Sexual behaviour and contraceptive use among youth in the Balkans

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ABSTRACT

Objectives To assess sexual and health seeking behaviour related to contraception among high school students in Bosnia (Sarajevo), the FYR of Macedonia (Skopje), and Serbia and Montenegro (Belgrade and Podgorica).

Methods A standardized questionnaire was self-administered by 2150 urban high school students. Multiple logistic regression analyses accounting for within-class correlation were applied to identify determinants of sexual behaviour, and the use of contraception and sexual and reproductive health (SRH) care.

Results In this group of youth with a mean age of 16.7 years, 41.3% of the boys and 20.8% of the girls had already experienced sexual intercourse. Mean age at sexual debut differed between sexually active boys (15.5) and girls (16.3). A condom was used at first sex by 73.7% of the boys and by 69.0% of the girls. Condoms were consistently used during sexual intercourse with the current or last partner by 64.3% of the boys and 48.5% of the girls. Oral contraception was resorted to by 0.0% (Macedonia) to 10.6% (Bosnia) of sexually active girls. One third of sexually active girls and 18.0% of sexually active boys had ever refrained from seeking medical advice on SRH despite feeling the need for it, mainly because of feelings of shame, fear and insecurity. TV or radio and friends were mostly mentioned as useful sources of information on contraceptives.

Conclusions Age at sexual debut and the proportion of sexually active youth in these Balkan states do not differ from those in other parts of Europe. However, declining condom use after sexual initiation is not compensated by having recourse to other contraceptive methods, as seen in some West-European countries. The role of mass media in dissemination of information and tackling barriers to SRH care should be explored.

KEY WORDS Contraception, sexual behaviour, reproductive health, Balkans, youth

INTRODUCTION

In recent years, the Balkan countries have experienced major conflicts, and political, social and economic upheavals. In this post-war era, many young people grow up in a climate of deteriorated living standards due to high poverty levels, even higher unemploy-
young people remain a vulnerable group, as transition is exposing them to opportunities and risks that are exciting yet dangerous. Early onset of sexual activity, low consistent use of contraceptives, concurrent sexual partnerships and a high number of sexual partners have been registered among youth in the Balkans. These high-risk behaviours make them vulnerable for unwanted pregnancy and sexually transmitted infections (STIs), including that caused by the human immunodeficiency virus (HIV).

Young people must be knowledgeable, and adopt proper attitudes and behaviours concerning contraception and STIs (including HIV) if they are to effectively protect their sexual and reproductive health (SRH). SRH information and services can play an important role in this, along with social learning through parents, school-based programmes and peers. Moreover, a response tailored to the SRH needs of young people is likely to improve the uptake and effectiveness of such services and information centres. This study, which was commissioned by the International Planned Parenthood Federation (IPPF), took place in preparation for the establishment of youth clinics. The survey assessed sexual and health seeking behaviour related to contraception among urban high school students in Bosnia (Sarajevo), the Former Yugoslav Republic of Macedonia (Skopje), and Serbia and Montenegro (Belgrade and Podgorica). In addition, barriers to utilize SRH services were explored.

METHODS

In December 2004 we conducted a cross-sectional survey using self-administered questionnaires. A clustered sample approach was adopted. Specifically, in each of the four capitals, two grammar high schools, three technical high schools and one medical high school were selected at random from the list of public schools. Private schools were excluded because they were few in number and represented very specific population characteristics. Investigators randomly selected one class of grade 1 or grade 2, one class of grade 3 and one class of grade 4 in each of the selected high schools. The questionnaire was translated by the local IPPF European Network partner organizations and an opt-out, rather than an opt-in strategy was chosen to limit the risks of selection bias. At the outset, the purpose of the survey and the content of the anonymous questionnaire were explained by members of the IPPF partner organizations and the questionnaires were filled out in class. A common core questionnaire assessing the perceived access to condoms, contraceptive methods and STI/HIV care, and two additional sections were administered:

- section A was to be completed by students who had ever had sexual intercourse;
- section B by students who had not had sexual intercourse yet.

For this paper, we mainly considered the data from the common core and section A. After data were entered locally using EPI-INFO 6.04d, data analysis was performed with SAS version 9.1.3 (SAS Institute, Cary, North Carolina, USA). Marginal logistic regression models were applied to identify factors associated with sexual activity and age at sexual debut, the use of contraceptives and SRH seeking behaviour. These models were fitted using generalized estimating equations with exchangeable working correlation. All reported p-values and confidence intervals are corrected for within-class correlation. Correlation between classes within schools was ignored in the analysis, as it was weak and non-significant (p = 0.45).

RESULTS

Study population

Key demographic characteristics of the sample population are shown in Table 1. The students were 12–24 years old, with over 95% of them being 14–18 years old. The mean age did not vary by gender (p = 0.59).

<table>
<thead>
<tr>
<th>Country</th>
<th>Bosnia</th>
<th>Macedonia</th>
<th>Montenegro</th>
<th>Serbia</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>513</td>
<td>574</td>
<td>540</td>
<td>523</td>
</tr>
<tr>
<td>Male/Female Ratio</td>
<td>0.67</td>
<td>0.98</td>
<td>1.16</td>
<td>0.86</td>
</tr>
<tr>
<td>Mean age (years)</td>
<td>16.56</td>
<td>16.57</td>
<td>16.84</td>
<td>16.73</td>
</tr>
<tr>
<td>Religion (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muslim</td>
<td>89.4</td>
<td>7.9</td>
<td>3.5</td>
<td>0.6</td>
</tr>
<tr>
<td>Orthodox</td>
<td>0.6</td>
<td>85.4</td>
<td>51.0</td>
<td>90.8</td>
</tr>
<tr>
<td>Protestant</td>
<td>0.2</td>
<td>0.2</td>
<td>30.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Other</td>
<td>9.8</td>
<td>6.5</td>
<td>15.4</td>
<td>7.7</td>
</tr>
</tbody>
</table>
type of school (grammar, technical, medical; \( p = 0.34 \)) or country \( ( p = 0.93 ) \).

**Sexual debut and later sexual activity**

More boys (418/1012; 41.3%) than girls (232/1116; 20.8%) were already sexually active at the time of the survey (Figure 1). In multiple logistic regression, country \( ( p = 0.038 ) \), gender \( ( p < 0.0001 ) \) and age \( ( p = 0.0005 ) \) were independently associated with sexual activity. Additionally, gender effects differed between countries \( ( p < 0.0001 ) \) and the age effect was different for boys and girls \( ( p = 0.0019 ) \). Neither religion (categorized into Muslim, Orthodox, Protestant and other; \( p = 0.28 \)), nor type of school \( ( p = 0.68 ) \) was independently associated with sexual activity. As shown in Table 2, the proportion of sexually active youth was lower in Montenegrin boys (adjusted odds ratio (AOR) = 0.47; CI: 0.27–0.82) and higher in Serbian girls (AOR = 3.98; CI: 2.36–6.71) than in boys and girls from the reference country (Bosnia*). The mean age at sexual debut of sexually active boys (15.5) and girls (16.3) differed significantly \( ( p < 0.0001 ) \), even after adjusting for age and country.

**Use of contraception**

Condom use at first sexual contact was relatively frequent; it did not significantly differ \( ( p = 0.19 ) \) between boys (73.7%) and girls (69.0%). However, consistent condom use with the current or last partner was reported by only 64.3% of the boys and 48.5%

![Figure 1](image_url)

**Figure 1** Unadjusted proportion of sexually active boys and girls

**Table 2** Estimated odds ratios for sexual activity

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AOR</td>
<td>95% CI</td>
</tr>
<tr>
<td>Country</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bosnia</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Macedonia</td>
<td>0.88</td>
<td>0.52–1.50</td>
</tr>
<tr>
<td>Montenegro</td>
<td>0.47</td>
<td>0.27–0.82</td>
</tr>
<tr>
<td>Serbia</td>
<td>0.69</td>
<td>0.42–1.15</td>
</tr>
<tr>
<td>Age</td>
<td>1.32</td>
<td>1.13–1.55</td>
</tr>
</tbody>
</table>

*Choosing Bosnia as the reference country facilitates the reading and interpretation of the table. Bosnia is the country with the highest proportion of sexually active boys and at the same time the country with the lowest proportion of sexually active girls.*
of the girls. Condom use at first sexual contact ($p < 0.0001$), gender ($p = 0.0014$) and country ($p = 0.02$) appeared to be determinants of consistent condom use in the current or last sexual relationship. On the other hand, religion ($p = 0.13$), type of school ($p = 0.22$) and age ($p = 0.19$) were not independently associated with consistent condom use. Of adolescents using a condom at first sexual contact, 71.2% were consistently using condoms with the current or last partner. This was only true for 26.1% of those who had not used a condom during the first intercourse. (AOR = 7.34; 95% CI: 4.76–11.32). Figure 2 shows the responses when asked which contraceptive method they or their partners used at first sexual contact, and in their current or last sexual relationship (categories are not mutually exclusive). Of note are the relatively large proportion practising no contraceptive method or an unsafe one and the very small proportion resorting to oral contraception. While withdrawal was practised by 4.3% (Bosnia) to 19.7% (Macedonia) of the boys, the use of oral contraceptives (OCs) with the current partner ranged from 0% in Macedonian girls to 10.6% in girls from Bosnia. Except for somewhat divergent answers concerning withdrawal and rhythm (safe days), the responses of both genders are highly consistent.

**Pregnancy and abortion**

Five per cent (19/378) of sexually active boys declared to ever have caused a pregnancy and a same proportion (4.8%; 11/229) of sexually active girls to
have been pregnant. Among them, 10 out of 18 boys and six out of 10 girls said they had tried to have the pregnancy terminated.

**Accessibility of condoms**

Table 3 displays the results for selected indicators of the readiness to effectively use contraceptive methods. Students who were sexually active scored better than those who were not on each of the indicators. Furthermore, indicators for access to condoms scored much higher in boys than in girls, whereas girls tended to be more aware of services that provide emergency contraception and abortion. Shops and pharmacies accounted for over 90% of purchased condoms. Boys preferred to buy condoms in shops, whereas girls most frequently bought condoms in pharmacies ($p < 0.001$). Remarkably, 40.0% of boys (400/1000) and 51.6% of girls (574/1112) found it embarrassing for a girl to buy condoms.

**Access to SRH information and services**

Figure 3 shows reported sources of contraception information in sexually active boys and girls. While close to half of the boys and girls identified mass media channels and friends as sources of useful information on contraceptives, a much smaller proportion of youth mentioned medical caregivers or school.

In sexually active youth, significantly more girls (83/232; 35.8%) than boys (67/415; 16.1%) had ever visited a SRH facility ($p < 0.0001$). Among students who were not sexually active, these proportions were 11.1% (98/883) among girls and 8.9% (53/594) among boys. One-third of sexually active girls (77/228) and 18.0% of sexually active boys (71/394)

| Table 3 Selected indicators of the readiness to effectively use contraceptive methods |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|
|                                  | Not sexually active | Sexually active |
|                                  | Boys (%) | Girls (%) | Boys (%) | Girls (%) |
| Sufficiently informed about contraceptive methods ($n=2115$) | 44.2   | 47.5   | 57.8   | 60.6   |
| Ever bought condoms ($n=2103$) | 56.7   | 14.4   | 92.3   | 38.7   |
| Condoms with you or at home ($n=2114$) | 38.3   | 14.3   | 77.0   | 38.5   |
| Knows where to go for emergency contraception ($n=2119$) | 27.5   | 36.5   | 40.7   | 55.6   |
| Knows where to go for abortion ($n=2112$) | 32.4   | 32.4   | 42.6   | 56.1   |

**Figure 3** Reported sources of useful information on contraceptives
had ever refrained from seeking medical advice on reproductive health despite feeling the need for it. Most frequent reasons for not seeking medical advice included not knowing where to go, uncertainty of the severity of the problem, fear of the diagnosis, fear that their parents would find out about it, and shame of speaking about the problem. Sixty-one per cent of female students mentioned gynaecological problems and/or STIs as their reasons for visiting the SRH facility, while contraception, HIV testing and pregnancy testing were mentioned by 13, 12 and 6%, respectively. For male students, urological problems and/or STIs were mentioned by 25.6%, and contraception, and HIV and pregnancy testing by 10, 18 and 4%, respectively. About one-quarter of boys and girls visiting SRH facilities, wanted to receive counselling or advice on sexuality. Of adolescents who thought they might have contracted a STI, only 42% (37/88) had subsequently visited a doctor or health facility. The main reasons for not doing so were spontaneous disappearance of the complaints, fear of the diagnosis and being ashamed to discuss the problem.

DISCUSSION

Two major questions should be addressed when interpreting the results of this survey:

- do youth in the Balkans have different sexual risk behaviours and contraceptive practices than youngsters in the rest of Europe;
- to what extent is the perceived need for SRH care among this group of high school students provided for?

To answer the first question, we compared our results with the results from the 2001/2002 Health Behaviour in School-aged Children (HBSC) study. The sexual health survey of the HBSC study was conducted in 31 countries of the European Region, including the Russian Federation. As the sexual health questionnaire in the HBSC study was only administered to 15-year-old youth, we selected the corresponding subset of our dataset. The mean age of sexual debut in fifteen year olds in our sample (14.5 years for boys and 14.7 years for girls) was within the age range (i.e. 13.5–14.5 for boys and 13.6–14.9 for girls) as registered by the HBSC survey, albeit on the higher end of the range. Furthermore, the proportions of 15-year-old boys and girls in our sample who were already sexually active (18.92 and 2.94%, respectively) were much smaller than those in the HBSC study countries (HBSC mean 28.1% in boys and 20.2% in girls). In another youth survey, conducted in 1999 in Spanish youth, 30.1% of the boys and 24.0% of the girls aged 15–19 years had had sexual intercourse.

Our survey further suggests that unsafe sex practices in youth in the Balkans are in line with previously reported findings from other parts of Europe. In our sample, 21.1% of the boys and 26.6% of the girls had applied either no contraceptive method or an unsafe one (withdrawal, safe days, spermicidal cream only) at first sexual contact. Similar findings were reported among Swedish, Danish and Italian adolescents, with unsafe sex during first intercourse ranging between 22 and 25%9–12. However, lower proportions, between 7 and 12%, have been observed among adolescents in Switzerland, the United Kingdom, France and the Netherlands13–16.

Consistent condom use among boys (64.3%) in our sample was better than the 58.5, 51.8 and 40% previously reported in youth in Moscow (Russia), Catanzaro (Italy) and Budapest (Hungary), respectively. One should be cautious when comparing these figures; we asked about consistent condom use in the last or current relationship while the three other surveys were concerned with condom use during a fixed time interval (the past 6 months in the Russian and Italian surveys, and the past 5 weeks in that from Hungary)17–19. While gradual declines in (consistent) condom use after sexual initiation are compensated for by increased use of OCs in many European countries,8,13,16,18,20, this trend was not observed in our sample population. Moreover, the very low rates of OC use with the current or last partner among sexually active high-school girls in the Balkans contrast sharply with those observed in Belgium and the Netherlands (63 and 73%, respectively)16,21.

With regard to the need for SRH care, this survey provides evidence that increased efforts are needed to inform and guide both sexually active and inactive youth about contraceptive methods and safe sex. Overcoming psychosocial barriers, such as feelings of fear, shame and insecurity call for solutions beyond merely eliminating the financial and practical obstacles to SRH care accessibility. Social peers, radio and television should not be ignored, but viewed as
potentially powerful channels for dissemination of information. Also, there is still a great potential for the school and health care facilities to grow as an important source of useful information on contraceptives.

Limitations of our survey include the validity constraints related to self-reported sexual behaviour and the lack of data on a number of aspects of sexual behaviour, such as the number and type of sexual partnerships, and the existence of concurrent relationships. Also, although this survey provides detailed insights in sexual behaviour and contraceptive use among youth attending urban high-school in the Balkans, it should be determined through additional nationwide surveys whether the study findings apply to the whole of the Western Balkans as youth attending rural high-schools may behave differently.

In conclusion, although it is difficult to compare the findings of different studies because of differences in methodology and in age groups assessed, there is no evidence from this survey that sexual debut would be earlier in the Balkans than in other parts of Europe, nor that the proportion of sexually active youth would be larger. However, through declining condom use that is not compensated for by other contraceptive methods, youth in the Balkans seem to place themselves more frequently at risk for pregnancy than youngsters from some West-European countries. There is still a long way to go in providing adequate education and information about SRH matters. Feelings of shame, fear and insecurity still prevent people from seeking SRH care and advice. The role of mass media in overcoming these obstacles and disseminating information should be thoroughly explored.

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REFERENCES
