctor should ask additional questions to clarify an aspect that s/he did not understand or which was not properly reported;
- The doctor should aim at a higher rate of responses, even from people who cannot read or write or who feel safer when they talk instead of writing;
- Opportunity of direct contact with the subjects, with the possibility of "recording" behavioral reactions and approaches (both on the part of the patient and of the persons with whom they interact);



- The interview is a constructive experience from which both the patient and the doctor can learn;
- Finding out the factors that influence the opinions, behaviour or motivation of the subject;
- Testing new ideas or new strategies that reveal how the patient reacts when faced with a new, unmanageable situation;
- Offer the patient the opportunity to describe in his/her own words the experience;
- The clinician must have a good training in relation to the accomplishment and implementation of an interview, regardless of its nature: quantitative or qualitative;
- The interview should consist of several types of questions: general questions, specific questions, but also transition questions;
- Studying problems in depth by asking additional questions;
- Systematizing the data obtained and storing them in a database of the medical centre;
- The use of scientific observation (Agabrian, 2004, p. 56).

### **Interpretation of results**

The results of the interview can be presented in several forms. The data processed by various quantitative / statistical or purely qualitative methods must be analyzed, i.e., it goes beyond tables, graphs, schemata, etc., to find the significance of the results of the processing.

It should be noted that there is no method superior to another, good or bad, but only methods that are used correctly or incorrectly, appropriate or inappropriate to the domain, research intentions, assumptions / hypotheses to be verified, questions to be answered (the method is selected according to the the questions seeking answers).

Before publishing the results of the study , it is important to check whether the following aspects have been achieved:

- Existence of objective statistics that correctly describe the collected data;
- Presenting the results properly, without leaving room for misinterpretations;
- All inserted figures and tables are appropriately titled;
- In the case of a complex research in which the results are multiple, it is important to choose a schematic presentation mode that will draw attention to the main idea.

### **Evaluation of results:**

- The researcher must evaluate correctly, in a strictly rational manner, without any subjectivity, all the results obtained from the scientific research of the studied object;
- The results have to be compared with the existing data in mainstream literature;

- Checking the accuracy of the data obtained is preferable to be done independently by another team of researchers.

### **Conclusions**

Medical scientific research through the use of the interview proves to be an efficient method, being easy to implement by the clinician. At the same time, this technique manages to include a number of important details that guide the physician in order to establish a correct diagnosis and to devise an optimal therapeutic plan. The choice of the interview type and how to interpret the results obtained differs depending on the professional experience of the doctor, as well as according to the complexity of the medical case addressed. It is important to note that there is no ideal method of diagnosing the patient, but it is essential to find a technique appropriate to the condition we are facing.

### **REFERENCES**

1. Agabrian, M. (2004.) *Cercetarea calitativă a socialului*. Iași: Institutul European.
2. Atkinson, R. (2006). *Povestea vieții. Interviuul*. Iași: Polirom.
3. Babbie, E. (2010). *Practica cercetării sociale*. Iași: Polirom.
4. David, D. (2006). *Metodologia cercetării clinice*. Iași: Polirom.
5. Iorgulescu, G. (2016). *Elemente de științe comportamentale și neuroștiințe în medicina dentară*. București: Medicală.
6. McQueen, R.A. (2006). *Metode de cercetare în științele sociale*. Iași: Institutul European.
7. Moscovici, S. (2007). *Metodologia științelor socioumane*. Iași: Polirom.
8. Nanu, A. (2012). *Malpraxisul medical – 7 instrucțiuni de siguranță*, 1st edition. Suceava: Lidana.
9. Popescu, M. (2013). *Reabilitare orală*. Craiova: Sitech.
10. Quivy, R. and Campenhoudt, L. (1988). *Manuel de recherche en sciences sociales*. Malakoff: Dunod.
11. Rotariu, T. (2006). *Ancheta sociologică și sondajul de opinie. Teorie și practică*. Iași: Polirom.