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CLINICAL STUDY

A comparison of the opinion of general practitioners and their patients on compliance with pharmacotherapy

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Abstract: *Objectives:* The aim of the study was to identify and confront the opinions of both patients and general practitioners on their relationship.
Methods: Our questionnaire was designed according to the target of our study – to analyse the communication between the GP and the patient as well as the adherence to the treatment procedures – in the group of 100 GPs and 500 patients.
Results: The response rate was 95 % in GPs and 86.6 % in patients. Totally, 88 % of patients and 52 % of GPs were convinced that the compliance with the treatment and the trust to the GP are related.
Conclusions: Non-compliance is a frequent reason for the patient's unsatisfying response to the therapy. A professional approach to this problem is an essential precondition of an increased quality of health care and an increased patient's satisfaction without requirements of health care system for additional financial resources *(Tab. 1, Fig. 1, Ref. 12)*. Full Text (Free, PDF) *www.bmj.sk.*
Key words: compliance, general practice, patient, general practitioner (GP) personality, self-regulation of medicaments.

A patient's willingness to cooperate with the GP and to comply with the advice and treatment plan is a necessary condition for a successful health care (HC). Patient compliance was complexly defined by Judith Murphy and Coster (1) 10 years ago as the extent, to which a person's behaviour coincides with the health – related advice and includes the ability of the patient to attend clinical appointments, take medicines as prescribed and complete recommended investigations. On the other hand, an insufficient cooperation (non-compliance) results in patient's unsatisfying response to therapy or therapy failure (2). Seriousness of the problem is notified in the US analyses results, according to which 33 to 69 % of hospitalisations relate to a low level of patient's cooperation with their GPs**.** Economic calculation of costs shows that there is a loss over 100 bill. of U.S. dollars. Despite a long-time effort expressed by the number of studies and programs aimed to quality and health care safety improvement, the implementation of the information obtained from the medical research into practice keeps failing (4). Considering the relative lack of proofs about quality of communication between the GP and the patient in the process of pharmacotherapy published in the Slovak Republic, we decided to analyse this relationship at the time of HC transformation. The selected aim of the survey was to analyse the communication between the GP and the patient and its relation to the compliance with the treatment regimen as suggested by a GP.

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Material and methods

In the study, we used a commonly accepted evaluation of compliance by a structured questionnaire (2, 5). When constructing the survey instruments, questions and formulating the hypotheses, we worked on the main aim of the survey. The validity and reliability of the questionnaire at the stage of its preparation was guaranteed by cooperation with a sociologist, a clinical pharmacologist and a GP. We used a two-phased survey for opinions in order to determine marks intensity and to verify the accuracy of measurements. We surveyed both the respondent's opinion and the opinion „common in the environment where the respondent lives" and we compared the two. The methods reflect the requirements of a sociological survey. We did not prefer the method of qualitative analysis. Within the pilot study, by addressing questionnaire to 17 GPs and 36 patients, definiteness of given questions and understanding of the terminology was examined and using the control questions, the control system was set.

Considering the advice of a consulting statistician, the random sample was selected and covered the territorial community of patients and GPs, while we assumed their prior cooperation. A cooperation potential and duration of relationships were not analysed. For the purpose of the survey, defining the sample according to demographic factors (sex, education) was not necessary. The random sample of GPs was selected from the Slovak

Tab. 1. What are the reasons for non-compliance with my instructions? Indicate each reason in percentage! (There can be more reasons for one patient).

	Total number of answers	Number of answers (%)	Average (%)
Patient decided to follow my instructions partially	71	14	26.2
Patient influenced by other non-professional opinions	66	13	19.8
Patient stopped using the pills due to social duties	61	12	18.7
Patient did not understand my instructions	57	11	17.5
Patient made a mistake in using the pills so stopped taking them	59	11	15.3
Patient influenced by other physician's opinions	60	12	14.9
Patient did not make notes of recommendations and therefore forgot them	43	8	13.8
I did not prove patient's incapability to work	34	7	13.3
I did not prescribe the drugs patient had asked for	48	9	11.7
Other reasons (laziness, financial)	18	3	11.3

A division of GPs according to the reasons of patients' non-compliance with the therapeutic routine "Average" defines the rate of cause defined by a given proportional ratio of patients.

register of GPs. Questionnaires delivery and collection were carried out by the interviewers – 100 of questionnaires were distributed, 95 (95 %) were returned. The sample of patients was selected by distributing the questionnaires to the first five patients who came to offices of the interviewed GPs that day (total of 500 questionnaires delivered by interviewers). The anonymity was guaranteed by the collection box placed in the waiting room (433 returned questionnaires – 86.6 %). The comparison of both GP's and patients' opinions was the result of a descriptive analysis.

Results

Physicians, responses. Table 1 shows the division of GPs' opinions on reasons for non-compliance with treatment regimen. In the question, the respondent could state an unlimited number of reasons and they also determined the weigh of reasons within the percentage of patients they had determined. 11 % of GPs reckon that the patient did not understand their advice on the compliance with the treatment regimen and 8 % of GPs knew a patient who, leaving their office, might not remember their advice because forgot to note it down. Totally, 16 % of GPs admit the fact the recommendation will not be followed by the patient because the GP did not prescribe the medicaments the patient asked for or the GP did not prove the patient was incapable to work.

In questions focused on the reasons for non-compliance, 52 % of GPs stated that the personality and abilities of a GP influence the compliance, 46 % assumed that compliance with the GP's advice depended on the patient and their personality and needs. In the answers to the question, only 28 % of GPs admitted that patients intentionally did not tell the truth, 72 % did not know any case when a patient would lie.

In questions related to patient instructions, which "tools helped their patients to remember the instructions", 29 % of GPs provided printed instructions, 28 % of GPs made sure their patients understand the instructions and if not, they explained the instructions again. 21 % of GPs said they wrote down their own notes for the patients. When evaluating the compliance with pharmacotherapy, only 2 % were sure their patients did not use the medicaments without their knowledge, 27 % of GPs were sure patients used the medicaments without their knowledge and 43 % of GPs assumed that patients probably used the medicaments without knowledge of their GP. Changing the dose by the patient was assumed by 72 % of GPs.

Patients, responses. Figure l shows patients' opinions on the medicaments use. It shows that less than 50 % of all interviewed patients complied with their GPs' advice. 41 % of patients declared they used all the medicaments, 6 % did not use the medicaments at all. In the following answers, only 39 % of patients claimed they never took the medicaments their GP did not know about. 37 % of patients confessed occasional and 14 % regular usage of medicaments without prior approval of their GP. 87 % of patients assumed that the illness and its duration influenced the usage of the medicaments.

Evaluating the usage of medicaments by the patient in general, there were only 38 % of respondents who were convinced that all prescribed medicaments taken from a pharmacy were really used. As much as 34 % of patients estimated that people store medicaments "for future use". 26 % of patients believed that unused medicaments are "thrown away" and 12 % of pa-

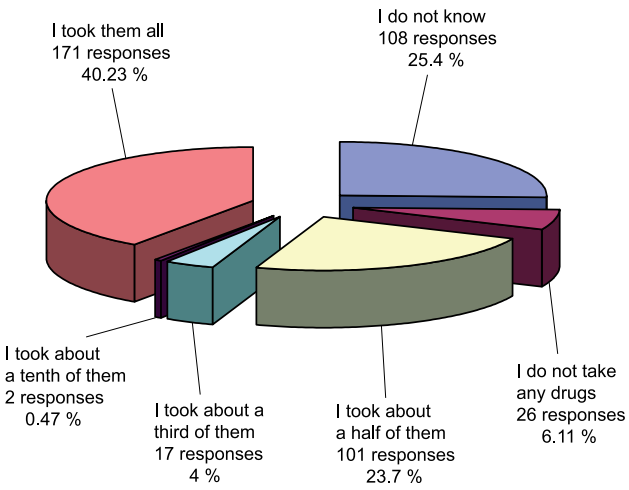

Fig. 1. Division of patients by their own experience with taking drugs (425 responders).

tients estimated that patients forward unused medicaments to someone "who needs them". Only in the "others" (6 %) there was a hidden alternative of "taking the unused medicaments back to the pharmacy".

88 % of patients were convinced about the relationship between the compliance and the treatment regimen and the trust in the GP, 47 % of patients said "maybe yes" and 41 % of patients answered "definitely yes". The correlation between the family and compliance with the treatment regimen "family controls, alerts and pays attention" was admitted by 30 % of patients, 33 % of patients limited the positive family impact to "sometimes". Only 26 % of respondents denied the family impact. An alarming fact was that up to 68 % of patients were not provided with sufficiently understandable information about their health. Only 23 % of patients expressed an absolute satisfaction with the information provided. When we asked respondents to evaluate their relatives' and friends' experience with the provision of comprehensible information using a different scale, answers were clearer. More negative answers prevail, but 17 % of relatives and friends perceived information about their health state as always sufficient.

Discussion

The outcomes of the pilot survey study confirmed the information, which form a common opinion, that patient's compliance with therapy plan is relatively low. GPs were willing to assume the compliance lower than 50 %; patients admitted a similar degree of non-compliance. Similar outcomes on compliance as advised by the GP have been known from other countries for a long time (6, 7).

It is known that both GPs and patients consider the mistrust to GP's decisions to be the most frequent reason for the non-compliance. GPs can gain their patients' trust mainly by their professional and open approach and their ability to explain the suggested procedure (8). Even though we expected the preference of professionalism, it was evident that patients use different criteria for their evaluation than professionals (9).

Awareness of patients is an important factor for cooperation (9, 10). The results gained from the study varied and they often confirmed insufficient information provided to the patient and also the absence of GP in this process. Several answers showed that GPs were aware of a necessity to inform their patients about the medicaments and expected effects appropriately, but they did not implement it into daily practice. This is confirmed by the patients, opinions. Inability to implement the knowledge is a serious system problem, which commonly occurs (4). The quality and quantity of tools for remembering, which were stated by GPs, raised a hope for the future that the number of patients leaving GP's office "adequately informed" will rise. The important finding was that 66 % of patients confirmed (constantly or in specific cases) the influence of family environment as an operating, control and regulatory mechanism for compliance.

The number of used medicaments is one of the indirect indicators of a trust to GP and their procedures. A negative experience (low percentage of patients who used all prescribed medicaments according to the prescribed dose) was confirmed (9). In this study, a proved high percentage of patients throwing the unused medicaments away were astounding.

It is important to emphasize that non-compliance is a frequent cause of the patient's unsatisfying response to the therapy, or even therapy failure (despite the GP's lege artis performance), which is consistent with the information from other countries and different environment (10, 12). If the GP did not take it into account in the case of therapy failure, their routine reactions would consist of increasing the dosage or changing medicaments or their combination, applying different treatment approach. Any procedure without trustworthy and sufficient information about patients' willingness to comply with the treatment regimen and use of medicaments according to the prescribed dosage is a threat for deepening this problem.

The meta-analysis by Simpson et al, published in British Medical Journal in 2006, summarizing the results of 21 observatory studies, which were evaluated using the criteria of health care quality, apparently proved that the compliance with pharmacotherapy resulted in decreased mortality and proved the possibility of an effective prevention (11). An increased quality of information provided by the GP to the patient is considered to be the most plausible approach to decrease the non-compliance. Education of both patient and GP and the implementation of the obtained outcomes are the conditions of mutual communication improvement, which is necessary for an appropriate compliance.

Study limitations and advantages

The evaluation of an opinion by a questionnaire always meets the problem of veracity of the answers and also the verification of the probability or variability in answers using statistical methods. In this case, it was the evaluation of the respondent's opinion and attitude and their identification with their environment using a two-phased evaluation. The outcomes of the study were also limited by the selection of respondents without any demographic criteria determination. Therefore no constructions using difficult indicators were created. In relation to the aim of the study, we did not consider comparing the samples, which were not defined by demographic indicators by frequency tables (Chi-square test, t-test), to be correct. Questionnaire limitation was given by the fact that patients in their answers produce their notion of an „appropriate behaviour". We tried to resolve this contradiction within a limited space by asking the questions. The surveyed characteristics of patients enabling us to identify their abilities, possibilities and efforts to comply with their GPs' advice, were analysed as the opinions of respondents, their attitudes and experience. In the second phase, "common phenomenon in the patient's environment" was surveyed. This method allowed us to compare the respondent's opinion and attitude within "common phenomenon" typical of the environment. It was a two-phased evaluation. Respondents were often not able to evaluate their behaviour or their experience as strictly as they could by evaluating "what is common in your family, among your acquaintances and friends".

Considering the discussed limitations, the relevancy of the obtained opinions is the advantage of the study. It was confirmed by the response rate expressing the respondents' interest in the problem.

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