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PATIENTS' SELF-PERCEPTION, ATTITUDES AND AWARENESS OF HEALTH RISK FACTORS (PATIENTS' JUDGMENT OF RISKS)

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ABSTRACT. The construction of risk perception is important, because perception has a great inertia, and it shapes the attitudes and the human behavior. Ill people are more vulnerable and susceptible than healthy people, their coping and resilience strategies being jeopardized by emotional determinants.

Methods. An anonymous questionnaire including items about the reason/ reasons for hospital admission, diagnosis at admission, and questions with multiple-choices answers trying to detect patients' perception on their health and the awareness of risk factors conditioning the health status was used on 200 patients hospitalized in three clinics: Infectious Diseases, Occupational Medicine and Medical Clinic.

Results. Demographic and socio-economic structure of patients differ form one clinic to another. Although among the first three sources of information frequently accessed, internet is on the last place when it comes on confidence. Most trustful are doctors, then TV and friends, the least trustful being radio, magazines and internet. Patients' attitudes and awareness of health risk factors reflect their knowledge and a discrepancy between attitudes and behavior. Many of presented results in ill people are similar to healthy people, but in terms of disease perceived risk, patients are much more influenced by their level of knowledge and socio-economic level, and other unconscient motivational factors, conducting to an underestimation of risk.

Conclusions. Patients' health education in hospitals is important, but Romania nowadays is confronting a severe shortage of medical staff, so further and refined research is needed to better and fully understand the factors underlying risk perception in ill people.

Key words*: risk perception, danger, attitudes, patients' behavior, environment*

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REZUMAT. Auto-percepţia pacienţilor, atitudinile şi conştiinţa cu privire la factorii de risc în sănătate (judecata riscurilor în percepţia pacienţilor).
Construirea percepţiei asupra riscului este importantă, deoarece percepţia are o mare inerţie şi formează atitudinile şi comportamentul uman. Oamenii bolnavi sunt mai mult vulnerabili decât oamenii sănătoşi, coping-ul și strategiile de rezilienţă fiind periclitate de factorii emoţionali.
Metode. Un chestionar anonim care conţine elemente despre motivul / motivele internării la spital, diagnosticul la internare şi întrebări cu opţiuni posibile de răspunsuri încearcă să detecteze percepţia pacienţilor asupra sănătăţii lor, fiind utilizată conştientizarea factorilor de risc care condiţionează starea de sănătate la 200 de pacienţi internaţi în trei clinici: Boli Infecţioase, Medicina muncii şi Clinică medicală.
Rezultate. Structura demografică şi socio-economică a pacienţilor diferă de o clinică la alta. Printre primele trei surse de informaţii frecvent accesate, internetul este pe ultimul loc când vine vorba de încredere. Cei mai de încredere sunt doctorii, apoi televiziunea şi prietenii, încrederea cea mai redusă o au în radio, reviste şi internet. Atitudinile pacienţilor şi conştientizarea factorilor de risc pentru sănătate reflectă cunoştinţele lor, fiind evidentă o discrepanţă între atitudini şi comportament. Rezultatele percepţiei la pacienţi sunt similare cu cele ale persoanelor sănătoase, dar în termeni de percepţie a riscului de boală, pacienţii sunt influenţaţi de nivelul de educaţie, de cel socio-economic, şi de factorii motivaţionali, fapt ce duce la o subestimare a riscului.
Concluzii. Educaţia pacienţilor cu privire la sănătate în spitale este importantă, dar România zilelor noastre se confruntă cu o lipsă severă de personal medical, este nevoie de cercetare atentă pentru a înţelege mai bine factorii care stau la baza percepţiei riscului de boală.

Cuvinte-cheie: *percepţia riscului, pericol, atitudini, comportamentul pacienţilor, mediu*

Introduction

Although the concepts of danger and risk are often used interchangeably, their meaning is greatly different for specialists. Hazard/peril refers to factor, situation or condition with an intrinsic harmful potential, while risk represents the probability to manifest the negative effect, if someone is exposed to danger (and so, is a future event, socially and subjectively builded) (Buwal, 1991; Bell, 2001).

The construction of risk perception is important, because it shapes the attitudes and the human behavior (Sjoberg, 2000, 2003; Slovic 1978). Perception represents a particulate psychic process of organizing and synthesizing extern stimuli, and once crystallized, have a great inertia.

The risk perception depends on many factors: age, gender (controversial results), religious participation (weak positive correlation), social structure, education (level of knowledge), political orientation, income, familiarity, controllability, the fact of being or not an ordinary, natural, fair, fatal, feared, diffuse in space/time event (Fischhoff, 1987; Flynn, 1994).

When it comes on risk perception, it may not exist a real stimulus, risk being a probability of negative effect, un unoccured event, which only can be imagined, based on attitude, the degree of awareness of danger, vulnerability (subjective probability), and cognition (8).

At the beginnings, first theories about risk perception (Starr, 1969) were focused on cognitive processes, underlying the importance of information (insufficient/incorrect information could determine oversized fears).

Then, psychological approaches highlight the human preferences (how much risk people are willing to accept) in risk perception building (*http://en.wikipedia.org/wiki/Risk perception*; Tversky and Kahneman, 1974; Gregory and Mendelsohn, 1993; Slovic, 2000).

The anthropological/sociological theory sustains the importance of social support (perceptions are builded by institutions, cultural values, way of life) (Douglas and Aaron, 1982; Douglas, 1992).

The most recent approaches try to explain processes of risk amplification or reduction by personal filters (risky events interact with individual psychological factors, cultural and social factors that can change risk perception (Fischhoff, 1987; *http://en.wikipedia.org/wiki/Risk perception*; Tversky and Kahneman, 1974; Gregory and Mendelsohn, 1993; Slovic, 2000; Douglas, 1992; Kasperson J. and Kasperson R.E., 2005; Wildavsky and Dake, 1990; Robin and Mendelson, 1998; Brenot, Bonnefous and Marris, 1998).

Purpose and objective

Risk perception is influenced by numerous factors: familiarity, controllability, the fact of being or not an ordinary, natural, fair, fatal, feared, diffuse in space and time event; gender, income, education, age may also explain differences in risk perception.

Ill people are more vulnerable and susceptible than healthy people, their coping and resilience strategies being jeopardized by emotional determinants.

This paper aims to analyze health risk factors perception in hospitalized patients by assessing their health status and various factors - medical, occupational, and behavioral - that can influence health.

Methods and patients

The study was conducted on a group of 200 patients hospitalized in three clinics from Cluj-Napoca: Infectious Diseases (ID), Department of Occupational Medicine (OM), and Medical Clinic 1 (M1). For data collection was used an anonymous self-filled questionnaire including demographic variables (age, gender, education level, and income); questions about the reason/reasons for hospital admission; diagnosis at admission; and 20 questions with multiple-choices answers, trying to detect self-perception on their health and the awareness of risk factors conditioning the health status (behavioral, occupational, medical, hereditary).

Data were processed in a Microsoft Office database using Microsoft Word and Excel. Chi-square test was also used, significance being given by p-value<.05.

Results

While in ID and M1, patients were split almost evenly in the two genders, most of the patients from OM (70%) were men (table 1). Regarding the provenance, most patients in ID and M1 (70%) are from urban environment, and 64% in OM are from rural environment.

The highest level of education can be found in ID (31% are university graduates), and the lowest level in M1 primary school), while in OM most of patients are vocational school leavers (45%).

Incomes differ from one clinic to another, 80% of all patients having as monthly salary very low to low (fewer than 1500 lei).

Table no. 1. Gender, age, provenance, studies and income

Hospital		ID (n=103) %	OM (n=47) %	M1 (n=50) %	Total (n=200) %
Gender	M	48.5	70.2	56.0	55.5
	F	51.5	29.8	44.0	44.5
Provenance	Urban	70.8	36.1	70.0	62.5
	Rural	29.2	63.9	30.0	37.5
Studies	Primary school	23.3	17.0	36.0	25.0
	Vocational school	14.5	44.6	5.8	21.0
	High school	23.0	27.6	30.0	26.0
	Higher general secondary education	7.79	1.9	3.8	7.0
	Faculty	31.0	2.9	6.7	21.0

Hospital		ID (n=103) %	OM (n=47) %	M1 (n=50) %	Total (n=200) %
Income (lei)	< 500	23.3	19.1	28.0	23.5
	500-1000	34.9	57.4	42.0	42.0
	1000-1500	19.4	19.1	20.0	19.5
	1500-2000	8.7	0.0	6.0	6.0
	200-2500	5.8	2.1	2.0	4.0
	2500-3000	1.9	0.0	2.0	1.5
	>3000	5.8	2.1	0.0	2.5
Mean age (years)		48.6	51.5	60.0	52.1

On a scale of four degrees, patients were asked to self-appreciate their health status (very good, good, good enough, and bad). Globally, only 1% of all patients has appreciated self-health as very good, all of them from ID (table 2).

Bad or good enough health status is considered by 64% in ID, 95.7% in OM, and 86% in M1. Most subjects considering their health status as good or very good are from ID (35.9%), and the fewest in OM (4.2%).

One third of patients from ID are aware they have a risk of disease inheritage and chose to make periodic checks and to inform themselves in order to avoid such as possibility. In the other two Clinics, the main attitudes to avoid this risk are represented by periodic checks and avoiding the known risk factors.

Table no. 2. Self-appreciation of health status

		ID (%)	OM (%)	M1 (%)	Total (%)
Self-appreciation of health status	Very good	2.9	0	0	0.96
	Good	33	4.2	14	17
	Good enough	41.7	46.8	54	47.5
	Bad (poor)	22.3	48.9	32	34
Do you have a risk of disease inheritage?		33	29.7	22	28
Attitudes to avoid the risk of disease inheritage	Inform	32	17	14	21
	Avoid known risk factors	26	34	34	31
	Periodic checks	52	72	70	65
	Don't care/don't change self-life style	17	6	12	12

Table 3 shows the awareness about personal medical condition and disease complications, the importance of treatment and profession, the risk of hospitalization, and medical intervention.

Table no. 4 shows some aspects of nutrition attitudes and habits, as well as the main sources of information about health.

Table no. 3. Patients risk perception (a)

Questions		ID (%)	OM (%)	M1 (%)	Total (%)
Do you have a chronic disease?	Yes	41.7	63.8	48	51
	No	50.5	19.1	48	39
	Don't know	7.7	17	4	10
Do you follow a chronic treatment?	Yes	45.6	72.3	70	63
	No	54.4	27.7	30	37
Are you aware of your disease complications?	Yes	64.2	81.4	60.4	69
	No	35.8	18.6	39.6	31
Is important to follow the treatment?	Yes	96.1	81.4	60	79
	No	3.9	18.6	40	21
Do your pills bring extra-risks for your health?	Little	64.1	72	60.4	65.5
	Moderate	25.6	18.6	30.2	25
	Much	8.9	9.3	9.3	9.2
	Very much	1	0	0	0.6
Is hospitalization a risk factor for health?	Yes	20.4	12.8	10	14
	No	68.9	72.3	82	74
	Don't know	10.7	14.9	8	11
Are medical interventions risky?	Yes	44.6	29.8	38	37
	No	32	36	40	36
	Don't know	23.3	34	22	26
Is risky your profession or place of work?	Yes	48.6	82.9	56	62.5
	No	46.6	10.6	36	31
	Don't know	4.8	6.4	8	6.4
Attitude to avoid professional risk factors	Periodic checks	47	60	34	47
	Changing place of work	17	19	12	16
	No attitude	22	13	46	27
	Don't know what to do	15	13	12	13

Table no. 4. Patients risk perception (b)

		ID (%)	**Questions**	M1 (%)	Total (%)
Is your nutrition healthy?	Healthy	39.8	46.8	44	43.5
	Satisfactorily	52.4	48.9	46	49
	Unhealthy	7.8	4.2	10	7.3
Do you use unhealthy products?	Alcohol	21.4	23.4	18	21
	Tobacco	32	25.5	14	24
	Salt	9.7	17	12	13
	Drugs	0	0	0	0
	None	51.4	57.4	62	57
Number of concomitant unhealthy products	0	51.4	57.4	62	57
	1	35.9	29.8	24	29.9
	2	12.6	8.6	14	11.7
	3	0	4.2	0	1.4
	4	0	0	0	0
Have you a disease risk by consuming these types of substances?	Yes	81.5	93.6	88	87.7
	No	10.7	2.1	6	6.3
	Do not know	7.7	4.2	6	6
Ever got ill after certain food consumption?	Yes	31	45	30	35
	No	69	55	70	65
How often do you search information about health?	Daily	11.6	8.5	18	12.7
	Once a week	14.5	21.3	16	17.3
	Once a month	24.3	21.3	26	24
	Twice a year	29.1	21.3	14	21.4
	Never	6.8	2.1	12	7
What is your confidence in information sources? (mean scores)	TV	2	2.2	2.5	2.2
	Radio	1.8	2.2	1.8	1.9
	Magazines	1.8	1.7	1.9	1.8
	Internet	1.9	1.6	1.6	1.7
	Friends	2.1	2.2	2	2.1
	Doctors	3.3	3.4	3.3	3.3

Conclusions and discussion

Mean age of all the participants is 52.1 years, most of them coming from urban environment. Globally, for most of subjects the highest level of education is high school, primary school then vocational school or faculty.

In all patients and all the three Clinics, the income of most of them is between 500-1000 Ron, values much under the average monthly salary in Romania (*http://www.viata-medicala.ro; http://www.insse.ro*. National Institute of Statistics – Average monthly salary).

The main symptoms justifying the hospitalization are: weakness, pain, fever, breathing difficulty and cough (coughing). Fever was the main reason in ID, breathing difficulty in OM, and pain in M1.

Globally, only 1% of patients have appreciated their health as very good, but none of patients in OM and M1. Over 80% of patients from OM (those who are suffering chronic diseases) and M1 consider their health status as bad or good enough. Most subjects considering their health status as good or very good are from ID, and the fewest in OM. Most of hospitalized patients do not think they could inherit a disease; in order to protect them against such a possibility, they preferred periodic checks and analysis.

More than half follows a chronic treatment (especially from OM and M1) and two thirds of them are aware of possible complications (especially in OM), but only 51% know their illness is a chronic disease (p value for chi-square test <.05). Most of patients are aware about the importance of following treatment. There is no statistical significance between awareness of possible complications and the importance given to following the proper treatment (contingency coefficient=.04 and p-value=.550).

Two-thirds to 3/4 of patients assess the side-effects of medicines (drugs) as low, and a quarter as medium; less than 10% appreciate the risk as high. There is no statistical significance between the given importance of following treatment and health consequences (risks) of medicines (contingency coefficient=.103, p-value=.209).

Hospitalization isn't perceived as a risk factor for health in ¾ of cases, and 1 out of ten patients doesn't know what to believe about this. In Romania, nosocomial infections are under-reported, with a frequency of 1-3%, and about 4% in intensive care units (http), much under real values, and the recognized values in UE or USA (http://www.insse.ro. National Institute of Statistics – Average monthly salary).

In Romania there isn't a fair evaluation of this phenomenon's dimensions, doctors being reluctant about this topic; sanctions, hospital reputation/fame lost, prevent them to officially admit the reality of nosocomial infections. Besides, 21 to 84% of nosocomial infections (in case of surgical site) are manifesting after discharge from hospital (Ghelase et al, 2014), a post-discharge detection program being not available in our country.

Medical interventions are considered risky by over 1/3 of subjects (especially in ID), but one quarter do not have information about this problem

(are not aware about this risk). The chi2-test results show a statistically significance between hospitalization and medical interventions as risk factors (contingency coefficient=.387, p-value=.0001).

Over 60% of all subjects consider that their profession/place of work has/has had represented a risk factor for health, mainly among those from OM, and they chose to protect themselves by periodic checks or changing work place. The rest of patients don't have any attitude or don't know what to think about this aspect.

Less than half of subjects believe their food is healthy, and 2/3 of them do not consume any of unhealthy products (alcohol, tobacco, excessive salt, drugs).

Between 90 and 96% of patients consider their nutrition as healthy or satisfactorily, admitting the concomitant presence of 1, 2 or 3 unhealthy products in their life: one third of patients consume only one unhealthy product, 1/10 uses two products, while three concomitant products are consumed exclusively at OM (4%). None of our subjects uses drugs (affirmatively). Tobacco is the most used unhealthy product; excessive salt is affirmatively consumed by only 10 to 17% of patients, although Romania is a country with a high level of salt ingestion, proving that it's a matter of risk perception here.

Only 5.5% of patients admit they consume other types of unhealthy products (coffee, sweets, gaseous juices, cans). Over 80% of subjects consider they are exposed to risk by consuming this type of substances. There is a significant correlation between the number of unhealthy products and the perceived risk of illness (the higher the number of substances, the higher the perceived risk), with p-value <.05. The most aware of risk are subjects which do not consume any of risky products.

There are still subjects not knowing about the possible health risk, or considering any of those products without risk for them. That's because people believe in the possibility of controlling the risks, as an expression of risk denial (Finucane, 2000). Lay people are oriented by the law "all or nothing" (Wright, Rowe and McColl, 2004), they simplify complex problems in "safe-unsafe", "good-bad" (Slovic, 1978). Vulnerability is an important factor influencing the risk perception: if someone considers him/her vulnerable, his/her behavior and attitude are healthier. Ill people have their expectations about disease evolution or complications influenced by their perception about illness and their subjective vulnerability (Armas, 2006; Kouabenan, 1998).

Even if less than 10% of patients consider unhealthy their nutrition, 35% of patients have had food borne diseases, showing discrepancy between attitudes and behavior, and a lower awareness of possible risk factors of nutrition.

In order to protect them from disease, and to be healthy they try to inform themselves once a month or twice a year, doctors, TV and internet being the most accessed sources of information.

For question "What is your confidence in information sources?" the answers were rated with 1 ("very little"), with 2 ("little"), 3 ("much"), and 4 ("very much"), then a mean score was calculated for every answer. Although among the first three sources of information frequently accessed, internet is on the last place when it comes on confidence. Most trustful are doctors (much and very much), then TV and friends (little too much), the least trustful being radio, magazines and internet (little or very little).

Many of presented results in ill people are similar to healthy people, but in terms of disease perceived risk, those presenting a disease are much more influenced by their level of knowledge and socio-economic level (like the very first theories on risk perception), and other unconscient motivational factors, conducting to un underestimation of risk (Brehmer, 1987).

Hence, patients' health education in hospitals is important, but Romania nowadays is confronting a severe shortage of medical staff, and health education is very time consuming.

Although notion of risk perception appears back in 70' years, the meaning is confused and the studies are insufficient, especially in Romanian subjects. In order to better and fully understand the factors emphasizing risk perception in ill people, further and refined research is needed, risk perception being an essential indicator in crisis management and the adoption of policies and strategies to reduce danger.

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