

## Risk perception of communicable diseases among adult Latvian general practice patients

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### **Summary**

*Context: The willingness in a population to accept measures against hazards and diseases depends on the perception of health risks involved. Studies on health risk perception in the general population are lacking in Latvia.*

*Objective: To study risk perception of communicable diseases in a sample of adults in Latvia.*

*Design and setting: Data were collected in ten general practices in Latvia October 2001. Every fifth patient visiting the general practitioners (GPs) during two weeks was requested to participate in a structured interview performed by a nurse.*

*Subjects: 199 patients aged 18-78 years; 65% were females.*

*Results: More than half of the respondents perceived that they were at high risk of contracting communicable diseases, especially food borne infections. Twenty eight percent of the patients thought that they had a high or very high risk of attracting lung tuberculosis, and an additional 20% perceived this risk as being moderate. Only 19% had a high or very high confidence in preventive measures against communicable diseases, but 58% had high or very high confidence in treatment. More than half regarded their knowledge about communicable diseases as rather low.*

*Conclusion: There seems to be a substantial perception of risk of communicable diseases among adults in Latvia. This is combined with a low confidence in preventive measures, but a high trust in treatment. Latvia probably has important preventive potentials in strengthening general health education about public health matters, and in particular in relation to the prevention of communicable diseases.*

*Key words: communicable diseases, infections, tuberculosis, general practice, health education, Latvia*

## Introduction

When Latvia achieved political independence in 1991, a process started which caused profound changes in the entire setup of the society. Not only economy and social conditions were subjected to alterations, but also living circumstances in general, health, and the availability of health services.

It is well established within public health science that social instability favours spread of communicable diseases. Failures in controlling such diseases as well as care for patients may endanger the whole population. These assumptions also seem relevant for Latvia (1,2). For example, the numbers of acute intestinal infections clusters (each with five and more affected cases) increased by a factor of about four in the years 1997-2000, suggesting faultiness in food handling and hygiene. Tuberculosis has again become a public health threat. The prevalence of tuberculosis is still increasing, from 70.5 to 72.9 per 100 000 inhabitants from 2000 to 2001, and the rising occurrence of multiresistant strains causes particular concern.

A part of the problem may be related to insufficient knowledge about communicable diseases in the general population. Another factor may be a general underestimation of health hazards when costs for health have to be balanced against other values that are felt as equally imminent demands, such as housing, clothing, buying a car etc.

This study attempted to explore communicable disease risk assessment among adults in Latvia by interviewing patients seeing a general practitioner.

## Material and methods

In ten Latvian general practices (five urban and five in rural areas) adult patient encounters were recorded successively and simultaneously during a two weeks' period in October 2001. Every fifth patient consulting the general practitioner (GP) was invited to a structured interview on their individual perception of infection risks. Trained nurses performed the fifteen minute interviews. In all, 199 patients aged 18-78 were interviewed, 65% of which were females.

Questions were posed and answered in Latvian by means of a pre-tested form. The questionnaire addressed the perception of infection risks, confidence in preventive measures taken in society, assessment of own knowledge regarding communicable diseases, own capacity to protect oneself from communicable diseases, and confidence in treatment offered in case of contracting some communicable infection. In addition, more specific questions were posed concerning tuberculosis, sexually transmitted diseases, and food borne infections.

Differences between proportions were analysed by Chi-square tests in the SPSS programme, version 10 (3); level of significance was set to p-values " 0.05. In the cross tabulations, the answering categories were combined into 1: Very high/ high, 2: Moderate, 3: Low/very low. The "Do not know" category was not included in the cross tabulations. The independent variables used were sex, age tertiles (18-32 years, 33-48 years , 49-78 years), and being diagnosed as having an infection (yes/no).

## Results

34 out of 1 000 recorded patients had to be excluded due to incomplete forms, giving a total number of 966 patients of which 199 completed the interviews.

More than half of the respondents perceived their own risk of getting a communicable disease to represent a substantial health threat (Table I). Eighty percent had only a moderate or a low confidence in preventive measures taken in society against communicable diseases.

More than half of the respondents stated that they had a low or very low degree of knowledge regarding communicable diseases. Only one third of the respondents perceived their own capacity to protect themselves from contracting communicable diseases as being high or very high, more males than females (46% versus 25%,  $p < 0.05$ ). This was the only significant gender difference found in the data set. More than half of the respondents were confident that contagious infections might be treated efficiently by modern medicine.

Twenty eight percent of the patients thought that they had a high or very high risk of attracting lung tuberculosis, and an additional 20% perceived this risk as being moderate (Table II). On the other hand, 39% perceived their risk as being low or very low. Those in the middle age group (33-48 years) were more likely to report a very low or low risk (59% compared to 34% in the youngest and 39% in the oldest group,  $p < 0.01$ ). Nine out of ten respondents were in favour of rather comprehensive control programmes to prevent the spread of lung tuberculosis (hygienic measures, vaccinations, X-ray controls, isolation of patients under treatment, etc.). When asked to what extent they thought that resistant tuberculosis bacteria might represent a problem for controlling lung tuberculosis, only half of the respondents claimed that they had any knowledge about this issue.

As regards sexually transmitted diseases, three out of four respondents assessed their own risk of contracting such diseases to be low or very low. Almost half of the respondents thought that the general level of knowledge about preventing sexually transmitted diseases in society was moderate,

while about one out of four felt that the level was high or very high. When asked to which extent sexually transmitted diseases might cause infertility, more than half of the respondents meant that the risk was high or very high, whilst one out of five claimed that they did not know. However, the confidence in treatment possibilities was generally high.

The self perceived risk of contracting food borne infections was rather high; half of the patients assessed their risk as being high or very high, while one third thought that they were at a moderate risk. The public health measures and regulations against food borne infections were judged as moderately satisfactory or less so (low/very low) by 84% of the respondents.

When having diarrhoea and/or vomiting, nearly half of the respondents said that they would relate this to intake of food and drinks. The oldest age group was less likely than the younger ones to relate gastrointestinal symptoms to food and drinks (33% responded high/very high compared to 60% in the youngest and 45% in the middle age group,  $p < 0.01$ ). However, in all age groups the likelihood for seeking some professional advice in case of acute gastroenteritis was generally low.

*Table I. Perceptions of communicable diseases among 199 adult patients in general practice in Latvia. Percentages.*

	Very high/ High	Moderate	Very low/ Low	Do not know
The chance of getting a communicable disease is an actual threat to own life and health	58	23	16	3
Confidence in the preventive measures taken in society against a communicable disease, e.g. public hygiene, vaccinations, food control	19	49	31	2
Own knowledge regarding communicable diseases	6	42	52	1
Capacity to protect oneself from contracting communicable diseases	32	46	19	4
Confidence that communicable diseases may be treated efficiently by modern medicine	58	21	7	14

*Table II: Perception of own risk of lung tuberculosis, sexually transmitted diseases, or food borne infections among 199 adult patients in Latvian general practice. Percentages.*

	Very high/ High	Moderate	Very low/ Low	Do not know
<b>Lung tuberculosis</b>				
Self perceived risk of contracting lung tuberculosis	28	20	39	13
Acceptance of comprehensive control programs	92	5	1	4
Perception that resistant bacteria is a problem in control of lung tuberculosis	36	14	3	47
<b>Sexually transmitted diseases (STD)</b>				
Self perceived risk of contracting STD	11	14	73	3
Perception of own knowledge about STD prevention in general public	28	48	21	4
Perception that STD cause infertility	55	24	2	20
Perception that STD can be treated successfully	55	21	9	15
<b>Food borne infections</b>				
Self perceived risk of contracting food borne infections	48	35	15	2
Careful to avoid food borne infections in daily life	51	29	18	2
Perception of public health measures and regulation in society to protect against food borne diseases as satisfactory	12	48	36	4
Relate own diarrhoea and/or vomiting to intake of food or drinks	45	36	17	3
Seek professional advice for diarrhoea and/or vomiting	14	29	57	1

## Discussion

There are few traditions for research projects in primary health care in Latvia, and we have found no previous study on peoples' perceptions of health issues.

As the participants were selected in a patient population, the respondents may differ somewhat from the general adult Latvian population. Only 35% were males, while males constituted 46 % of the Latvian population in 2001 (2). The interviews were performed in a health care setting. This may have introduced a bias, i.e. that the participants expressed more concern about health care matters than the general population would have done. This possible overestimation of risk perception in our population, as compared to that in the general Latvian population, should be taken into account when interpreting the results.

The over all knowledge of communicable and infectious diseases was low. The fact that half of the respondents were not aware of the dangers connected to the drug resistant tuberculosis strains may complicate the acceptance of precautions that may be needed to avoid further growth of the tuberculosis problem.

Traditionally, the group of sexually transmitted diseases in Latvia mainly contained syphilis, gonorrhoea, chlamydia, and other urinary- and vaginal infections (2). The introduction of HIV to Latvia is relatively new and came predominantly with injection substance abusers. We therefore suppose that in 2001, some respondents probably did not regard HIV primarily as a sexually transmitted disease.

At the time of this study, public health issues were by and large neglected among the general population. Therefore it seems that Latvia still has important preventive potentials e.g. in strengthening the risk perception by a more efficient general health education. The findings in this study suggest that the population probably will welcome comprehensive control programs, in particular regarding the fight against tuberculosis.

In general, the results from this study points to the importance of knowledge about health risk perception as such in public health work. Studies of the perception of risk in a society (4,5) may be indispensable in order to learn how different risks are ranked by the individuals, and how consequences of risk-taking are perceived by those involved.

In case of contagious diseases, the imbalance between the perception of risk held by the professionals and that of the lay population causes concern: On the medical side the risk of spread has prime interest because treatment may fail. On the lay side trust in treatment seemed to subdue the risk of affecting the disease.

## Conclusions

Our main finding is that nearly six out of ten among our Latvian respondents perceived they had a relatively high chance of contracting some communicable diseases. In general they had a rather moderate confidence in preventive measures, but their confidence in treatment was high. Important also was that many people regarded their own knowledge about communicable diseases to be low. People reported a moderate trust in self-administered preventive measures against these infections, but on the other hand, many claimed that they were very careful to avoid food borne illnesses in daily life. An insight into the health risk perception held by the target population seems to be a necessity when tailoring public health measures.

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