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## The Innsbruck Women's Health Study 1999: health status and behaviour

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### Summary

**Objectives:** The aim of this study is to report descriptive results of a recent survey on women's health and to analyse associations between perceived health status and health behaviour.

**Methods:** A cross-sectional survey on 609 women aged 20 to 95 years was performed in Innsbruck (Austria) in 1999.

**Results:** Self-reported poor health status was 6% in the 20–39 age group, 10% in the 40–59 age group and 20% in the 60 and older age group. Age and physical activity were significant predictors for health status. Women who performed physical activities on a regular basis had a more than 70% reduced risk of poor health status. Concerning the prevalence of self-reported morbidity, urogenital disorders (35%), allergies (32%), and headache (42%) were most frequent in younger women whereas skeletal disorders such as rheumatic diseases (41%), osteoporosis (39%), and intervertebral disc damage (39%) in older women. Important health behaviour-related problems to be found were 40% smoking among women under 40, and 42% overweight or obesity among women over 60. Stress affected 37% of women under 60 years of age.

**Conclusions:** Physical activity, smoking, overweight and stress revealed to be key-indicators for improving women's health.

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**Key-Words:** Women's health – Health status – Health behaviour – Health surveys – Lifestyle – Physical activity.

In recent years women's health has attracted increased attention by health officials and scientists. The growing demand for gender-specific health reporting and health promotion has been emphasised by many international organisations<sup>1–5</sup>. Beyond the characteristics associated with the female reproductive function, patterns of health and illness show marked differences between men and women. In general, women tend to have a longer life expectancy than men in the same socio-economic circumstances. Although they live longer, they do not necessarily live better and healthier lives. According to women's assessments of their own physical and psychological well-being, they are more prone to illness than men<sup>6</sup>. In the United States for example, women were 25% more likely to report that their activities are restricted by health problems, than men<sup>7</sup>. Besides mortality and morbidity, several other less objective but important aspects of health status such as self-rated health status, mental and psychosocial well-being have to be considered when assessing women's health. Nervousness, headache, or sleeping disorders may often result in a poor quality of life<sup>8</sup>. Health behaviour and lifestyle as well as the socio-economic environment are strongly associated with health status<sup>9–12</sup>.

Health status clearly deteriorates with age but its perception does not always depend on it<sup>13</sup>. Women seem to take into consideration a broad range of factors, including lifestyle, vitality, mental attitude, socio-economic status, reproductive history and if they have a health condition, the chronicity of their disease, duration since diagnosis, and treatment<sup>14,15</sup>. Perceived health status is certainly a key health issue and because of its complexity it is a demanding challenge for scientists to find its determinants.

Despite the increased activities in reporting the women's situation<sup>16–18</sup>, there is a continued lack of routinely collected health statistics. In Austria, only a small number of surveys

or health statistics systematically account for gender<sup>19</sup>. However, reporting on women's health on a regular basis, provides the knowledge base and the technology upon which health policies and health services are founded. Health promotion and health care depend largely on the availability and quality of health data. Successful health policy strategies should reflect women's needs and should therefore be data-driven.

To collect specific information on women's health status and health behaviour we performed a cross-sectional study in the city of Innsbruck (Austria) in 1999. 609 women, aged 20 years and older, participated in this study and were personally interviewed. The purpose of this paper is to report the most important results of the study concerning health status and health behaviour. Presentation of data is primarily descriptive and focuses on age-dependent differences. Additionally, this study aimed to identify correlates of self-rated health. We analysed cross-sectional associations between perceived health status and health behaviour/lifestyle variables.

## Methods

### *Study participants*

The population studied, consisted of a representative sample of women 20 years and older presently residing in Innsbruck, the capital city (approx. 120 000 inhabitants) of the province of Tyrol (Austria). A random sample stratified by age (20–39, 40–59, 60 and older) was drawn from a sampling frame obtained from the local administration. Sampling was weighted 1:1:2 in favour of women aged 60 years and older. Those sampled were contacted first by letter or by phone and then received a personal interviewer in their homes. 609 from 975 selected women (62,5%), aged 20 to 95 years, agreed to participate and completed the interview.

### *Data collected*

The participants' health status, health behaviour, and demographic characteristics were ascertained through the completion of the interviewer-administered standardised questionnaire by each individual. Health status included self-reported morbidity, hospitalisation, medical attendance, intake of medication, and quality of life. Health behaviour included nutrition, drinking, smoking, physical activity, risk factors such as stress or sunburn, and participation in preventive visits.

The questionnaire was developed in 1993 when the first health survey took place in Innsbruck. Questions were posed in a simple standard way as it is usually done in health

surveys. For example physical activity was asked like this: "How often do you perform sports or physical activity (hiking, walking, biking, gymnastics or other kinds of sport)?" The answer choices were "daily", "weekly", "seldom" or "never". To keep the interview short no additional standardized instruments were used.

### *Data analysis*

The main results of the study were presented by means of descriptive statistics. Analysis focused on differences between the age-subgroups (20–39 years of age, 40–59 years and 60 and older). Effects of health behaviour/lifestyle and sociodemographic variables on health status were analysed using a logistic regression model taking into account stratification and weighting information<sup>20</sup>. The dependent variable health status was based on the question: "How would you describe your current health status?" Is it "very good", "good", "satisfactory", "not good" or "poor". Those who answered that their health status was "not good" or "poor" were considered as having poor health status. Eligible predictors for health status were all lifestyle/health behaviour variables. Selection of independent variables was based on previously known associations and univariate statistical analyses using Mann-Whitney test, Pearson's Chi-square test or Fisher's Exact test, as appropriate. Goodness of fit tests and sensitivity analyses were applied to assess the stability of the model. The model was checked for interactions between the predictor variables. P-values less than 0,05 are considered to indicate statistical significance.

## Results

### *Sociodemographic characteristics*

Table 1 shows the sociodemographic characteristics of the sample subdivided into the three age groups. There are substantial differences in educational attainment between the participants in the age group 20–39 and women aged 60 years or older. In the older group, primary school and apprenticeship were most common. The younger age group were more likely to have finished a secondary school or a university education. More than 90% of the study population were Austrian citizens. The other most frequently occurring nationalities were citizens from the former Yugoslavia, Germany, and Italy. Family status changed with age: in the youngest age group most women were single or married, in the middle aged group most of the women were married, while most of the older women were married or widowed. More than 80% of the women aged 40 and older reported to have children, and 60% raised the family together with a

	Age 20 – 39 yrs (31 ± 4 yrs)* n (%)	40 – 59 yrs (49 ± 6 yrs) n (%)	60 and older (73 ± 9 yrs) n (%)
<b>Education</b>			
Primary	12 (7)	27 (16)	104 (39)
Apprenticeship	69 (41)	96 (57)	127 (47)
Secondary	36 (22)	19 (11)	20 (7)
University	50 (30)	28 (16)	18 (7)
<b>Job</b>			
Employed	105 (64)	107 (63)	12 (5)
Unearned income (pension etc.)	2 (1)	20 (12)	219 (83)
Maintained person (student etc.)	54 (33)	38 (23)	33 (12)
Unemployed	4 (2)	4 (2)	1 (0)
<b>Citizenship</b>			
Austrian	151 (90)	160 (94)	265 (98)
Other	16 (10)	10 (6)	5 (2)
<b>Family status</b>			
Single	86 (52)	21 (12)	30 (11)
Married	72 (43)	113 (67)	107 (40)
Divorced	7 (4)	31 (18)	19 (7)
Widowed	2 (1)	5 (3)	113 (42)
<b>Children</b>			
No	80 (49)	29 (17)	49 (18)
Yes: Two-parents	60 (36)	102 (60)	159 (60)
Single-parent	24 (15)	38 (23)	59 (22)
<b>Members in the household</b>			
One person	21 (12)	21 (12)	137 (51)
Two persons	48 (29)	58 (34)	109 (40)
More than two persons	98 (59)	91 (54)	23 (9)
<b>Material conditions (household)</b>			
Low income ( $< 725$ Euro per month)	105 (65)	78 (49)	114 (47)
Higher income ( $\geq 725$ Euro per month)	57 (35)	81 (51)	129 (53)

\* mean  $\pm$  SD

**Table 1** Sociodemographic characteristics of the study participants, by age groups. Innsbruck Women's Health Study, Austria, 1999

spouse. Up to 60 years most women were living with at least two people in a household. There was a higher tendency for women aged 60 or older to live alone, often due to being widowed. With regard to household income, about half of the study participants had higher revenues.

### Health status

Perceived general health and disability due to health problems, as well as impaired mobility, vision and hearing, were our key indicators for health status. Only 64% of women under 40 reported their health status to be very good or good. Persons older than 60 years had a 32% very good or good health status, 48% were satisfied with their general health and 20% reported a poor health status. 50% of the persons in this age group stated that they were disabled due to health problems. 52% complained of visual problems. Impaired mobility and impaired hearing was noted by 37% and 30%, respectively.

	Age 20 – 39 yrs (31 ± 4 yrs)* n (%)	40 – 59 yrs (49 ± 6 yrs) n (%)	60 and older (73 ± 9 yrs) n (%)
<b>Perceived general health</b>			
Very good/good	107 (64)	91 (54)	86 (32)
Satisfactory	52 (31)	68 (40)	130 (48)
Poor	8 (5)	10 (6)	55 (20)
<b>Disability due to health problems</b>			
No	151 (90)	140 (83)	136 (50)
To a certain extent	13 (8)	18 (11)	94 (35)
Yes	3 (2)	10 (6)	41 (15)
<b>Impaired mobility</b>			
No	159 (96)	148 (88)	169 (63)
Yes	6 (4)	21 (12)	99(37)
<b>Impaired vision</b>			
No	142 (85)	107 (63)	128 (48)
Yes	24 (15)	62 (37)	140 (52)
<b>Impaired hearing</b>			
No	161 (97)	159 (94)	187 (70)
Yes	5 (3)	10 (6)	82 (30)

\* mean  $\pm$  SD

**Table 2** Key indicators for health status, by age groups. Innsbruck Women's Health Study, Austria, 1999

### Self-reported morbidity

Concerning the prevalence of self-reported morbidity, marked age-related differences were found. In younger women headaches (42%), urogenital disorders (35%), and allergies (32%) were dominant, as were skeletal disorders such as rheumatic diseases (41%), osteoporosis (39%), and intervertebral disc damage (39%) in older women. Also venous diseases, hypertension, hypercholesterolemia, hyperlipidemia, and insomnia were found to increase strongly with age. For example, 25% of women older than 60 years of age were afflicted with hypertension, 27% had hyperlipidemia including hypercholesterolemia, and 42% were overweight or obese. Also, 35% suffered from manifest cardiac diseases. Mental and psychosomatic disorders were relatively frequent in younger age groups. 42% of women under 40 years of age complained of headache, and 17% complained of nervousness. Headache was considerable lower in the higher age groups (33% and 25%, respectively). Sleeping disorders became more prevalent among the older age group.

### Health behaviour

As key indicators for health behaviour/lifestyle, we selected the variables smoking, alcohol consumption, body mass index (BMI), diet, physical activity, stress, sunburn, and preventive visits. Most remarkable was the 40% rate of smokers in the group of women under 40 years of age. 37% of these women also took the contraceptive pill while smoking. 35% of the participants in the 40–59 age group reported smoking.

	Age 20–39 yrs (31 ± 4 yrs) <sup>a</sup> n (%)	40–59 yrs (49 ± 6 yrs) n (%)	60 and older (73 ± 9 yrs) n (%)
<b>Cardiac diseases</b>			
Cardiovascular diseases <sup>a)</sup>	0 (0)	2 (1)	43 (16)
Heart insufficiency	1 (1)	3 (2)	51 (19)
Cerebro-vascular diseases <sup>b)</sup>	0 (0)	3 (2)	34 (13)
Hypertension	2 (1)	22 (13)	65 (25)
Cancer	0 (0)	3 (2)	10 (4)
<b>Metabolic disorders</b>			
Diabetes mellitus	1 (1)	3 (2)	30 (11)
Hypercholesterinaemia/ hyperlipidaemia	1 (7)	37 (22)	71 (27)
Gout/hyperuricemia	1 (1)	4 (2)	20 (8)
Goitre/thyroid disease	6 (4)	14 (8)	32 (12)
<b>Gastrointestinal disorders</b>			
Gastric and intestinal ulcer	4 (2)	9 (5)	16 (6)
Hepatic and bile-disorders	2 (1)	6 (3)	32 (12)
Digestive problems/ constipation/diarrhea	21 (13)	19 (11)	56 (21)
<b>Urogenital disorders<sup>c)</sup></b>			
	58 (35)	23 (14)	19 (7)
<b>Chronic lung diseases (asthma/bronchitis)</b>			
	15 (9)	18 (11)	25 (9)
<b>Skeletal disorders</b>			
Osteoporosis	1 (1)	20 (12)	103 (39)
Rheumatic diseases	2 (1)	29 (17)	109 (41)
Intervertebral disc damage	4 (2)	38 (23)	105 (39)
<b>Venous diseases<sup>d)</sup></b>			
	9 (6)	42 (25)	111 (41)
<b>Allergies</b>			
	53 (32)	47 (28)	45 (17)
<b>Psychical disorders</b>			
Eating disorders	6 (4)	2 (1)	11 (4)
Headache	70 (42)	55 (33)	66 (25)
Insomnia	14 (8)	36 (21)	91 (34)
Nervousness	28 (17)	37 (22)	58 (22)
Free from any disease	59 (38)	21 (14)	5 (2)

<sup>a</sup> mean ± SD  
<sup>b</sup> Circulatory disturbance/angina pectoris/myocardial infarction  
<sup>c</sup> Stroke or cerebral circulatory disturbance  
<sup>d</sup> Stones or inflammation of the bladder/kidney/urinary tract and menstrual disorders  
<sup>e</sup> Phlebitis/thrombosis/varicoses

**Table 3** Self-reported morbidity by age groups. Innsbruck Women's Health Study, Austria, 1999

Less pronounced was the rate of smokers in the older women (10%). Overweight and obesity increased with age. In the age group up to 40 years, there were 9% overweight and 3% obese, while in the group older than 60 years, 33% of the participants were overweight and 9% were obese. Physical activity did not vary significantly between the age groups. Almost 75% of all women reported regular physical activity. Apart from smoking the most frequently affecting behaviours in younger women up to 60 years, were stress (38%, 36%) and sunburn within the last year (36%, 19%). More than 65% of all women underwent at least one preventive medical check-up. In the group of 40–59 years of age, this percentage was 74%.

	Age 20–39 yrs (31 ± 4 yrs) <sup>a</sup> n (%)	40–59 yrs (49 ± 6 yrs) n (%)	60 and older (73 ± 9 yrs) n (%)
<b>Smoking habits</b>			
Never smoked	77 (46)	69 (41)	195 (73)
Former smoker	23 (14)	41 (24)	45 (17)
Smoker	67 (40)	58 (35)	28 (10)
<b>Consumption of alcohol</b>			
20 g/day or less	153 (92)	149 (88)	207 (84)
More than 20 g/day	14 (8)	21 (12)	43 (16)
<b>BMI (kg/m<sup>2</sup>)</b>			
Underweight (< 18)	4 (2)	4 (2)	9 (3)
Normal (18–24.9)	142 (86)	113 (66)	146 (55)
Overweight (25–29.9)	15 (9)	35 (21)	88 (33)
Obesity (≥ 30)	5 (3)	18 (11)	24 (9)
<b>Dietary habits</b>			
Dieting	28 (17)	36 (21)	69 (26)
Not dieting	139 (83)	134 (79)	201 (74)
<b>Cholesterol and blood lipid levels</b>			
Elevated	11 (7)	37 (22)	71 (27)
Normal	153 (93)	131 (78)	195 (73)
<b>Physical activity/sports</b>			
Regular	119 (71)	131 (79)	198 (73)
Rare	37 (22)	32 (19)	45 (17)
Never	11 (7)	4 (2)	28 (10)
<b>Stress</b>			
Yes	64 (38)	60 (36)	24 (9)
No	103 (62)	109 (64)	249 (91)
<b>Sun burn</b>			
Sun burn in the last year	60 (36)	32 (19)	5 (2)
No sun burn in the last year	107 (64)	138 (81)	263 (98)
<b>Contraceptive pill intake and smoking</b>			
Pill intake	71 (44)		
Pill intake and smoking	26 (37)		
Pill intake and no smoking	45 (63)		
<b>Preventive medical check-up</b>			
Yes, at least once	97 (58)	126 (74)	174 (64)
Never	70 (42)	44 (26)	96 (36)

<sup>a</sup> mean ± SD

**Table 4** Key indicators for health behaviour, by age groups. Innsbruck Women's Health Study, Austria, 1999

#### Association of health status and health behaviour

We analysed associations between health status and health behaviour taking into account the given sociodemographic information. In the following variables significant univariate associations ( $p < 0.05$ ) regarding health status were found: age, physical activity, diet, BMI, stress, education, income, number of persons in household. These variables together with smoking, alcohol consumption, marital status, number of children, and citizenship were included as independent variables in the multivariate analysis. The final logistic regression model revealed only age and physical activity as significant predictors for health status. All other considered variables, including interactions between these variables, did not show significant effects on health status in the adjusted

Variable	Observed	Estimated proportion (%)	Standard Error	Odds Ratio (95% CI)	p-value
<b>Age (years)</b>					
20 - 39	8/159	5,7	0,02	1	
40 - 59	10/159	9,5	0,05	1,55 (0,44 - 5,42)	0,49
≥ 60	55/216	19,6	0,03	3,84 (1,78 - 8,26)	0,001
<b>Physical activity</b>					
Daily	24/201	8,9	0,02	0,28 (0,09 - 0,88)	0,03
Weekly	13/210	7,7	0,03	0,27 (0,12 - 0,59)	0,001
Rare	21/93	18,2	0,06	0,74 (0,26 - 2,12)	0,58
Never	15/28	29	0,07	1	
CI = confidence interval					

**Table 5** Predictors of poor health status evaluated through the final survey logit model. Innsbruck Women's Health Study, Austria, 1999

analysis. The model showed a highly significant association between the dependent and the two independent variables ( $p < 0.001$ ). Correct classification rate was 85%. Table 5 presents observed and estimated proportions of women reporting poor health status and odds ratios with 95% confidence intervals separately for the different levels of age and physical activity. Poor health status increased with age. Women over 60 years of age were 3.8 times more likely to report not good or poor health compared to women between 20 and 40 years of age. Physical activity was found to have a strong protective influence. Women with daily or weekly physical activity showed a more than 70% reduced risk of poor health status compared to women who never perform sport or mild physical activities such as walking, cycling, gymnastics, etc. Even after adding the variable immobility (126 women reported being hindered in mobility) as a covariate into the model, physical activity still remained significantly influential on health status.

## Discussion

This cross-sectional study, based on a representative sample of the female residents of Innsbruck (Austria), provides insights into the health status and behaviour of women living in this alpine city. The study revealed profound health behaviour related problems such as heavy smoking in young women or overweight in older women. Furthermore, we could show a strong association between health status and physical activity.

Since a comparable health study of Innsbruck's citizen was performed in 1993<sup>21</sup>, results of 1999 can be compared with that study in order to establish trends in health status and behaviour. In 1999, self-reported general health status was more frequently found to be very good or good (47% vs 39% in 1993). In contrast, poor health status was higher in 1999 (12% vs 8% in 1993). 41% reported their health status

to be fair in 1999 and 53% in 1993, respectively. In 1999, women were more satisfied with their mobility, vision and their hearing abilities. As the most important development with regard to self-reported morbidity, the following changes were reported since 1993: Cardiac diseases decreased within all age groups. Gout showed an overall declining tendency. In the age group of 40–59 years, circulatory disturbance, overweight/obesity, and liver diseases decreased considerably. Women older than 60 years reported in 1999 higher prevalence of varicoses and intervertebral disc-damages, women in the age group of 40–59 years higher prevalence of renal diseases. Generally, diabetes type II, hypercholesterolemia, rheumatic diseases, allergies, and cancer showed an increasing tendency.

With regard to health behaviour, there was an increase in presentation for preventive medical check-ups (74% in 1999 vs 56% in 1993 in women between 40–59 years of age). The percentage of regular smokers was higher in 1999, especially in young women (40% in 1999 vs 37% in 1993). Women were also more likely to perform sports in 1999.

The increasing smoking rate is rather worrying since according to one estimate, approximately half of the entire women's favourable difference in life expectancy in the United States and Sweden can be attributed to past gender differences in smoking patterns<sup>22</sup>. Smoking, along with men's greater exposure to occupational carcinogens is primarily responsible for the much higher numbers of male deaths from lung cancer. Additionally to the elevated risk of lung cancer, smoking is generally associated with lower levels of health consciousness, e.g., low fibre ingestion and not taking exercise<sup>23,24</sup>. There continues to be surprise and disappointment among health professionals that rates of smoking are not declining and indeed may even be increasing among women, particularly the young<sup>25</sup>.

Compared to 1993, physical activity increased in 1999. Women of 40–59 years of age were 15% more regularly active and women older than 60 years were as much as 25% more

active. This development is favourable since in several studies, physical activity was reported to be positively related with good health status<sup>26</sup> and inversely related with chronic disease, morbidity, and mortality<sup>27,28</sup>. Likewise, we were able to show this association between physical activity and health status in our study. Also, the benefit of regular physical activity in providing long standing protection against the manifestations of coronary heart disease has been demonstrated<sup>29,30</sup>. Another study found that walking for exercise is associated with successful ageing<sup>31</sup>. Thus, encouraging older persons to partake in sports could be an approach to improve their well-being.

Actually, about 40% of Innsbruck's women older than 60 years report overweight/obesity and a quarter suffer from each hypercholesterolemia/hyperlipidemia and hypertension. Diabetologists expect a third of the middle-aged obese people to develop diabetes<sup>32</sup>. Considering that these disorders are potential risk factors for atherosclerosis, myocardial infarction, and stroke, the prevention of these risk factors should be more encouraged.

The tendency of a higher proportion of women older than 60 years who suffer from skeletal disorders such as rheumatic diseases, osteoporosis, and vertebral disc-damage is worrying because of their consequences of disability and impaired well-being. In fact, more than every third female citizen in Innsbruck older than 60 years is affected from impaired mobility.

The finding that nearly every third participant suffers from headache, and that insomnia and nervousness are reported in approximately 20% of Innsbruck's women, agrees with other studies that these non-specific symptoms are widely present<sup>33</sup>. Such disorders may be the expression of psychosocial problems, or at least a lack of psycho-social well-being. Mental and psychological well-being is an important aspect of health-related quality of life, although less information about this dimension of health is available.

There are some limitations of our study which have to be considered. Self-rated data provide a subjective measure of health and are less valuable than objective ones. Self-reported morbidity does not equal confirmed diagnoses of diseases. However, self-reported poor health status showed to be a strong predictor of death in several longitudinal studies<sup>34-37</sup> and even patients' involvement in recording and assessing their own state of health, represents a major element in the process of evaluating the impact of health care<sup>38,39</sup>. The fact, that no further associations were found between health status and lifestyle or socio-economic factors can be

explained through the relatively small effects of these variables which are difficult to detect in middle-sized studies. The sample size of  $n = 609$  with only 73 women rating their health as poor provides only limited statistical power to detect determinants of poor self-rated health in a multivariate model.

However, positive correlations between lower educational attainment, low household income, and women living alone or women without children, and poor health status are well known<sup>40,41</sup>, as well as associations between smoking, alcohol consumption, diet, overweight, stress, and health status<sup>42</sup>. Our findings do not directly address issues of cause and effect in order of the cross-sectional design of the study. Causal directions of the relationship between health status and lifestyle have to be evaluated in longitudinal epidemiological studies.

In summary, this study confirms that age and physical activity are vulnerable indicators for health status. Regular physical activity not only contributes strongly to a person's well-being, but is also negatively associated to smoking, overweight, and stress which emulated as the most important health behaviour related problems found in this study. Physical activity, smoking, overweight, and stress revealed to be the key-indicators for improving women's health.

The results further indicate that women underlie other health-specific risks and burdens than men. Since women live on average five to six years longer than men, the percentage of illness and disability also augments. 50% of the women older than 60 report to be disabled due to health problems. Thus, in many cases, greater life expectancy carries no real advantage in terms of additional years lived free of disability. Therefore the necessity of female-specific health measures is evident and should lead to political consequences. Possible intervention strategies suitable for the Austrian situation were published recently<sup>43</sup>. Gender-specific health reporting provides the basis to develop effective strategies and should be accepted as a cornerstone for the planning of effective health and population programmes.

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## Zusammenfassung

### Die Innsbrucker Frauengesundheitsstudie 1999: Gesundheitszustand und Gesundheitsverhalten

**Fragestellung:** Im Jahre 1999 wurde in Innsbruck ein Survey zur Erhebung des Gesundheitszustandes und des Gesundheitsverhalten der weiblichen Bevölkerung durchgeführt. In der vorliegenden Arbeit berichten wir über die wesentlichen Ergebnisse dieser Studie und versuchen, Einflussfaktoren für den selbst berichteten Gesundheitszustand der Frauen zu identifizieren.

**Methoden:** 609 zufällig ausgewählte Frauen im Alter von 20 bis 95 Jahren beteiligten sich an der Studie und wurden im Rahmen eines standardisierten Interviews von geschulten Interviewerinnen befragt.

**Ergebnisse:** Zu den häufigsten Beschwerden von Frauen unter 40 Jahre zählten Kopfschmerzen (42%), Probleme im Genitalbereich (35%) und Allergien (32%). Bei 40- bis 60-jährigen Frauen waren es ebenfalls Kopfschmerzen (33%) sowie Venenerkrankungen (28%), die am meisten genannt wurden. Frauen über 60 Jahre berichteten sehr häufig über rheumatische Erkrankungen (41%), Osteoporose (39%) und Bandscheibenleiden (39%). Rauchen (40% bei unter 40-Jährigen) und Stress (37% bei unter 60-Jährigen) sowie Übergewicht bei älteren Frauen (42% bei über 60-Jährigen) erwiesen sich als die häufigsten Probleme im Gesundheitsverhalten. Frauen mit täglicher oder zumindest wöchentlicher körperlicher Aktivität hatten ein um 70% reduziertes Risiko für einen schlechten Gesundheitszustand.

**Schlussfolgerungen:** Körperliche Aktivität, Übergewicht, Rauchen und Stress sind Schlüsselfaktoren für das Ansetzen von gesundheitsfördernden Massnahmen.

## Résumé

### Etude du niveau de santé des femmes à Innsbruck en 1999: état de santé et comportement de santé

**Objectifs:** Ce travail consiste en un rapport descriptif d'une étude récente concernant la santé des femmes.

**Méthodes:** Une étude transversale a été menée à Innsbruck sur 609 femmes âgées de 20 à 95 ans.

**Résultats:** Parmi les maux les plus courants, les jeunes femmes nomment le mal de tête (42%), les problèmes urogénitales (35%) et les allergies (32%). Par contre, les femmes plus âgées insistent sur les maladies rhumatismales (41%), l'ostéoporose (39%) et l'hernie discale (39%). Les problèmes importants liés au comportement de santé proviennent essentiellement de la consommation de tabac pour les femmes de moins de 40 ans et l'obésité (42%) pour les femmes de plus de 60 ans. Enfin 37% des femmes de moins de 60 ans avouent être stressé. Il sort de cette étude que l'âge et l'activité physique permettent des prédictions significatives de l'état de santé. Ainsi, les femmes pratiquant une activité physique journalière ou hebdomadaire voient leur risque d'avoir un mauvais état de santé réduit de 70%.

**Conclusions:** L'activité physique, le tabagisme, le surplus pondéral et le stress sont des indicateurs clés sur lesquels nous pouvons jouer pour améliorer la santé des femmes.

## References

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Appendix

Age/years	n	Percentiles (P)	P10	P25	P50	P75	P90	mean (SD)
<b>Body/mass index (kg/m<sup>2</sup>)</b>								
20-24	9		19.5	20.5	21.3	22.3	22.3	22.2 (3.1)
25-29	57		18.4	19.7	21.0	22.5	26.3	21.5 (3.0)
30-34	62		18.8	19.7	20.9	22.5	25.3	21.5 (2.6)
35-39	39		18.4	19.7	20.9	23.7	25.6	21.6 (2.9)
40-44	49		19.4	20.8	23.1	26.3	31.2	24.1 (4.8)
45-49	43		19.5	21.9	23.1	25.4	28.4	23.6 (3.0)
50-54	41		19.8	21.5	23.9	26.3	31.5	24.9 (5.6)
55-59	37		19.7	21.4	23.3	26.5	30.5	24.2 (4.1)
60-64	56		20.6	22.0	25.0	26.6	30.8	25.0 (3.9)
65-69	43		21.2	22.5	24.2	27.2	29.9	25.0 (3.4)
70-74	54		19.5	22.0	24.1	28.0	31.8	25.1 (4.6)
75-79	62		20.2	22.3	24.1	27.5	29.7	24.8 (3.9)
80-84	21		20.8	22.5	24.2	26.5	28.8	24.4 (2.8)
85+	32		17.8	19.7	21.6	24.1	26.3	21.9 (3.1)
<b>Number of cigarettes per day</b>								
20-24	9		0	8.5	17	19	19	14.4 (8.4)
25-29	57		0	0	0	17	19	7.5 (8.7)
30-34	62		0	0	6.5	18	18.7	8.9 (9.2)
35-39	39		0	0	16	18	21	11.2 (9.2)
40-44	49		0	0	16	20	24	12.7 (9.8)
45-49	43		0	0	16	18	20	9.9 (9.6)
50-54	41		0	0	17	20	23.6	11.9 (10.0)
55-59	37		0	0	0	19.5	21.8	9.0 (10.8)
60-64	57		0	0	0	7	18.4	4.5 (8.0)
65-69	43		0	0	0	19	23.4	7.3 (11.1)
70-74	55		0	0	0	0	22	5.6 (11.1)
75-79	63		0	0	0	0	22.4	4.9 (10.3)
80-84	21		0	0	0	19.5	25	9.8 (10.9)
85+	32		0	0	0	9	19.7	5.1 (9.9)

Table A1 Body mass index (kg/m<sup>2</sup>) and number of cigarettes smoked per day in women (n=607), Innsbruck Women's Health Study. Austria 1999