Patient behaviour and social support – whether the health literacy can influence the adherence of patients

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Abstract

The relationship between social support and health has received a great deal of research attention in health psychology and behavioral medicine, as in health care marketing as well. Adherence (or compliance) involves patient acceptance and follow-through with treatment recommendations. There are several studies measuring the adherence and to investigate the factors influencing the health behaviour of patients. The aim of ABC study was complex, from finding consensus in definition of adherence to the recommendations to healt care policy regarding improvement of adherence of patients.

As the adherence and health literacy studies show not favourable results for the Hungaraian patients, we will focus in our research on the relationship of health literacy of patients and on the improvement possibilites of adherence of patients.

As the case studies on melanome and diabetes mellitus show, the health literacy, the education of patients have an important role in improvement of adherence.

Keywords: health behaviour, health literacy, patient adherence

Track: Services marketing

Introduction: Patient adherence and social support

The relationship between social support and health has received a great deal of research attention in health psychology and behavioral medicine, as in health care marketing as well. Patient adherence may well mediate the link between social support and health.

Adherence (or compliance) involves patient acceptance and follow-through with treatment recommendations. An appreciable number of patients (as many as 25%–40%) are nonadherent, and adherence has been found to have significant effects on treatment outcome.

The establishment of a significant and substantial relationship between social support and adherence would suggest adherence as an important mediating mechanism between social support and health outcomes. The social support–adherence connection, although the research results are contradictory and complex.

Patient adherence is essential to the success of disease management, but close to a quarter of patients consistently fail to follow their physicians' recommendations. Adherence rates vary considerably across disease conditions and treatment regimens, and can be quite low, even for treatments that are highly effective. For nearly six decades, researchers have endeavored to understand the factors that predict adherence, including the cognitive, psychological, social, environmental, contextual, and therapeutic elements of the experience of living with illness. Patients' beliefs about their disease and its treatment have been proposed to be central to adherence. The Health Belief Model (HBM) ((Rosenstock, 1974; Becker et al., 1978; Kotler and Clarke, 1987, Janz et al., 1984) first conceptualized beliefs as predictors of preventive health behaviour. Fundamentally, the purpose of this model was to explain the choice of health behaviour and the probability of choosing a healthcare related form of behaviour. The model included perceptions of "the threat posed by illness, comprised of the likelihood of its occurrence ('perceived susceptibility') and its potential for causing physical harm and interfering with social functioning ('perceived severity')". Perceived disease severity threat and the other HBM components have also been studied as predictors of patients' adherence to treatment, and it has been proposed that greater disease severity threat would be associated with better adherence. Actual disease severity (e.g. patients' health status) has also been suggested as a factor in adherence to treatment. Despite a great deal of theoretical and empirical analysis, the question of whether patients who are in better health are more, or less, adherent to treatment than those in poorer health has not yet been answered. The HBM has provided a useful theoretical framework for investigators of the cognitive determinants of a wide range of behaviours for more than thirty years. The model's common sense constructs are easy for non-

psychologists to assimilate and can be readily and inexpensively operationalized in self-report questionnaires (Abraham and Sheeran, 2008).

Research on patient adherence

The research literature on patient adherence is extensive, especially on medical adherence in the clinical practice.

In the clinical practice assessment methods differ in their degree of subjectivity and sophistication, ranging from simple self-reports to more technologically-oriented tools such as the Medication Event Monitoring System (MEMS)™ – an innovative method for measuring adherence in which a hidden microchip mechanism records the time and date that a patient opens a pill box, removes a pill from a pack, actuates an inhaler, or dispenses an eye drop. With technologies such as these, every removed dose of medication sends an electronic signal to the physician with the date and time the bottle was opened, providing a very reliable indicator of medication access (despite the remaining possibility that the dose was removed but not actually taken as prescribed).

Understanding adherence requires a multi-method approach to give a clear and accurate picture of whether and how medical recommendations are being followed. Adherence needs to be measured using multiple tools. For example, adherence to antidepressant medication might be assessed by pill count, patient self-report, and MEMS. The combination and reconciling of various assessment techniques can be quite valuable, as individual measures of adherence have been shown to differ from one another by as much as 37%. Just as studies of adherence vary greatly in the way the measure the construct, they also range widely in scope and application. Some studies focus on variations in rates of nonadherence, some on particular types of nonadherence and their associations with patient outcomes, others on the correlates of adherenceothers on the correlates of adherence, and still others on the ways clinicians can improve adherence rates for their patients.

In the Hungarian health care practice there are not used these technology-oriented tools for measuring the adherence of patients. Although the global pharmaceutical companies are present on the local market as well, they don’t offer the patients and the doctors the same tools used in other countries in the adherence programs. The main reason of not offering the tools is not only the cost- factor, but the attitude of doctors and patients to adherence. The doctors pay only very little attention to adherence and if the doctors don’t deal much with adherence it will be not an issue for the patients too. This situation can be followed in the results of the ABC research ABC, 2012).

A comparative study on patient adherence: the ABC project

Non-adherence to medicines is a global issue of major public health concern. Non-adherence to medication is a frequent and widespread phenomenon, can be a major barrier for realising the benefits of medicines presents and is a significant barrier to the safe, effective and cost-effective use of medicines. Many patients do not adhere to effective treatments for the preservation of life1,2, quality of life3-5, organs6, or sight7,8, with direct clinical9,10 and economic consequences11,12.

The aim of ABC study was complex, from finding consensus in definition of adherence to the recommendations to healt care policy regarding improvement of adherence of patients.

The study investigated the factors influencing adherence in a long-term and short-term case. In the long-term approach the patient behaviour has been investigated in chronic-deseases, in the short-term approach the attitude towards antibiotica has been investigated. The study included 8 countries, the results are different for each countries and the results are comparable.

In the empirical research a total of 2630 adults from 11 countries completed the questionnaire.

The analysis was restricted to the 5 countries (Austria, England, Wales, Poland and Hungary) which recruited to target sample of 323 patients within the timeframe of the study (total, 1615). Participants' characteristics in these countries had some special differencies: those recruited from Wales tended to be older, more highly educated, and a higher proportion of females than other countries. Participants within the Hungarian sample reported more co-morbidities and took more medicines more frequently each day than other countries. A greater number of participants reported their general health as poor or fair in Poland (48.6%), Hungary (47.6%) and Austria (36.8%) than in England (19.5%) and Wales (19.8%).

Prevalence of non-adherence

Among the countries which reached target recruitment, patients in the Austrian sample were most adherent, with 109 (33.7%) classed as non-adherent according to the Morisky score. This was followed by patients from Wales (38.1%), England (41.5%), and Poland (57.6%). Compared to these, participants in Hungary were significantly more likely to be non-adherent (70.3%, $\chi^2 = 120.56$, $p < .001$). Intentional non-adherence ranged from 9.6% and 9.9% in Wales and England, 12.7% in Hungary, 17.3% in Austria, and 25.7% in Poland ($\chi^2 = 45.56$, $p < .001$).

The very high ratio of non-adherence in Hungary motivates my research to investigate the adhrence and non-adhetrence in Hungary on an other, bigger and more representative sample.

Factors affecting adherence

According to research results, there are many factors influencing the adherence of patients, we mention the most important categories containing several factors.

Cognitive factors

It goes without saying, perhaps, that patients must understand what they are supposed to do before they can follow medical recommendations. Thus, patients' health literacy is central to their ability to adhere. According to studies, health literacy involves the degree

to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions. Studies show that the risk of nonadherence is very high when patients cannot read and understand basic written medical instructions. Misunderstanding of this type is not as uncommon as one might imagine. One large study of over 2500 patients found that nearly one third had marginal or inadequate health literacy. Of these, 42% misunderstood directions for taking medications on an empty stomach, 25% misunderstood the scheduling of their next of medical practice, as well as what we have yet to determine. The health literacy measures of the Hungarian patients are low as well, according to an international research including 9 countries in Europe (Koltai et al., 2016). In the Hungarian research of the international study there were measured health literacy, the ability to acquire, understand, process and use health related information on an n= 1000 national representative sample of Hungary. The international HLS-EU 47 questionnaire and index calculation methods, developed and validated by the HLS-EU Consortium have been used. Using the internationally validated threshold levels for the general health literacy index, the results showed that more than half of Hungary's 16 or older population has only limited health literacy In each of the three main indices (health care, prevention and health promotion), very low proportions of Hungarian respondents achieved an excellent level of health literacy, while the proportion of those with inadequate health literacy is among the highest in international comparison.

Patients' attitudes

Patients' understanding of their recommendations and good physician–patient relationships are, of course, not sufficient to eliminate the risk of nonadherence. Patients' attitudes, beliefs, and group norms all influence adherence in meaningful and sometimes complex ways. Various

cognitive and behavioral models, such as the Theory of Reasoned Action (Ajzen et al., 1980), the Theory of Planned Behavior (Ajzen, 1991), and the Transtheoretical Model of Change (Prohaska et al., 1982) demonstrate that people's intentions to carry out a behaviour, such as to follow medication treatment, are the immediate precursors to the behaviour itself. In other words, *intending* to adhere, whether this is labeled an intention, a readiness, or a stage of change, is essential to following treatment advice. Intentions, in turn, depend upon what people think and believe, what attitudes they hold, and how other people influence them. Thus, if patients hold beliefs that are incongruent with what their physicians prescribe for them, or if their family or social group members hold divergent views about their illnesses and treatments, patients may have difficulty even forming a willingness or intention to adhere

The social therapeutics environment and the social support available to patients also affect their willingness to adhere, especially when dealing with such conditions as depression, anxiety, HIV, and other illnesses that carry a potential stigma.

Depression

There are meta-analytic works, where the findings suggest that one of the strongest predictors of patient nonadherence to medical treatment is patient depression. The risk of patient nonadherence is 27% higher if a medical patient is depressed than if he or she is not (it is 30% higher if that patient has end-stage renal disease). Depression has long been known to predict poor health outcomes, a fact that may be explained partly by the adherence problems caused by depression. Depressed patients experience pessimism, cognitive impairments, and withdrawal from social support, all of which can diminish both the willingness and ability to follow treatment regimens. Depression is a prevalent and powerful factor in health and illness, and one that cannot be ignored. Depression is currently the most prevalent mental illness and a cause of immense disability in industrialized countries. Major depression is second only to coronary heart disease in functional limitations and serious role impairment. Psychological disorders are often comorbid with chronic illnesses, increasing their associated morbidity and mortality rates

Case studies

As the adherence and health literacy studies show not favourable results for the Hungaraian patients, we will focus in our research on the relationship of health literacy of patients and on the improvement possibilites of adherence of patients.

Case 1: The effect of information on patient adherence on melanoma prevention

Early detection can be very important in addressing the public health threat of both malignant melanoma and non-malignant melanoma skin-cancer. Skin cancer has shown rapid increases over the last century.

The aim of the study was to investigate the patients' behaviour towards prevention with self screening based on the Health Belief Model concept. The method used was survey among 154 patients (not representative sample) with online self-administered questionnaire. The questionnaire contains questions regarding the perceived benefits, the perceived threats, the perceived severity and the self-efficacy and cues to action towards the visit at a practitioner or self-screening. The motivation to action has been measured before and after providing the patient with a description of skin cancer symptomes and the severity of skin cancer.

The research question was whether the information has an effect of adherence in prevention of respondents and whether some factors can be identified for prediction of prevention behaviour.

Results showed, that the respondents were aware of the risk of melanoma, but less than 50% went to practitioner for screening or made self-screening. The demographic variables: age, gender or qualification had no effect on prevention behaviour, but the former experience had an effect. The information during the survey improved the adherence of patients. There was no effect on perceived barriers and perceived benefits, but there was a significant effect on perceived severity and perceived susceptibility. The information increased the willingness to self-screening or to go for a screening to doctor.

The research results show that the patients need to be informed on the disease and on prevention, because the more information can lead to a higher adherence on prevention.

Case 2: The relationship between patient adherence and education in diabetes mellitus

As ABC-study showed, the Hungarian results were the worst for long term long-term adherence that is a crucial problem for chronic diseases. Diabetes patients have one of the lowest adherence ratio, according to adherence data in the most countries.

The research question was whether a good relationship with the doctor focusing on consultancy and education of the patients may have a measurable impact on patient adherence in diabetes?

A survey has been conducted in 5 diabetes centres, the non-representative sample consisted of 100 respondents. Adherence has been measured with self-reporting questions. The majority of patients were in the early phase of the disease, taking not insulin, but medicine.

The respondents were aware of the risk of diabetes and the importance of adherent behaviour. For the majority of respondents was the quality of life important and they were ready to improve their knowledge and behaviour. The measured adherence was better, than the data of patients

in the later phase of diabetes. The patients are ready to learn about the disease and the therapy, but in many cases the doctors do not have enough time for the information. The patients want personalized education, they prefer the personal contacts, but they are ready to use the internet and other communication canals applying the digital technology. But there are differences in using the digital technology.

The research results show better adherence as the general Hungarian data. The results show that the patients need to be informed on the disease and the education improves the adherence also in this chronical disease.

Conclusion

As the case studies show, the health literacy, the education of patients have an important role in improvement of adherence. As the patients get more informations, their behaviour tends to change in improving their behaviour. There are many other questions for the future research on maintaining of the changing behaviour and ont he other factors influencing patients' behaviour as well.

References

ABC (2012): Ascertaining Barriers for Compliance: policies for safe, effective and cost-effective use of medicines in Europe, Final Report of the ABC Project, http://www.ABCproject.eu

Abraham, C., and Sheeran, P. (2008). "The health belief model," in Predicting Health Behaviour, eds M. Conner and P. Norman (Buckingham: Open University Press), 28–80.

Ajzen I. and M. Fischbein (1980), Understanding attitudes and predicting social behavior, Prentice-Hall, Englewood Cliffs.

Ajzen, I. (1991): The Theory of Planned Behavior, Organizational behavior and human decision processes 50, 179-211

Becker, M. H., Radius, S. M., Rosenstock, I. M., Drachman, R. H., Schuberth, K. C., and Teets, K. C. (1978). Compliance with a medical regimen for asthma: a test of the health belief model. Public Health Rep. 93, 268–277.

Janz,K., Becker,M. (1984): The health belief model – a decade later, Health Education Quarterly, Vol. 11(1), 1-47

Koltai,J., Kun,E. (2016): A magyarországi egészségértés nemzetközi összehasonlításban (Hungarian health literacy in international comparison), Egészségfejlesztés, LVII. évfolyam, 2016. 3. szám; doi: 10.24365/ef.v57i3.62

Kotler, P., and Clarke, R. N. (1987). Marketing for Health Care Organisations. (Englewood Cliffs; New-Jersey: Prentice-Hall, Inc.), 578

Prochaska, J. O., & DiClemente, C. C. (1982): Transtheoretical therapy: Toward a more integrative model of change. Psychotherapy: theory, research and practice, 1982,19, 276-288.

Rosenstock, I. M. (1974). The health belief model and preventive health behavior. Health Educ. Behav. 2, 354–386. doi: 10.1177/ 109019817400200405