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Age and gender in the management of HIV-relevant sexual risks: theoretical background and first results of a population survey in the German speaking part of Switzerland

Summary

Objectives: Health related lifestyles can be seen as resources for preventive behaviour in HIV-relevant situations. A concept was developed to analyse the management of HIV-relevant sexual risks and to uncover patterns of sexual lifestyles. In this paper first descriptive results will be presented focusing on gender and age.

Methods: 2275 men and women between the ages of 19 and 65 from the German speaking part of Switzerland were interviewed in a computer-assisted telephone survey. Data were collected concerning attitudes, behaviours and resources, situational aspects and communication with regard to health and sexuality. Particularly, respondents were asked whether within the past 24 months they had had either first sexual contacts with new partners or casual sex, two forms of contacts which have special HIV relevance.

Results: 527 men and women reported having had first or casual sexual contacts. First results show a substantial lack of condom use among persons of both sexes in the age group older than 45. In general men showed more risk behaviour than women.

Conclusions: For the first time in Switzerland, detailed data were collected from persons older than 45 years regarding sexual risk behaviour. Older, sexually active people are a vulnerable target group which has been neglected thus far in terms of research and preventive measures.

Keywords: HIV prevention – Sexual risk management – Sexuality – Age – Gender – Lifestyle.

Epidemiological background

At the beginning of the 1990s, innovative prevention strategies led to rethinking and better protection behaviour within a broad segment of the Swiss population. This development was accompanied by a continuous decrease in the number of HIV-positive individuals: from 2144 new infections identified through testing in 1991 to 586 in the year 2000. In recent years, however, due to normalisation of and decreasing interest in HIV and Aids, only a small reduction of the incidence of positive HIV tests was registered. In fact, in the year 2001 there was an increase in the overall incidence (n = 630). This increase was caused by a higher incidence amongst male intravenous drug users (Bundesamt für Gesundheit 2002a). It is feared that this development may represent a lasting trend due to rising banalisation of HIV and the disease Aids (Bundesamt für Gesundheit 2001). In order to keep the numbers at a low level and to prevent an increase in sexually transmitted HIV infections, new prevention strategies are needed.

In Switzerland, the latest epidemiological data show that over 50% of the new infections are due to unprotected heterosexual intercourse. For women, this accounts for 79.0% of the overall incidence of 215 HIV-positive tests in 2001, whereas for men the respective numbers were 38.2% of 395 HIV-positive tests (Bundesamt für Gesundheit 2002a; Bundesamt für Statistik 2001).

Risk management as a theoretical background for prevention and research

Continuous evaluation data on the Swiss HIV prevention strategy indicate considerable achievements – at least among youths and young adults. They also highlight the fact that adults older than 30 years need increased attention.

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Additionally, it is stressed that the latest prevention campaigns were less perceived by the population (Dubois-Arber et al. 1999).

Discussion on the effectiveness of different models of HIV prevention has recently entered the international scientific discourse, with risk elimination, risk minimisation and risk management as central concepts (Bochow 1998). Risk elimination in the area of sexuality has been described as an "unrealistic model", while risk minimisation has been favoured as a more adequate and in the long run more efficient strategy (Kippax 1997). In Switzerland, risk minimisation and health-enhancing risk management have been standard policies of HIV prevention since 1987 (Bundesamt für Gesundheitswesen 1993; Stutz & Somaini 1993). In the context of the current discussions of effectiveness of prevention models, a better understanding of HIV risk management, based on comprehensive models, appears necessary (Paicheler 2000). At present, very little is known, however, with regard to HIV risk management in the general population. A multiplicity of factors influence whether HIV risk is handled in a manner favourable or detrimental to a person's health, or to what extent HIV risk is considered at all in sexual situations. The study introduced here provides first empirical results and interpretations on those issues.

The Bernese model of risk management in HIV-relevant sexual situations

A model of health-relevant lifestyles (Abel 1999) provides the conceptual frame for the present study and as such supports analytic specifications in a heuristic sense. In a Weberian tradition this model is derived from a sociological theory of action (Abel & Rütten 1994; Abel 1999; Abel et al. 2000a). The three-dimensional concept of health-relevant lifestyles permits the investigation of health-relevant behaviours on a collective level, taking into account sociological, psychological, and biological factors. The concept is based on the assumption of mutual dependencies within and between the three constituting dimensions *behaviour*, *orientations* and *social resources*. It describes health-relevant behaviour as part of a complex adaptive system through which social actors reflexively create meaningful patterns that help to structure daily life in an increasingly complex world (Abel et al. 1994). On the basis of the health lifestyle concept, links between social causes and health effects can empirically be examined in terms of behaviour, orientations, social conditions, and health risk (Abel et al. 2000a; Abel et al. 2001). Recent empirical findings show that gender and age are key factors in the patterning of health lifestyles (Abel et al. 2000b) (Duetz et al. 2002).

From there, a model was derived for the description of management of HIV-relevant sexual risks (Fig. 1). Behaviours, orientations, and social resources considered to be relevant for health risk in general and specifically for HIV risk are included. In addition, contextual factors are considered by looking at situational variables of HIV-relevant sexual contacts and relationship variables such as communication among the sexual partners. The model includes saluto- as well as pathogenetical factors combining resource-oriented and deficit-oriented variables. Salutogenetic factors (resources) are of particular interest in terms of health-favourable handling of HIV risk. Both surplus and deficit in resources can offer options for starting points in HIV prevention.

The present paper addresses two main questions:

1. How do factors of sexual risk management differ according to age and gender? Data are examined separately by gender and age, since it is assumed that within the same cultural circles these two factors are likely to have very differentiating features, and that people of different sexes and ages may place different meaning and weight on sexuality and the handling of sexual risks.
2. What issues for prevention emerge in the light of these findings?

Findings on consecutive issues will be published separately (Abel & Werner in press; Bruhin in press).

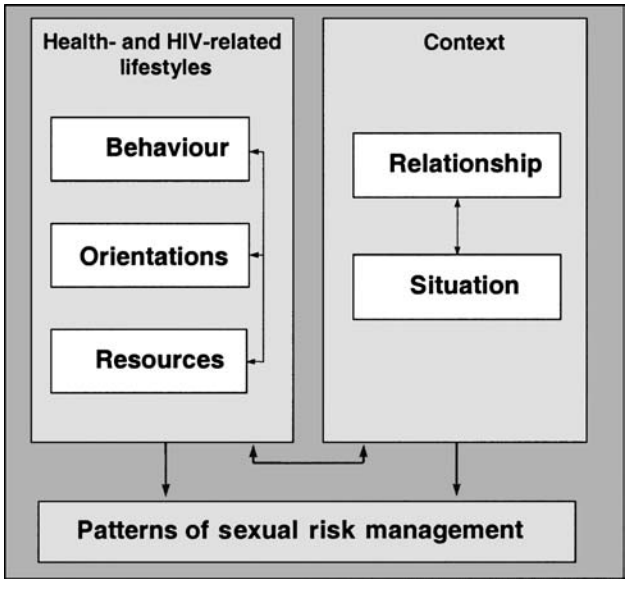

Figure 1 Bernese model of risk management in HIV-relevant sexual situations

Methods

Drawing of the sample

The sample is based on a double randomised selection. Firstly, 7000 addresses were drawn randomly from the telephone register in German speaking Swiss municipalities. Since at the time of the survey over 95% of households in Switzerland had a registered telephone connection, this random sample gave a representative picture of the Swiss population (LINK 2000). These 7000 households received a preliminary letter informing them of the content, goal, and purpose of the study. Secondly, members of a household (age 19 to 65) were selected at random applying the "last-birthday method" (Binson et al. 2000) to avoid over-sampling of persons who are often at home or who often answer the family's telephone. Data were collected between January and June 2000 by female students using CATI (computer-assisted telephone interviewing). All interviewers were trained in theory and practice on how to use CATI, on the study design and its objectives as well as on interviewing techniques.

After the exclusion of invalid telephone numbers, households with no members in the defined age group, and persons with insufficient knowledge of the German language, a net sample of 5037 persons resulted. The final random sample size comprised 2275 conducted interviews. This corresponded to a response rate of 46% of the net sample, with a refusal rate of 42%. Twelve percent of the originally identified households were unreachable.

Questionnaire

The interview comprised 128 questions concerning health-relevant lifestyle and sexuality, HIV/Aids, as well as questions regarding demography. Variables were selected according to theoretical consideration and existing empirical evidence for relevance on the topic of sexual risk management (Abel 1999; Abel et al. 1999; Bengel 1996). Whenever possible, items or scales were used which had already been applied in earlier studies and had proven valid and reliable (see for further comments on the validity of the questionnaire in the discussion section of the paper). The average time per interview was 27 minutes which lies in the optimal time range (Frey 1990).

The interview began with general questions regarding health and sexuality. Next, interviewees were asked whether they had had first or casual sexual contacts in the past 24 months. A first sexual contact was defined as a sexual contact from which a new, steady partnership developed. A casual sexual contact was defined as a sexual contact with no further obligations or from which no steady partnership resulted; this definition also included paid sexual contacts. These two definitions were introduced to the interviewees. The interviewee then reported the number of first and casual sexual contacts she/he had experienced in the past 24 months. Men and women who reported having had first or casual sexual contacts were asked 51 follow-up questions regarding their most recent first or casual sexual experience, under the assumption that this experience would be most clearly recalled. Finally, all interviewees were asked three general questions concerning sexuality and three demographic questions.

The results were analysed separately by gender and age. The separation of the sample into three age groups (19–30 years, 31–45 years, 46–65 years) was done according to the categories used in an annual study of sexual behaviour in Switzerland, carried out since 1986 (Dubois-Arber et al. 1999).

Results

Sample distribution

In order to check to what extent our sample corresponded to the general German speaking Swiss population the sample distribution was compared with corresponding data from official statistics for the German speaking part (where not available, with the general Swiss data) of Switzerland (Bundesamt für Statistik 2000; Bundesamt für Statistik 2001). With regard to gender and age, the present sample showed a slight over-representation of women and older persons when compared to the general Swiss population (Tab. 1). With regard to education, our sample had a higher level of education than German speaking inhabitants of Switzerland. Due to the fact that sufficient knowledge of the German language was used as a criterion for study inclusion, there was an under-representation of non-Swiss nationals in the sample (compared to the proportion of non-Swiss nationals living in the German speaking part of Switzerland, Tab. 1).

It can be concluded that the study population is comparable to the German speaking Swiss population with regard to age and gender distribution. Individuals with low education and non-Swiss nationals however, are underrepresented in the study sample.

Of the 2275 interviewees, 527 respondents (23% of the sample) reported having had one or more first and/or casual sexual contacts in the past two years. 54.8% of them were men and 46.5% women. 46.5% of the persons reporting at least one sexual contact were between 19 and 30 years of age, 35.1% were between 31 and 45 years old and 18.4% between 46 and 65. In terms of education 8.4% had finished

Table 1 Study sample compared with the population in the German speaking part of Switzerland in percentages (where not available with the population of Switzerland)

	Men[b]	Women[b]	Age[b] 19–30	Age[b] 31–45	Age[a] 46–65	Education[a]: compulsory school	Education[a]: secondary level II	Education[a]: tertiary level	Non-Swiss residents
Switzerland	48.8	51.2	23.9	42.6	33.5	17.8	59.1	23.1	17.3
Study Sample (n = 2275)	45.2	54.8	21.2	41.7	37.1	8.5	60.5	31.0	10.2

[a] Classification according to the Swiss Federal Statistical Office.
[b] Comparison of study sample with the population of Switzerland.

Table 2 Distribution of respondents reporting first and/or casual sexual contacts by gender, age and education in percentages

	Men	Women	Age 19–30	Age 31–45	Age 46–65	Compulsory school	Secondary level II	Tertiary level
n = 527	54.8	45.2	46.5	35.1	18.4	8.4	62.2	29.4

compulsory school, 62.2% had a secondary level II graduation and 29.4% had a degree on the tertiary level (Tab. 2).

Sexual behaviour

Of the 2275 interviewees, 427 individuals (18.8%) reported first sexual contacts and 256 (11.3%) reported casual sex within the past 24 months. 156 respondents reported both forms of contact.

The differences between men and women were statistically significant. More men reported having had first or casual sexual contacts. Also the number of reported contacts per person was higher for men. There were also large differences in results by age. The percentage of first contacts among 19–30-year-olds was three times that of 31–45-year-olds and six times that of 46–65-year-old interviewees. The differences were similar and almost as clear for casual contacts. The oldest age group reported significantly less first sexual contacts per person but more casual contacts (Tab. 3).

For 351 individuals the most recent sexual experience was a first sexual contact, and for 167 persons it was a casual contact. For nine respondents no information about the type of contact exists.

In 32% of the reported first or casual sexual contacts no condom was used. Condom use was significantly rarer among the 46–65-old interviewees than among members of the younger age groups (Tab. 3). The 46–65-olds were also the only group for whom there was a significant difference by gender regarding condom use during their most recent sexual contact: 63.6% of women vs. 46.9% of men (not shown in table).

519 of the 527 interviewees reporting first and/or casual sexual contacts supplied information about their sexual practices during the most recent contact. Anal sex (alone or in combination with other practices), particularly relevant for HIV, was practised in 7.5% of the contacts reported by men and in 5.1% of the contacts reported by women (Tab. 3). In nine cases (27% of the anal contacts) no condom was used (not shown in table).

HIV-relevant orientations

In order to measure the interviewees' HIV-relevant orientations, all 2275 interviewees were asked about their attitude towards condoms and the importance of sexuality (Bengel 1996). An index was constructed based on four items concerning attitudes towards condoms (annoyance, awkwardness, reliability, and general accessibility of condoms; Bengel 1996), with the answer scale ranging from "totally disagree" to "fully agree". Respondents were also asked about the general importance of sexuality in their life, with possible answers ranging from "very important" to "very unimportant". Men and the oldest group reported negative attitudes towards condom use significantly more often. Regarding the importance of sexuality, there were small but significant differences between the age groups as well as between men and women: Women and 46–65-year-olds rated importance of sexuality lower than men and younger respondents, although the overall rating on the item still was high (Tab. 4).

HIV-relevant knowledge

HIV-relevant knowledge was included in the model of sexual risk management as a resource component. Items concerning the HIV test (duration of the diagnostic window) and knowledge of HIV prevalence in Switzerland in

Table 3 Sexual behaviour by gender and age

	Men		Women		Age: 19–30		Age: 31–45		Age: 46–65	
First sexual contacts (FSC)[a]	n=1018**	%	n=1237	%	n=479***	%	n=942	%	n=834	%
Yes	218	21.4	209	16.9	217	45.3	149	15.8	61	7.3
No	800	78.6	1028	83.1	262	54.7	793	84.2	773	92.7
Average number of FSC per person with FSC	1.66 °°		1.64		1.64 °°°		1.78		1.36	
Casual sexual contacts (CSC)[a]	n=1012***	%	n=1237	%	n=477***	%	n=941	%	n=831	%
Yes	155	15.3	101	8.2	116	24.3	93	9.9	47	5.7
No	857	84.7	1136	91.8	361	75.7	848	90.1	784	94.3
Average number of CSC per person with CCS	7.5 °°°		4.1		4.61 °°°		6.74		8.79	
Reported sexual contact was	n=289**	%	n=238	%	n=245**	%	n=185	%	n=97	%
… a first contact	176	60.9	175	73.5	176	71.8	119	64.3	56	57.7
… a casual contact	107	37.0	60	25.2	64	26.1	62	33.5	41	42.3
… not determinable	6	2.1	3	1.3	5	2.0	4	2.2	0	0.0
Condom use[b]	n=289	%	n=238	%	n=245***	%	n=185	%	n=97	%
Yes	198	68.5	164	69.5	179	73.1	137	74.9	46	47.4
No	91	31.5	72	30.5	66	26.9	46	25.1	51	52.6
Practice[b]	n=282	%	n=232	%	n=241	%	n=180	%	n=93	%
Oral only	20	7.1	7	3.0	6	2.5	16	8.9	5	5.4
Vaginal only	138	48.9	119	51.3	126	52.4	79	43.9	52	55.9
Vaginal and oral	103	36.5	94	40.5	93	38.6	75	41.7	29	31.2
Practices including anal intercourse	21	7.5	12	5.2	16	6.5	10	5.5	7	7.5

[a] During past 24 months.
[b] On the occasion of the reported contact.
Chi²-test *p ≤ 0.05; **p ≤ 0.01; ***p ≤ 0.001; Mann-Whitney or Kruskal-Wallis test °p ≤ 0.05; °°p ≤ 0.01; °°°p ≤ 0.001.

Table 4 HIV-relevant orientations by gender and age

	Men	Women	Age: 19–30	Age: 31–45	Age: 46–65
Attitude towards condoms	n = 885°°°	n = 1048	n = 461°°°	n = 863	n = 609
Mean (0 = very negative to 16 = very positive)	10.8	11.21	11.1	11.2	10.7
Importance of sexuality	n = 1013°°°	n = 1233	n = 478°°	n = 941	n = 827
Mean (1 = very unimportant to 5 = very important)	4.07	3.84	4.00	3.99	3.86

Mann-Whitney or Kruskal-Wallis test °p ≤ 0.05; °°p ≤ 0.01; °°°p ≤ 0.001.

comparison with its world-wide dimensions were asked. Seventy percent of the interviewees over the age of 45 did not know the right answer to the duration of the diagnostic window (12 weeks or three months). Women and younger individuals were more likely to give the correct response. Significantly more men and younger respondents knew that the prevalence of HIV in Switzerland is low in comparison with other countries around the world (Tab. 5).

Situational aspects of the sexual contact

Based on gender of involved partners the reported contact was classified as hetero- or homosexual. Of the total of 527 reported first or casual sexual contacts 15 contacts occurred between men and four contacts between woman. With regard to location, 82.9% of first or casual contacts took place at either the interviewee's or the partner's home (Tab. 6). Club/sauna/sex establishment was indicated as a contact location almost exclusively by men and significantly more frequently by older men (not shown in table). Women and younger individuals reported more often that the sexual contact took place at home (Tab. 6).

Concerning the circumstances of the reported first or casual sexual contacts, 23.2% took place on holiday, business trips, during stays abroad or on other occasions such as in the army (Tab. 6).

An impact of alcohol or drug intake on the sexual contact was affirmed by more than one quarter of the sample. Regarding circumstances and alcohol/drug intake, no statistically significant gender and age differences were observable (Tab. 6).

Exchange of cash, gifts or favours on the occasion of the reported sexual contact was denied by all women but not by all men. With increasing age, men were more likely to have paid for sexual contacts. Due to the small sample size, no statistical significance was reached on this age and gender trend (Tab. 6).

Table 5 HIV-relevant resources (knowledge) by gender and age

	Men		Women		Age: 19–30		Age: 31–45		Age: 46–65	
Knowledge diagnostic window of HIV test	n = 939***	%	n = 1115	%	n = 462***	%	n = 891	%	n = 701	%
Correct (12 weeks/3 months)	295	31.4	446	40.0	196	42.4	335	37.6	210	30.0
Incorrect	644	68.6	669	60.0	266	57.6	556	62.4	491	70.0
Knowledge HIV prevalence in Switzerland compared to other countries worldwide	n = 1014***	%	n = 1233	%	n = 476***	%	n = 941	%	n = 830	%
Correct (low prevalence)	511	50.4	500	40.6	264	55.5	415	44.1	332	40.0
Incorrect (middle/high prevalence)	503	49.6	733	59.4	212	44.5	526	55.9	498	60.0

Chi²-test *p ≤ 0.05; **p ≤ 0.01; ***p ≤ 0.001.

Table 6 Situational aspects by gender and age

	Men		Women		Age: 19–30		Age: 31–45		Age: 46–65	
Hetero- or homosexual contact[a]	n = 289*	%	n = 238	%	n = 245	%	n = 185	%	n = 97	%
Heterosexual	274	94.8	234	98.3	210	98	174	94.1	94	96.9
Homosexual (men)	15	5.2	–	–	3	1.2	9	4.9	3	3.1
Homosexual (women)	–	–	4	1.7	2	0.8	2	1.1	0	0.0
Location[a]	n = 289**	%	n = 236	%	n = 245	%	n = 183	%	n = 97	%
At home	228	78.9	207	87.7	210	85.7	150	82.0	75	77.3
Hotel	19	6.6	14	5.9	16	6.5	12	6.6	5	5.2
Club, sauna, sex establishment	22	7.6	1	0.4	5	2.0	8	4.4	10	10.3
Other	20	6.9	14	5.9	14	5.7	13	7.1	7	7.2
Circumstances[a]	n = 289	%	n = 236	%	n = 245	%	n = 183	%	n = 97	%
Everyday life	215	74.4	188	79.7	189	77.1	143	78.1	71	73.2
Holiday, travels	41	14.2	30	12.7	35	14.3	21	11.5	15	15.5
Other	33	11.4	18	7.6	21	8.6	19	10.4	11	11.3
Influence of alcohol or drugs[a]	n = 289	%	n = 236	%	n = 245	%	n = 183	%	n = 97	%
Yes	83	28.7	59	25.0	63	25.7	55	30.1	24	24.7
No	206	71.3	177	75.0	182	74.3	128	69.9	73	75.3
Cash, gift or favour received[a]	n = 289	%	n = 236	%	n = 245	%	n = 183	%	n = 97	%
Yes, myself	2	0.7	0	0.0	0	0.0	1	0.5	1	1.0
Yes, partner	23	8.0	0	0.0	4	1.6	5	2.7	14	14.4
No	264	91.3	236	100.0	241	98.4	177	96.7	82	84.5
Parallel relationships[a]	n = 288**	%	n = 235	%	n = 244**	%	n = 182	%	n = 97	%
Yes	55	19.1	23	9.8	24	9.8	31	17.0	23	23.7
No	233	80.9	212	90.2	220	90.2	151	83.0	74	76.3

[a] On the occasion of the reported contact.
Chi²-test *p ≤ 0.05; **p ≤ 0 .01; ***p ≤ 0 .001.

Table 7 HIV-relevant communication by gender and age

	Men	Women	Age: 19–30	Age: 31–45	Age: 46–65
Communication[a, b]	n = 284°°°	n = 230	n = 241°°°	n = 178	n = 94
Mean (0 = no to 8 = much communication)	4.2	5.2	5.2	4.4	3.4

[a] On the occasion of the reported contact.
[b] Communication about former partnerships, fidelity, contraception, HIV/AIDS protection.
Mann-Whitney or Kruskal-Wallis test °p ≤ 0.05; °°p ≤ 0.01; °°°p ≤ 0.001.

Men indicated more often than women that a steady partnership existed parallel to the reported sexual contact. The differences between the three age groups were significant, indicating parallel relationships being more likely with increasing age (Tab. 6).

Communication on the occasion of the sexual contact
In terms of communication on sexuality a clear gender effect was identified. Women indicated more frequently that on the occasion of the reported contact there was communication about earlier partnerships, loyalty, pregnancy, and about HIV and/or preventive measures. In addition, younger interviewees reported communicating more frequently about these topics than respondents of the middle age group. Members of the oldest age group communicated significantly less often (Tab. 7).

Discussion

Discussion of methods
The present study yielded a response rate of 46% which raises questions about the representativeness of the sample and the generalisability of the results. It is unknown whether those 12% who were unreachable would have been willing to participate. It can be assumed that the 42% who declined to participate represent a particularly interesting sub-population. This group may be more averse to public discussion of sexuality and health and is possibly also less receptive to preventive messages. This problem of so-called self selection generally exists with scientific inquiries about sensitive topics (Bengel 2001). The interpretation of the results and the formulation of suggestions for communication of preventive messages should therefore take the absence of this group into account.
Comparability of response rates across different studies is problematic to the extent that study reports often provide no information whether their net samples included unreachable members of the sample. The response rate reported in the current study adheres to a more strict definition including unreachable households in the net sample, which naturally gives it a lower response rate in comparison with other studies which did not include unreachable persons. Applying a less strict definition of our net sample the present study would have reached an estimated response rate of 52%.
Telephone surveys that include questions about sexuality, typically show a wide range in response rates (Dubois-Arber et al. 1999; Weitkunat 1998; Robertson 1995; Schmidt 2000; Davis et al. 1993). The present response rate of 46% lies well within this range.

Studies on sensitive topics generally have to deal with problems of underreporting due to social desirability. In the present survey several measures have been taken in order to optimise validity according to suggestions made by Bengel (1996). Privacy and anonymity had been ensured. Items and corresponding answers were formulated in a manner which allowed the interviewees never having to use any delicate words. In addition, the phrasing of the questionnaire was non-judgemental and the items were arranged beginning with very general questions on health, followed by the more sensitive questions on sexuality. Regarding sensitive topics, telephone interviews combine the advantages of questionnaires and personal interviews: Anonymity is higher than in personal interviews and still a confidential atmosphere can be created.

Discussion of results
Differentiating by gender and age, the results are discussed in terms of hypothesis for further research and innovative approaches for future prevention efforts.

Gender-related differences: Behaviour and orientations explored in the present study correspond to a large extent to the traditional male/female role patterns. More women than men reported that their most recent sexual contact was a first contact with a steady partner rather than casual sex. This result may indicate that women and men have different kinds of sexual contacts. But the difference could also be due to women and men defining sexual contacts differently. As Holland et al. (1998) stated, for a woman very often it is important to have sex with a man she is in love with, whereas for men love often is not a prerequisite. Accordingly, men might rather define their sexual contacts as casual and women as first sexual contacts. Additionally, male homosexual contacts may account for the gender difference, as specific groups of homosexual men report more casual contacts than heterosexual men in general (Ostrow et al. 2002; Wang et al. 1999). Because only 15 out of 289 men (5.2%) reported a homosexual contact, the difference would, however, only partially be due to homosexual contacts.
Women reported more communication on topics related to sexuality, as well as a lower number of parallel relationships and no paid contacts. Furthermore, men reported more frequently than women that their most recent HIV-relevant sexual contact occurred outside of the home, e.g., in a hotel, club, sauna, or sex establishment. Similar results were reported from a national survey conducted in France (Bajos et al. 1997; Bajos et al. 2001). In their discussion Bajos et al. draw attention to the normative importance in our society that women adhere to the sexuality-love-procreation triad,

which possibly explains some gender differences found in the present study.

Men had a more negative attitude towards condoms than women. There are several possible reasons for this. On the one hand, men are not as directly affected by one of the functional benefits of the condom – birth control – as women. On the other hand, older men, in particular, often fear a loss of erection due to reduced sensitivity (Bengel 1996; Kleiber & Wilke 1995). Interestingly, reported condom use during sexual contacts, however, was approximately the same in both sexes.

The results of the current study indicate a considerable gender effect for sexual risks. Men tend to show more risk behaviour than women. This result relates to earlier findings on gender and sexual risk behaviour (Kleiber & Wilke 1995). At present, world-wide population-based campaigns are attempting to convey to men their responsibility for curbing the spread of HIV, e.g., with the UNAIDS programme "Men Make A Difference" (UNAIDS 2000a; UNAIDS 2000b; UNAIDS 2001). In Switzerland, the beginnings of theoretical reflection and discussion of gender-specific prevention models are evident (Bruhin in press; Spencer 2001). On a practical level, efforts have been made to address heterosexual men separately, for example with "Don Juan-suitor", a project begun in 1998 (Aids Info Docu Schweiz 2001).

Age-related differences: As a group, younger persons reported more first and casual sexual contacts in the past 24 months. However, the 46–65-year-old respondents had more casual and fewer first sexual contacts per person in the same period. In the highest age group, almost two thirds of the women and three quarters of the men rated sexuality as "moderately important" to "very important" in their life. With increasing age there was a slight decrease in the importance of sexuality. Similar results were reported in a recently published study on sexual attitudes and behaviours (App 2002).

Regarding condom use as well as attitudes towards condoms, members of the youngest and the middle age groups were more safety-oriented than members of the oldest category. Unfortunately, most studies on HIV and sexuality do not take into account people older than 45 years. Therefore very few data on this age group are available. A survey on Swiss travellers however, published in 1993, reported similar results: older people used less condoms than younger people when having casual sexual encounters (Blöchliger & Gagneux 1993). As the number of interviewed people over the age of 40 was low in the 1993 study, representativeness however was not given. Additionally, sexual risk behaviour was measured on a very unspecified level, which did not allow any further interpretation. In a French survey, analysing sexual behaviour of 18 to 69 year old people, condoms were used more often by young people in the preceding 12 months of the interview (Bajos et al. 1997). These findings are in line with the present results and support the importance of explicitly targeting older persons in HIV prevention.

Knowledge of HIV prevalence in Switzerland and of the duration of the serological window of a HIV test was greater among members of the two younger groups. These effects can likely be attributed to the fact that HIV prevention first became a topic of teaching and discussion in school for the youngest group. In addition, it is possible that the STOP AIDS campaigns are less likely to appeal to older members of the population.

Older interviewees communicate less with their partners regarding their current and past sexual relationships than individuals of younger or middle age. This is certainly related to the fact that, since Aids has become an issue, sexual topics have become less a taboo, and younger people – again due to prevention messages particularly focussed on them – are more likely to profit from this new openness.

Younger persons were less likely to have a relationship parallel to the sexual contact described in the study. They probably are more likely to practice serial monogamy and more easily end existing relationships, since some of these relations are less tied to binding circumstances such as children, shared life history or financial dependencies.

Concerning the influence of alcohol or drug intake on the reported sexual contact, there was no significant difference between the three age groups. Alcohol or drugs however had an overall influence on 27% of all reported sexual contacts. According to MacDonald et al. (2000) modification of the emotional and cognitive state due to alcohol and drug intake can have considerable consequences on protection behaviour. Other studies, analysing the impact of alcohol and other drugs on condom use however, often deny a correlation between alcohol or drug consumption on condom use when controlling for other factors such as sensation seeking (Justus et al. 2000; Messiah et al. 1998; Santelli et al. 2001). Further investigation should be conducted to further explore this point.

Conclusions

In this paper explorative results were presented without testing theoretical assumptions. The empirical findings, however, underline the importance of analysing gender and age effects on HIV-relevant sexual risk management.

The findings warrant further investigations, applying more complex statistical methods. Logistic regression modelling

would be an appropriate approach in measuring the effect of gender and age including possible interaction effects of the two factors.

The results of the current study supplement or confirm earlier findings regarding the effect of gender differences on sexual attitudes and practices. Some of the specific age differences observed and highlighted here may provide unique information. For the first time in Switzerland HIV-relevant sexual risk management of individuals over the age of 45 was studied applying a theory framed model combining lifestyle and contextual factors. Recent publications demonstrate that this age group until today has been neglected in terms of research and advice (Schmid Mast 2000). This is all the more noteworthy as – with the current and other recent studies – it has become increasingly apparent that sexuality in the second half of life plays a more important role than assumed thus far (App 2002; Delbès & Gaymu 1997; Hillman 2000). Moreover, the current paper demonstrates that condom use is insufficient among sexually active individuals over the age of 45, and that this age group reports the highest number of casual sexual contacts per person.

The present study is largely exploratory and the data are cross-sectional. It would, however, be important to investigate possible cohort effects and to find answers to the question whether higher rates of sexual risk behaviour in the oldest age group are due to advancing individual age or rather a generation effect. Data from a longitudinal study on sexual behaviour of people over 50 years of age – though not including topics on HIV – support a generation effect (Delbès et al. 1997). Delbès et al. conclude that the sexual behaviour of over 50 year old individuals has changed over time which would mean that in future the oldest age group would possibly be managing sexual risks differently. The results presented in this paper should therefore be considered in light of a possible cohort effect. Nevertheless, the results are highly relevant for the understanding of some of the currently pressing issues. In Switzerland, between 1999 and 2001 23% of the reported HIV-positive cases and 25% of the Aids cases occurred in persons over 45 years of age (Bundesamt für Gesundheit 2002b). In the USA, approximately 15% of all persons living with Aids are over 50 years old (Heckmann et al. 2001). Although these data do not give any information about the age of the infected person at the time of the infection, they still indicate that HIV is an Public Health issue in this age group. Furthermore, our findings indicate that the group over the age of 46 is sexually active and uses condoms less often than advised.

The findings presented here provide additional, yet not final, empirical evidence for concluding that older people are a HIV-vulnerable group.

Zusammenfassung

Alter und Geschlecht im Management HIV-relevanter sexueller Risiken: theoretischer Hintergrund und erste Resultate einer Bevölkerungsstudie in der Deutschschweiz

Fragestellung: Basierend auf dem Modell gesundheitsrelevanter Lebensstile wurde ein Konzept entwickelt, um das Management HIV-relevanter sexueller Risiken zu analysieren und Muster sexueller Lebensstile zu identifizieren. In diesem Artikel werden fokussierend auf Alter und Geschlecht erste deskriptive Ergebnisse präsentiert.

Methoden: Mittels Computer unterstützter telephonischer Interviews wurden 2275 in der Deutschschweiz wohnhafte Frauen und Männer im Alter von 19 bis 65 befragt. Es wurden Einstellungen, Verhalten, Ressourcen, situative Aspekte und Kommunikation in Bezug auf Gesundheit und Sexualität erhoben. Im Speziellen wurden die Interviewten gefragt, ob sie in den vergangenen 24 Monaten besonders HIV-relevante sexuelle Kontakte, das heisst Erstkontakte mit neuen Partnern oder Partnerinnen bzw. Gelegenheitskontakte hatten.

Ergebnisse: 527 Frauen und Männer berichteten über Erst- oder Gelegenheitskontakte. Die ersten Ergebnisse zeigen bei den Frauen und Männern der Altersgruppe 46–65 ein substantielles Defizit bezüglich Kondomgebrauch. Im Allgemeinen weisen Männer ein höheres Risikoverhalten auf.

Schlussfolgerungen: Zum ersten Mal konnten in der Schweiz bezüglich sexuellem Risikoverhalten detaillierte Daten über Personen älter als 45 Jahre gesammelt werden. Ältere, sexuell aktive Menschen sind eine vulnerable Zielgruppe, die bisher bezüglich Forschung und präventiver Massnahmen vernachlässigt wurde.

Résumé

Age et genre dans la gestion des risques sexuelles et VIH-relevantes

Objectifs: En se basant sur le modèle de styles de vie concernant la santé un concept a été développé pour analyser la gestion des risques sexuels et en rapport avec le VIH et identifier les types de styles de vie sexuels. Cet article présente des premiers résultats descriptifs en fonction de l'âge et du sexe.

Méthodes: Au moyen des entrevues téléphoniques effectuées par ordinateur, 2 275 femmes et hommes résidants en Suisse alémanique âgés de 19 à 65 ans ont été interrogés au sujet de leurs attitudes, comportements, ressources, situations et leur communication en ce qui concerne la santé et la sexualité. En particulier, les personnes ont été interrogées sur leurs contacts sexuels et en rapport avec le VIH au cours des derniers 24 mois, c.-à-d. des premiers contacts avec des nouvelles/nouveaux partenaires et/ou contacts occasionnels.

Résultats: 527 femmes et hommes ont fait un rapport sur des contacts occasionels ou nouveaux. Les premiers résultats montrent pour les femmes et les hommes du groupe d'âge de 46 à 65 ans un déficit substantiel d'utilisation du préservatif. En général, les hommes ont un comportement à risque plus élevé.

Conclusions: Pour la première fois en Suisse des données détaillées sur le comportement à risque sexuel des personnes de plus de 45 ans ont pu être rassemblées. Les personnes plus âgées et sexuellement actives sont un groupe cible et vulnérable qui a été négligé jusqu'ici par la recherche et les mesures préventives.

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