

TRENDS IN SEXUAL INITIATION AND CONTRACEPTION USE AMONG CZECH ADOLESCENTS BETWEEN 2002–2022

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SUMMARY

Objectives: This study examined trends in sexual behaviour and the timing of sexual initiation among 15-year-old adolescents in Czechia between 2002 and 2022, with a focus on the age of sexual debut (15 and older; early at 14; very early at 13 or younger). It also investigated trends in condom and hormonal contraceptive use at most recent intercourse.

Methods: Data were drawn from six nationally representative waves of the Czech Health Behaviour in School-aged Children study, which was conducted between 2002 and 2022. Only 15-year-olds were included (N = 19,384). Descriptive trend analyses were conducted using survey weights, with subgroup comparisons by gender and age at sexual initiation.

Results: The findings indicate a shift toward later sexual initiation, particularly among girls, with increasing proportions initiating at age 15 or older and declining initiation at age 14. A significant gender gap emerged in 2022, with fewer girls (13.9%) than boys (18.7%) reporting a sexual experience. The prevalence of very early initiation (age 13 or younger) remained stable over time, yet this group – especially boys – consistently accounted for a substantial minority of sexually active adolescents. Condom use declined from 81.2% to 69.9% across all initiation groups between 2014 and 2022, with the most persistent decline among very early initiators.

Conclusions: The findings suggest a modest postponement of sexual debut among Czech adolescents and highlight a growing gender disparity in sexual activity by age 15. Persistent early initiation and declining condom use highlight the need for differentiated sexual health education strategies, particularly for younger initiators.

Key words: sexual intercourse, adolescent sexuality, sexual health, contraception use

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INTRODUCTION

Sexual initiation, or sexual debut, refers to a person's first experience with sexual intercourse (1, 2). The legal age of sexual consent varies across countries and depends upon cultural norms (3). In the Czech Republic, the age of consent is 15 years old (4), and any sexual contact before this age is defined as early sexual initiation. In contrast, some countries, such as Germany and Hungary, have a lower age of consent, highlighting the complexity and cultural relativity of defining early sexual intercourse. To address these differences, a recent large-scale study on early sexual initiation used sexual activity before the age of 14 as the cut-off for premature sexual expression (5).

Early sexual initiation is associated with various negative outcomes including a higher risk for non-volitional sexual experiences, abortion, sexually transmitted infections (STIs), and lower contraceptive use (1, 2, 6, 7). However, there is growing evidence that the timing of sexual onset varies depending on cohorts, probably due to cultural norms (1, 5). In this respect, the present study, based on representative data from the Czech section

of the Health Behaviour in School-aged Children (HBSC) study, focuses on identifying birth cohort changes in the prevalence of sexual initiation at age 15 and older, early sexual initiation at age 14, and very early sexual initiation at 13 and younger, as well as changes in contraception use.

Prevalence of Sexual Initiation

Sexual initiation in adolescence has been the focus of several large-scale epidemiological surveys. A recent study conducted across 33 countries found that the percentage of 15-year-olds who had experienced sexual intercourse decreased from 25.3% in 2010 to 18.3% in 2018 (1). Another survey of adolescents aged 12–15 from 50 countries, primarily from non-WEIRD (Western, Educated, Industrialized, Rich, and Democratic) regions, reported that 14.2% had engaged in early sexual initiation (defined as ≤ 14 years of age) (2). Data from 37 countries on very early sexual initiation (before the age of 14) show a slight decline in incidence, from 5.1% in 2002 to 3.8% in 2022 (5). This suggests that very early sexual initiation is not prevalent.

In general, adolescent boys are more likely to report sexual initiation than their female peers. That holds true for both early and very early sexual initiation (1, 2, 5). Although this gender gap in sexual initiation varies across countries, in Europe it was found to have slightly decreased between 2010 and 2018. This narrowing of the gap is particularly evident in countries with more progressive gender attitudes and lower levels of gender inequality (1), corroborating prior findings regarding another type of adolescent sexual behaviour (8).

According to HBSC data from the period between 2002 and 2010, the percentage of 15-year-olds with sexual experience in Czechia increased from 17.3% to 23.7%, while their average age of sexual initiation remained between 14.3 and 14.2 (9). In comparison, Czech national surveys from 1993 and 2024 conducted on populations of 15+ and 18+ show only a slight shift in the average age of sexual initiation for men (18.1 to 18.3 years old) as well as women (18.0 to 17.5 years old) (10, 11).

Additional data from the Czech section of the HBSC survey indicate a decline in the prevalence of sexual initiation among adolescents between 2014 and 2018. Among girls, the rate dropped from 24% to 18%, while for boys it decreased slightly from 23% to 21% (12). However, the gender difference in prevalence in 2018 was statistically non-significant (1). By 2022, the downward trend continued with 14% of girls and 19% of boys reporting sexual initiation (13). These recent findings suggest that adolescent sexual behaviour have changed in recent years. How these changes translate into sexual health behaviours, such as contraception use, is the focus of the following section.

Contraception Use among Sexually Active Adolescents

Sexual activity is always associated with recommendations to use barrier protection against sexually transmitted disease (e.g., condom use) and for the prevention of unwanted pregnancies (e.g., hormonal contraception). The use of contraception among adolescents varies significantly among countries (14), and in the last decade a decline in condom use among adolescents has been reported by scholars (15–17).

Specifically, the WHO report on sexual behaviour among 15-year-olds in Europe, central Asia, and Canada (15), which was based on data from 44 countries and regions, showed that the proportion of sexually active adolescents who used a condom during their most recent intercourse fell from 63% to 57% among girls and from 70% to 61% among boys between 2014 and 2022. Nonetheless, no significant change in contraceptive pill use during the most recent sexual intercourse was seen in either gender between 2014 and 2022 (26% of girls and 25% of boys). The rates of unprotected sex among sexually active adolescents are relatively high: almost a third of adolescents reported using neither a condom nor the contraceptive pill during their most recent intercourse and this proportion remains similar for 2018 and 2022 (15). According to data from 2022, Czech adolescents reported a similar prevalence for condom use (62% girls, 59% boys), hormonal contraception (31% girls, 28% boys), and no contraception (25% girls, 30% boys) to the international average (15). Although the rates of contraception use during the most recent intercourse among Czech adolescents do not substantially vary by gender, little is known about how the timing of sexual initiation is linked to sexual health behaviours.

Study Aim

The aim of the present study is to analyse the trends in sexual behaviour and the timing of sexual initiation among Czech adolescents, with a specific focus on identifying birth cohort changes in the prevalence of sexual initiation at age 15 and older, early initiation at age 14, and very early initiation at age 13 or younger between 2002 and 2022. Additionally, trends in condom and hormonal contraceptive use at most recent sexual intercourse will be examined and analysed in relation to the age at sexual debut.

MATERIALS AND METHODS

Sample and Procedure

We used Czech cohort data from the HBSC study, which was collected in six waves between 2002 and 2022. The HBSC study is a World Health Organization collaborative project that focuses on health and wellbeing in school-aged children across Europe and North America. All national data collections adhered to the standardised HBSC international protocol to ensure representativeness and cross-national comparability.

Sampling procedures and data collection methods were based on the official HBSC methodological documentation and the Czech national data collection protocol (18, 19). A stratified two-stage cluster sampling approach was used in each wave. It was stratified by region, school type (elementary vs. gymnasium), and school size. Schools were randomly selected from the database of the Czech Ministry of Education, and one class from the ninth grade (or the equivalent grade at multi-year gymnasium schools) was randomly chosen to participate. Only data from the ninth grade (or equivalent) students were used in this study, because they were the only group who were administered questions about their sexual behaviour across the survey waves. The sizes of the final samples were as follows: 1,660 for 2002 ($M_{age} = 15.41$, $SD_{age} = 0.37$, 51.4% girls); 1,652 for 2006 ($M_{age} = 15.42$, $SD_{age} = 0.32$, 49.5% girls); 1,481 for 2010 ($M_{age} = 15.45$, $SD_{age} = 0.33$, 51.4% girls); 4,761 for 2014 ($M_{age} = 15.42$, $SD_{age} = 0.41$, 50.4% girls); 4,343 for 2018 ($M_{age} = 15.47$, $SD_{age} = 0.41$, 48.6% girls); and 5,487 for 2022 ($M_{age} = 15.46$, $SD_{age} = 0.41$, 49.1% girls).

Participation was voluntary and anonymous. Parents were informed about the study in advance by the school administration and they could opt their child out. The survey was administered during regular class time with either a paper-pencil (until 2014) or online format (since 2018), depending on the year. Trained researchers supervised the data collection. Weights were applied to the data to ensure representativeness by region and year of school attendance.

Measures

The following variables were available across the full dataset. Sexual initiation was measured with a dichotomous item that asked whether the respondent had ever had sexual intercourse (yes/no). Age of sexual initiation was assessed with a categorical item with six options from “11 or younger” to “16 or older.”

The following variables were available only in the 2014–2022 waves. Condom use at most recent intercourse and contraceptive pill use at most recent intercourse were assessed with items that offered three response options: “yes”, “no”, and “I don’t know”.

Data Analyses

Descriptive analyses were conducted with RStudio (version 2024.12.0+467). Trend visualisations were created with the ggplot2 package. Survey weights that were available in the dataset were applied to adjust the estimates for regional and grade-level representation within each wave.

RESULTS

Trends in Sexual Initiation

Table 1 shows the prevalence of sexual initiation across six survey waves (2002–2022).

From 2002 to 2022, the median age at first sexual intercourse among those who reported such experience was 15 years, except in 2010, when it dropped to 14 years.

Figure 1 presents trends in the prevalence of sexual initiation among 15-year-olds in Czechia, disaggregated by gender. From 2002 to 2014, the proportions of boys and girls who reported sexual intercourse were largely comparable. In 2010, girls reported slightly higher levels of sexual initiation compared to boys, although the wide confidence intervals preclude firm conclusions. A divergence in the trends becomes apparent from 2014 onward. Between 2014 and 2022, the prevalence of sexual initiation among girls showed a marked decline. This divergence culminates in 2022, where a statistically significant gender gap emerges: approximately 19% of boys reported a sexual experience, compared to only about 14% of girls, $\chi^2(1, N=4,982) = 20.12, p < 0.001$.

Trends in Timing of Sexual Initiation

Figure 2 illustrates the distribution of the timing of sexual initiation among Czech adolescents who reported having had sexual intercourse, stratified by gender and age group: initiation at 15 years or older, early initiation at 14, and very early initiation at 13 or younger. Trends are presented across six survey years (2002–2022).

Among boys, there has been a gradual increase in the proportion of those who report sexual initiation at age 15 or older, rising from approximately 48% in 2002 to more than 55% in 2022. Concurrently, there has been a slight decline in early initiators (age 14), dropping from around 35% in the early 2000s to below 30% in recent years. The prevalence of very early initiation (age 13 or younger) among boys has fluctuated (between 18% and 25%) across the 20-year period.

For girls, the trend is even more pronounced. The proportion of girls who initiate sex at age 15 or older has significantly increased, from under 55% in 2002 to approximately 65% in 2022. This shift has been accompanied by a noticeable decline in early initiation (age 14), which fell from more than 30% in 2002–2010 to about 22% in 2022. Similar to boys, the share of very early initiators has remained relatively stable over time, hovering between 10% and 13%.

Contraceptive Use at Most Recent Intercourse

Table 2 shows the prevalence of contraception use between 2014 and 2022, disaggregated by gender and the type of contra-

Table 1. Sexual initiation and age of sexual initiation of Czech adolescents by gender and year

| Year | Boys | | | | | | Girls | | | | | | All | | | | | |
|------|---------------------------|-----|-----|---------|------|------|---------------------------|-----|------|---------|------|------|---------------------------|-----|------|---------|------|------|
| | Proportion of SI (95% CI) | | | n valid | | | Proportion of SI (95% CI) | | | n valid | | | Proportion of SI (95% CI) | | | n valid | | |
| | ≤11 | 12 | 13 | 14 | 15 | 16 ≤ | ≤11 | 12 | 13 | 14 | 15 | 16 ≤ | ≤11 | 12 | 13 | 14 | 15 | 16 ≤ |
| 2002 | 17.2 (14.5–19.9) | 1.6 | 1.6 | 33.6 | 51.2 | 3.2 | 2.7 | 8.0 | 8.0 | 33.6 | 45.1 | 2.7 | 18.2 (16.2–20.3) | 4.6 | 8.4 | 33.6 | 48.3 | 2.9 |
| 2006 | 18.2 (15.3–21.1) | 0 | 4.0 | 31.0 | 54.0 | 1.6 | 0.9 | 2.8 | 13.8 | 36.7 | 44.0 | 1.8 | 17.6 (15.5–19.6) | 3.4 | 11.5 | 33.6 | 49.4 | 1.7 |
| 2010 | 25.5 (22.1–29.0) | 0 | 1.3 | 36.1 | 53.6 | 0.7 | 4.4 | 2.6 | 19.3 | 32.5 | 40.4 | 0.9 | 23.7 (21.2–26.2) | 1.9 | 13.0 | 34.6 | 48.0 | 0.7 |
| 2014 | 23.6 (21.8–25.4) | 1.5 | 0.9 | 35.6 | 51.7 | 1.3 | 6.4 | 2.2 | 7.7 | 29.0 | 50.3 | 4.4 | 22.7 (21.4–24.0) | 1.5 | 8.4 | 32.4 | 51.1 | 2.8 |
| 2018 | 18.6 (16.8–20.4) | 1.3 | 1.1 | 27.0 | 61.5 | 3.9 | 10.6 | 3.0 | 6.1 | 21.4 | 52.7 | 6.3 | 20.3 (19.0–21.6) | 2.1 | 5.7 | 23.9 | 56.7 | 5.2 |
| 2022 | 13.9 (12.5–15.3) | 5.0 | 0.6 | 22.1 | 62.9 | 3.5 | 13.1 | 2.9 | 4.0 | 23.2 | 53.0 | 3.8 | 16.3 (15.2–17.3) | 1.9 | 4.8 | 22.7 | 57.3 | 3.7 |

SI – sexual initiation; SI adolescents – sexually initiated adolescents; CI – confidence interval

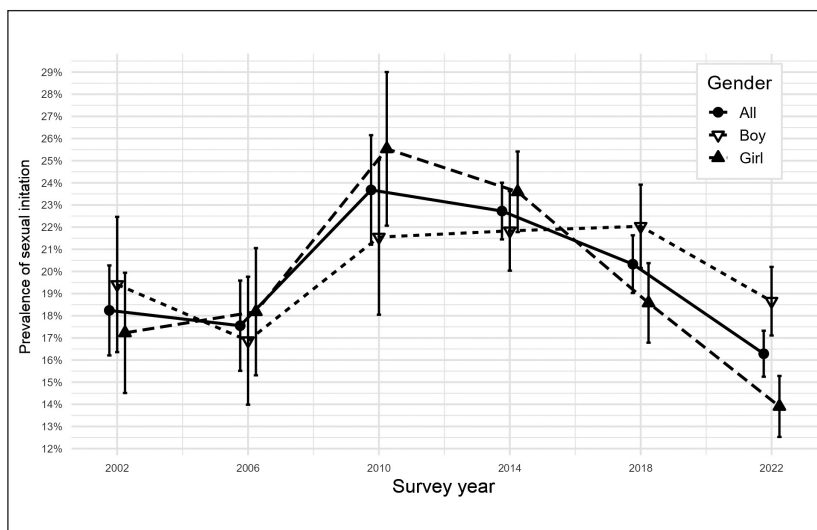


Fig. 1. Trends in sexual initiation by gender.

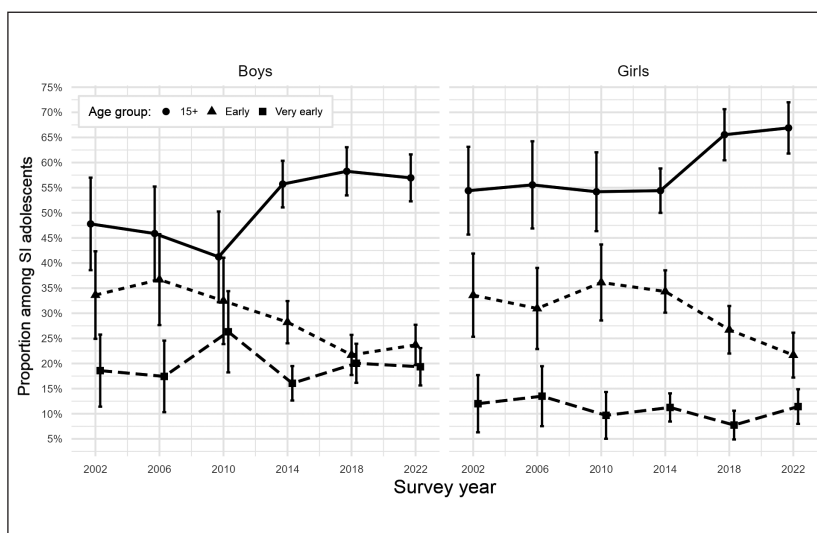


Fig. 2. Trends in age of sexual initiation by gender.

SI adolescents – sexually initiated adolescents

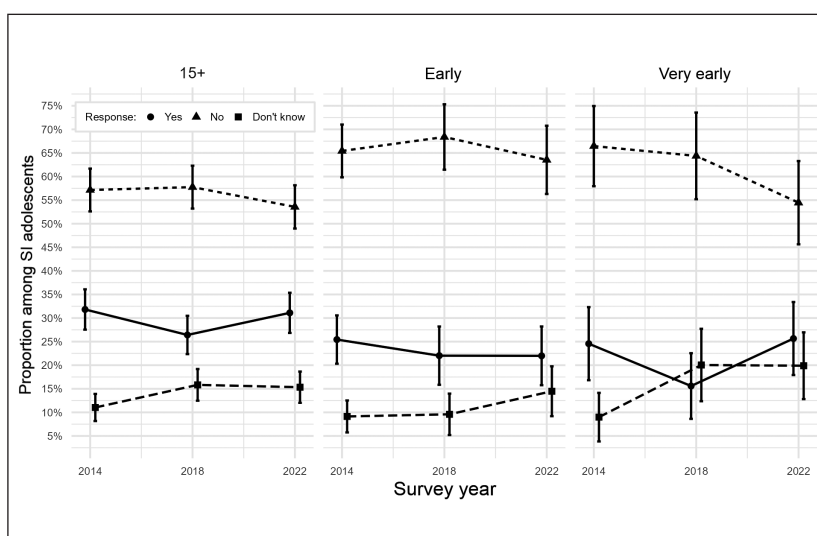


Fig. 3. Hormonal contraception use at most recent intercourse by age of sexual initiation.

SI adolescents – sexually initiated adolescents

Table 2. Contraception use among sexually initiated adolescents by gender and year

| Variable | | Condom use | | | Hormonal contraception use | | | Certain contraception use ^a | | |
|----------|------------|------------------|------------------|------------------|----------------------------|------------------|------------------|--|------------------|------------------|
| | | 2014 (95% CI) | 2018 (95% CI) | 2022 (95% CI) | 2014 (95% CI) | 2018 (95% CI) | 2022 (95% CI) | 2014 (95% CI) | 2018 (95% CI) | 2022 (95% CI) |
| All | n valid | 1,042 | 841 | 778 | 975 | 838 | 771 | 1,055 | 844 | 781 |
| | Yes | 70.5 (67.6–73.5) | 53.4 (49.8–57.0) | 58.4 (54.9–61.9) | 28.5 (25.5–31.5) | 23.8 (20.7–26.9) | 27.8 (24.6–31.0) | 81.2 (78.7–83.7) | 64.4 (60.9–67.9) | 69.6 (66.3–72.9) |
| | No | 27.5 (24.7–30.4) | 38.8 (35.2–42.3) | 30.8 (27.5–34.1) | 61.5 (58.3–64.8) | 61.0 (57.5–64.5) | 56.0 (52.5–59.6) | 18.8 (16.3–21.3) | 35.6 (32.1–39.1) | 30.4 (27.1–33.7) |
| | Don't know | 1.9 (1.0–2.8) | 7.8 (5.9–9.8) | 10.8 (8.6–13.0) | 10.0 (8.0–12.0) | 15.2 (12.6–17.8) | 16.2 (13.5–18.8) | — | — | — |
| Boys | n valid | 498 | 460 | 444 | 469 | 461 | 442 | 506 | 463 | 447 |
| | Yes | 74.6 (70.6–78.7) | 54.7 (49.8–59.6) | 57.7 (53.1–62.4) | 25.8 (21.7–30.0) | 23.4 (19.3–27.6) | 26.2 (22.0–30.3) | 81.4 (77.7–85.0) | 62.7 (57.9–67.4) | 67.0 (62.6–71.4) |
| | No | 23.4 (19.4–27.3) | 35.8 (31.0–40.5) | 29.1 (24.8–33.4) | 55.0 (50.2–59.8) | 51.7 (46.8–56.7) | 48.7 (44.0–53.4) | 18.6 (15.0–22.3) | 37.3 (32.6–42.1) | 33.0 (28.6–37.4) |
| | Don't know | 2.0 (0.7–3.3) | 9.5 (6.6–12.4) | 13.1 (9.9–16.3) | 19.2 (15.3–23.0) | 24.8 (20.6–29.0) | 25.1 (21.1–29.2) | — | — | — |
| Girls | n valid | 544 | 381 | 334 | 506 | 377 | 329 | 549 | 381 | 334 |
| | Yes | 66.9 (62.7–71.1) | 51.9 (46.5–57.2) | 59.3 (54.0–64.6) | 30.9 (26.6–35.2) | 24.2 (19.6–28.8) | 30.0 (25.0–35.0) | 81.1 (77.6–84.6) | 66.5 (61.3–71.6) | 73.0 (68.2–77.8) |
| | No | 31.3 (27.2–35.5) | 42.3 (37.0–47.6) | 33.0 (27.9–38.1) | 67.4 (63.1–71.8) | 72.2 (67.3–77.0) | 65.8 (60.7–71.0) | 18.9 (15.4–22.4) | 33.5 (28.4–38.7) | 27.0 (22.2–31.8) |
| | Don't know | 1.8 (0.6–3.1) | 5.8 (3.3–8.4) | 7.7 (4.8–10.6) | 1.6 (0.4–2.8) | 3.6 (1.7–5.6) | 4.2 (2.0–6.4) | — | — | — |

^aCertain contraception use was coded 'yes' in cases where at least one of the two contraception questions was answered 'yes'.

ception. Contraception use, in general, declined between 2014 and 2022, from 81.2% to 69.6%. The same pattern concerned both girls and boys.

Figures 3 and 4 display the trends in the reported use of the contraceptive pill at most recent intercourse (Fig. 3) and condom use at most recent intercourse (Fig. 4) between 2014 and 2022, disaggregated by age of sexual initiation: 15+, early (age 14), and very early (age 13 or younger). The use of hormonal contraception at most recent intercourse did not vary substantially across cohorts or age-at-initiation groups, although the group that reported very early initiation showed the most fluctuation.

Figure 4 shows that condom use at the most recent intercourse declined markedly between 2014 and 2018 across all of the sexual initiation age groups. Although a partial reversal of this trend was observed in the 15+ and 14-year-old initiation groups in subsequent years, the decline remained pronounced among those who initiated sex at age 13 or younger. The proportion of adolescents who reported uncertainty about condom use increased over time across all of the initiation groups.

DISCUSSION

This study examined trends in sexual behaviour and the timing of sexual initiation among Czech adolescents, focusing on shifts across birth cohorts from 2002 to 2022. Specifically, it explored changes in the prevalence of sexual initiation at age 15 or older, early initiation at age 14, and very early initiation at age 13 or younger. In addition, the study investigated patterns in condom and hormonal contraceptive use during the most recent sexual intercourse, with particular attention to how these behaviours relate to the timing of sexual debut.

The study found that from 2002 to 2014 similar proportions of girls and boys reported having had sexual intercourse, except for 2010, when more girls reported initiation. However, starting in 2018, a gender gap began to appear. By 2022, this difference became statistically significant, with a sharper decline in reported sexual activity among girls. Post-pandemic data indicate that adolescent girls were especially affected. This trend is consistent with early post-COVID findings from the last HBSC survey, which was conducted in 2022, and which reported a decline in mental health, particularly among older girls (20). It is plausible that the increased prevalence of anxiety, depression, and stress-related disorders, especially among adolescent girls, contributed to a decline in the formation of typical romantic relationships, which often serve as the context for initial sexual experiences. The changes in recent cohorts may be attributed to the increasing importance of digital media in the lives of adolescents. However, this role of the internet may be ambiguous, affecting various groups differently. For example, an increasing number of adolescents affected by the increased emotional difficulties are spending too much time online, which prevents them from further socializing opportunities (21) and thus potential sexual involvement. On the other hand, the internet brings more opportunities for other types of sexual expression that may be a precursor for offline sexual behaviour (22). Nonetheless, less progressive gender attitudes and higher levels of gender inequality may also contribute to the growing disparities in the acquisition of sexual experience (1). Whether this development represents a temporary

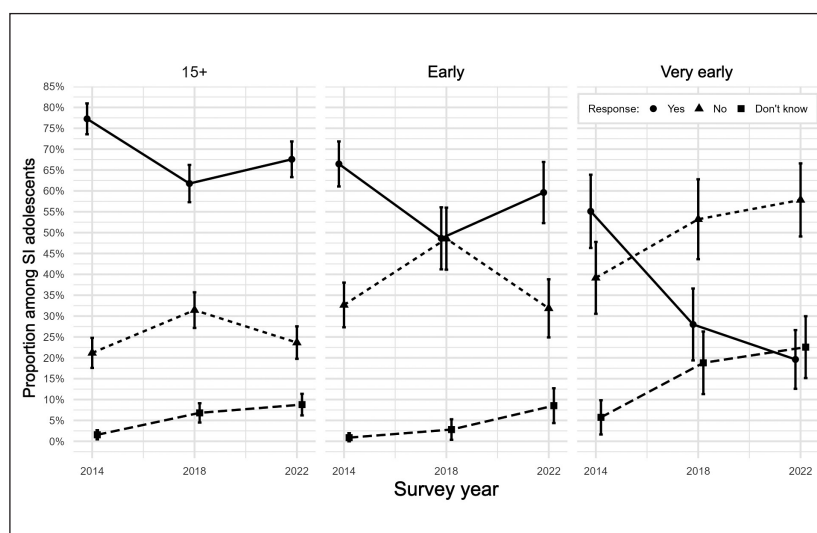


Fig. 4. Condom use at most recent intercourse by age of sexual initiation.

SI adolescents – sexually initiated adolescents

fluctuation or the onset of a new trend remains uncertain and warrants the close monitoring of future cohorts of 15-year-olds in the HBSC survey.

Our results indicate a decline in the proportion of adolescents who initiate sexual intercourse at age 14, accompanied by a relative increase in initiation at age 15, primarily in adolescent girls. These findings, along with evidence of a decline in sexual initiation among 15-year-olds, suggest that adolescents, including those in Czechia, may not be as sexually active as some media narratives often portray. At the same time, it is worth noting that the proportion of adolescents who report sexual initiation at age 13 or younger has remained relatively stable over the past two decades. Among those who have had sexual intercourse, approximately 10% of girls and 20% of boys report very early initiation. Contrary to the modest decline reported by Költö et al. (5), our data do not suggest a similar trend in Czechia. However, the persistent presence of very early initiation, especially among boys, highlights a subgroup that remains at heightened risk and warrants targeted attention from researchers and public health professionals. Moreover, it may also be worth considering whether the HBSC methodology, specifically the Czech protocol, should be adapted to assess whether very early sexual initiation was consensual and to distinguish it from non-consensual experiences.

Our study identified a notable decline in condom use among adolescents with very early sexual initiation. While Költö et al. (15) also report a general decrease in condom use, our findings suggest that this trend is particularly concentrated among those who initiate sexual activity at a very young age. This raises important questions about whether safe sex campaigns have lost momentum and whether this pattern may also be linked to the absence of mandatory sex education in the Czech Republic. The lack of a comprehensive national policy on sexual and reproductive health education may contribute to inconsistent messaging and missed opportunities to establish healthy sexual behaviour patterns especially among the most vulnerable groups, such as adolescents with early or very early sexual experience.

Limitations

The present study is not without limitations. First, the relatively small number of respondents through the 2002 and 2010 survey waves resulted in less precise estimates for they key indicators. Future iterations of the HBSC study in Czechia should aim to maintain larger sample sizes, as has been the case since 2014, in order to enhance the reliability and accuracy of trend estimates. Second, the analysis of trends in contraceptive use is based on data from only three recent cohorts (2014–2022). This narrow timeframe limits our ability to interpret whether the observed change in the most recent wave reflects a temporary fluctuation or a genuine increase in unprotected sexual activity. Third, we cannot determine whether reported contraceptive use at last intercourse refers to the first sexual experience. This limits our understanding of whether the absence of protection is due to structural barriers, such as the limited accessibility of contraceptives for younger adolescents, who are not typically expected to be sexually active, or whether it reflects a broader pattern of risk-taking among those who initiate sexual activity very early. Finally, the measure of hormonal contraception did not distinguish between regular hormonal birth control and emergency contraception (the morning-after pill), which may have different implications for adolescent sexual health behaviour and planning.

CONCLUSIONS

This study offers a comprehensive examination of trends in adolescent sexual behaviour in Czechia between 2002 and 2022, revealing notable shifts in both the timing of sexual initiation and the patterns of contraceptive use. The findings suggest a gradual postponement of sexual debut, particularly among girls, as evidenced by an increasing proportion of adolescents who report initiation at age 15 or older and a concurrent decline in initiation at age 14. These changes have been accompanied by the emergence of a gender gap in sexual activity by age 15, with significantly fewer girls than boys reporting sexual experience in the most recent cohort.

While the prevalence of very early sexual initiation (age 13 or younger) has remained relatively stable over time, this group continues to represent a particularly vulnerable segment of sexually active adolescents. Of particular concern is the marked decline in condom use among this subgroup, which may reflect broader gaps in sexual education and public health outreach.

Given the overall decline in contraceptive use observed in the most recent HBSC cohorts, these findings underscore the need for differentiated public health strategies. Such strategies should promote healthy sexual development through comprehensive education for all adolescents, while targeting early initiators with tailored, timely, and accessible information about safe sex practices. Finally, revising national survey protocols to include measures of consent would enhance our understanding and inform policy and programme development in adolescent sexual health.

Acknowledgement

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Conflicts of Interest

None declared

Adherence to Ethical Standards

The study design and methodology were approved by the Institutional Ethics Committee of the Faculty of Physical Culture, Palacký University Olomouc (Ref. Nos. 17/2013, 9/2016 and 65/2020 for the 2014, 2018 and 2022 data collections, respectively). The parents were informed about the study via the school administration, and they had the possibility to opt out if they disagreed with their child's participation in the surveys.

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Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

REFERENCES

- De Graaf H, Schouten F, Van Dorsselaer S, Költő A, Ball J, Stevens GWJM, et al. Trends and the gender gap in the reporting of sexual initiation among 15-year-olds: a comparison of 33 European countries. *J Sex Res.* 2024;62(4):445-54.
- Kushal SA, Amin YM, Reza S, Hossain FB, Shawon MSR. Regional and sex differences in the prevalence and correlates of early sexual initiation among adolescents aged 12–15 years in 50 countries. *J Adolesc Health.* 2022;70(4):607-16.
- Madkour AS, de Looze M, Ma P, Halpern CT, Farhat T, Ter Bogt TF, et al. Macro-level age norms for the timing of sexual initiation and adolescents' early sexual initiation in 17 European countries. *J Adolesc Health.* 2014;55(1):114-21.
- Zhu G, van der Aa S. Trends of age of consent legislation in Europe: A comparative study of 59 jurisdictions on the European continent. *New J Eur Crim Law.* 2017;8(1):14-42.
- Költő A, Winter K, Maloney R, Lunney L, Nicolaou C, Cosma A, et al. Cross-national trends in early sexual initiation among 15-year-old adolescents, 2002–2022. *Int J Public Health.* 2025;70:a1607711. doi:10.3389/ijph.2025.1607711.
- Heywood W, Patrick K, Smith AM, Pitts MK. Associations between early first sexual intercourse and later sexual and reproductive outcomes: a systematic review of population-based data. *Arch Sex Behav.* 2015;44(3):531-69.
- Peragine DE, Skorska MN, Maxwell JA, Impett EA, Van der Laan DP. The risks and benefits of being "early to bed": toward a broader understanding of age at sexual debut and sexual health in adulthood. *J Sex Med.* 2022;19(9):1343-58.
- Ševčíková A, Šerek J, Barbovschi M, Daneback K. the roles of individual characteristics and liberalism in intentional and unintentional exposure to online sexual material among European youth: a multilevel approach. *Sex Res Soc Policy.* 2014;11(2):104-15.
- Pastor Z, Weiss P, Sigmundová D. Trends in sexual behaviour in Czech schoolchildren between 2002-2014. *Cent Eur J Public Health.* 2017;25(Suppl 1):S64-8.
- Weiss P. [Sexual behavior and sexual attitudes in the Czech Republic: results of the representative surveys] [dissertation]. Prague: Czech Academy of Sciences; 2012 [cited 2025 Apr 28]. Czech.
- Ševčíková A, Blinka L, Bártová K, Krejčová L, Kalenská L, Androvičová R, et al. [Sex and relationships of young adults – results of the CZECH-SEX survey]. In: Knytl M, editor. [Proceedings of the 32nd statewide congress on sexual education in the Czech Republic: wellbeing, education & sexuality]; 2024 Oct 17-18; Pardubice, Czech Republic. Prague: Czech Family Planning Association; 2024. p. 50-2 [cited 2025 Apr 28]. Czech.
- Inchley JC, Stevens GWJM, Samdal O, Currie DB. Enhancing understanding of adolescent health and well-being: the health behaviour in school-aged children study. *J Adolesc Health.* 2020;66(6 Suppl):S3-5.
- Suchý V. Trends in factors of sexual initiation among Czech adolescents: a network analysis [dissertation]. Brno: Masaryk University; 2024. Czech.
- Inchley J, Currie D, Budisavljevic S, Torheim T, Jästad A, Cosma A, et al., editors. Spotlight on adolescent health and well-being. Findings from the 2017/2018 Health Behaviour in School-aged Children (HBSC) survey in Europe and Canada. International report. Volume 2. Key findings [Internet]. Copenhagen: WHO Regional Office for Europe; 2020 [cited 2025 Apr 28]. Available from: <https://www.who.int/europe/publications/i/item/9789289055000>.
- Költő A, de Looze M, Jästad A, Nealon Lennox O, Currie D, Nic Gabhainn S. A focus on adolescent sexual health in Europe, central Asia and Canada: health behaviour in school-aged children international report from the 2021/2022 survey. Volume 5 [Internet]. Copenhagen: WHO Regional Office for Europe; 2024 [cited 2025 Apr 28]. Available from: <https://www.who.int/europe/publications/i/item/9789289061155>.
- Risley C, Douglas K, Karimi M, Brumfield J, Gartrell G, Vargas R, et al. Trends in sexual risk behavioral responses among high school students between Mississippi and the United States: 2001 to 2019 YRBSS. *J Sch Health.* 2023;93(6):500-7.
- Grubb LK; Committee on Adolescence. Barrier protection use by adolescents during sexual activity. *Pediatrics.* 2020;146(2):e2020007245. doi:10.1542/peds.2020-007245.
- Sigmund E, Baďura P, Sigmundová D, Csémy L, Kalman M. Methodological aspects of trend studies and development of the HBSC study in the Czech Republic. *Cent Eur J Public Health.* 2017;25(Suppl 1):S4-9.
- Zdravá generace. Data collection methodology - HBSC 2022 [Internet]. Olomouc: Zdravá generace [cited 2025 Apr 28]. Available from: <https://zdravagenerace.cz/metodika/>. Czech.
- Cosma A, Költő A, Young H, Thorsteinsson E, Godeau E, Saewyc E, et al. Romantic love and involvement in bullying and cyberbullying in 15-year-old adolescents from eight European countries and regions. *J LGBT Youth.* 2022;20(1):33-54.
- Boniell-Nissim M, Marino C, Galeotti T, Blinka L, Ozoliņa K, Creig W, et al. A focus on adolescent social media use and gaming in Europe, Central Asia and Canada: health behaviour in school-aged children international report from the 2021/2022 survey. Volume 6 [Internet]. Copenhagen: WHO Regional Office for Europe; 2024 [cited 2025 Apr 28]. Available from: <https://www.who.int/europe/publications/i/item/9789289061155>.
- Ševčíková A, Blinka L, Daneback K. Sexting as a predictor of sexual behavior in a sample of Czech adolescents. *Eur J Dev Psychol.* 2018;15(4):426-37.

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