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Overview

The second decade of life involves rapid development of sexuality and sexual debut (i.e., first experience of sexual behavior) for most adolescents living in and beyond the Western world. This essay begins by describing the most common theoretical and empirical orientations to research on adolescent sexual behavior. Following this, three primary topics are addressed by drawing from the past 50 years of research in psychology, public health, and related fields. These topics include describing age-related patterns of sexual debut and sexual behavior for diverse children. adolescents, and young adults and changes in these patterns across historical cohorts; summarizing what is known about how biology, perceptions, attitudes, social relationships, and sociocultural pressures or norms are associated with early, typical, or delayed onset of sexual behavior; and considering how adolescents must and sometimes do balance the risks with the benefits of sexual behavior. Throughout these topics, the importance of nationality, race/ethnicity, gender, and sexual

identity are acknowledged, and known differences and similarities are highlighted.

Foundations of Research on Sexual Debut and Adolescent Sexual Behavior

Adolescence includes the years of pubertal development into the early 20s. During these adolescent years, there is exposure to a range of physical changes and life experiences that are likely to impact significantly upon sexual behavior and health (Brooks-Gunn & Paikoff, 1997; Finer & Philbin, 2013; Morales-Alemán & Scarinci, 2016; Olmstead, 2020; Zimmer-Gembeck et al., 2016). There is especially rapid development of many aspects of sexuality including ways of thinking about sexual preferences and desire, understanding of the self as a sexual being, and the onset of actual behaviors. However, although sexual debut often occurs during adolescence, sexual interests and behavior can onset much earlier. One study reported that most children engage in some sexual behavior as early as age 4, but this behavior is most often limited to attempts to look at others in the nude or see others undressing (Lussier et al., 2018).

When the focus is on adolescents, the term "sexually active" can refer to kissing, fondling, oral sex, and a multitude of other sexual behaviors – now even including sexting ("sending sexually explicit messages, images, or videos to a romantic partner," Steinberg et al., 2019,

p. 2322). However, the term sexually active has a long history of being used to refer to only vaginal intercourse or penetrative sex. Hence, it is easy to locate information on adolescent sexual intercourse – we know a great deal about when it starts, who is involved, the correlates of debut timing, and what changes might ensue after debut. In fact, although progress has been made in the past 10 years, the research conducted to answer these questions continues to far outweigh research on other important topics, such as (a) the meaning and context of adolescent sexual behavior, (b) the development of an understanding of sexual desire, (c) the capacity for autonomous sexual decision making, the meaning of sex within adolescents' relationships – whether they are committed or more casual, and (d) the pros and cons of refraining from sexual debut until later in life.

Surveys that provide us with knowledge of who and how many are doing "it" are numerous. Many of the 100 s of studies published in just the past 20 years provide up-to-date age-, gender-, and racial/ethnic-specific rates of sexual intercourse. To understand both the limits and the extent of knowledge on sexual debut, it is useful to begin by considering the underlying purpose for conducting research on adolescent sexual behavior. The core concern is the promotion of the health and well-being of young people, including sexual health but also social and emotional health. However, the perspectives that direct the particular focus within each study are more diverse and fall into four general categories that encompass many theoretical orientations.

First, some researchers begin with a problem orientation and draw from multiple theories that point toward individual and social influences on multiple risky behaviors, including sexual intercourse, sexual partnering, inconsistent condom or contraceptive use, binge drinking, aggressive behavior, school nonattendance, and others (e.g., Capaldi et al., 2017; Smout et al., 2020; Zimmer-Gembeck & Collins, 2008). Such theories often focus on many levels of potential influence from individual characteristics to social institutions that might assist young people to reduce their risky behaviors by providing alternative interests and goals (e.g., school) or promoting social bonds

(e.g., good family relationships, having peers that are not engaging in deviant behavior). Justification for referring to sexual behavior as "risky" comes from research showing links between earlier onset of vaginal intercourse (or the accumulation of more partners or inconsistent condom use) and higher rates of unintended pregnancy, sexually transmitted infections, or mental health problems (e.g., depressive symptoms).

Second and very much related to the first perspective, another comes from prevention science or public and population health. In this area, there is a more explicit goal of understanding child and adolescent behavior to guide interventions that reduce risk – most importantly reducing unprotected sexual intercourse to impact on rates of pregnancy and sexually transmitted infections (STIs) (e.g., Piotrowski & Hedeker, 2016). For example, many researchers have the aim of understanding adolescent sexual planning and decision making in order to guide the development of better interventions to assist adolescents to delay sexual intercourse, improve condom use, or limit their number of sexual partners.

A third category of research places more emphasis on normal or typical developmental processes as part of the emergence of sexual behavior as normative and positive, as well as continuing to note the importance of individual dispositions and social environments in initiation and development (Horne & Zimmer-Gembeck, 2005, 2006; Olmstead, 2020; Tolman & McClelland, 2011). In these investigations, researchers have emphasized the importance of biological unfolding in conjunction with family and/or peer influences. For example, earlier physical maturation not only comes with hormonal changes that spark interest in romantic and sexual relationships, but they also seem to prompt certain responses from the social environment, resulting in increased opportunities for romantic and sexual involvement (Zimmer-Gembeck & Helfand, 2008).

Fourth and finally, research has turned to considering adolescents' emotions and cognitions relevant to sexual behavior, and the growth and opportunities that can follow from sexual and romantic relationships. For example, in multiple studies, Zimmer-Gembeck and her colleagues

(Mastro & Zimmer-Gembeck, 2015, 2016; Zimmer-Gembeck, 2013; Zimmer-Gembeck et al., 2015; Zimmer-Gembeck & French, 2016) have examined sexual subjectivity, defined as sexual body-esteem, perceptions of entitlement to sexual desire and pleasure, and cognitions and emotional reactions to sexual experiences. Even before this work, others had proposed definitions of positive sexuality that include learning about intimacy, learning about sexual roles and responsibilities, body self-esteem, understanding and adjustment to erotic feelings, and learning about societal standards or sexual expression (Bukowski et al., 1993; Buzwell & Rosenthal, 1996) and begun to empirically investigate these aspects of sexuality during adolescence and early adulthood.

Drawing from this extensive literature, three primary topics are addressed in this chapter. First, age-related patterns of sexual debut and adolescent sexual behavior are described, drawing attention to current timing of sexual debut and trends. Second, a summary is provided of what is known about how individual biology, perceptions, attitudes, and social relationships are associated with early, typical, or delayed onset of sexual behavior. These comments are primarily derived from research using prospective designs to better isolate the impact of earlier behaviors, attitudes, or other factors on the emergence of first sexual behavior. This summary also highlights how the development of sexual behavior may vary as a function of gender and race/ethnicity and notes some new and preliminary findings in this area. Third, sexual behavior is considered along with sexual self-perceptions and positive sexuality to draw attention to both the risks and benefits of sexual behavior.

Age-Related Patterns of Sexual Behavior and Progression of Sexual Activity

A sizeable proportion of young people residing in the USA experience their sexual debut (in the form of vaginal intercourse) before leaving secondary school (about the age of 18 or 19), and this is similar among adolescents in other Western countries. Current estimates suggest that first sexual intercourse now occurs at about age 17.8 for young women and about 18.1 for young men (Finer & Philbin, 2013). However, among adolescents in the USA, the National Survey of Family Growth (conducted by the US Centers for Disease Control) shows that sexual debut prior to age 20 has been on the decline over at least the past 10 years, especially for young men (Abma & Martinez, 2020). In the years 2015-2017, 42% of girls and 38% of boys aged 15-19 years reported a history of sexual intercourse. On the national Youth Risk Behavior Survey conducted by the CDC in 2019, 27% of high school students had crossed their sexual debut (Szucs et al., 2020). This seems to be suggesting a significant decline from just 10 years before, especially for boys; in 2002, sexual debut had occurred for 46% of girls and 46% of boys aged 15-19. Sexual debut timing was similar in a Canadian survey at about this time (Boyce et al., 2006), with about 45% of boys and girls in grade 11 reporting they had experienced vaginal intercourse, and these were similar to rates in Australia (Skinner et al., 2008) and other non-US Western countries. Hence, in the later teen years, sexual behavior is widespread but may no longer be the majority experience. However, by age 20, 77% of boys and 79% of girls reported sexual intercourse experience, and it is still rare to have had no experience with vaginal intercourse by the late 20's (Boislard et al., 2016). Notably, even kissing is not a universal experience prior to leaving secondary school. In a study of first year university students in the USA (age 17 to 20 years), 14% reported they had never been kissed on the lips by a partner (Lefkowitz et al., 2018), and Asian Americans and those in the honors college (high academic performers) were even likely to have been kissed. A longitudinal study of high school students found a similar rate, with 14% of students in grade 11 reporting they had never been kissed (Steinberg et al., 2019). Interestingly, this same study showed that the proportion of high school students who reported a history of sexting was almost identical to the proportion who reported oral sex and penetrative sex (about 20% of those in grade 9 and about 50% of those in grade 11).

Interesting, also, is the increase in sexual *in*activity that we are witnessing. Drawing data from the US General Social Survey, about 19% of young men aged 18 to 24 years reported having had no sexual activity in the past year when surveyed between 2000 and 2002, but this proportion increased to 31% by 2016–2018 (Ueda et al., 2020). There was also an increase among young women from about 15% to 19%, but this increase was not statistically significant. Sexual inactivity after age 18 is also much more common among those born between 1990 and 1994 (15%) compared to those born between 1965 and 1969 (6%) and those born between 1970 and 1989 (12%).

Although overall rates from large surveys are informative for identifying emerging historical patterns and to better target health services to those who need it, sexual debut rates vary from study to study across regions or areas within a country, so that "typical" sexual debut or a single pattern of behavior is difficult to pinpoint. For example, the percentage of US young people who initiate intercourse by the end of grade 8 ranges from as low as 10% to as high as almost 40% across different regions and groups. Regarding patterns of sexual behavior, young people vary in how frequently they have intercourse following debut; one recent survey (Boyce et al., 2006) found that about 30% of grade 8 students and 15% of grade 11 students reported they had vaginal intercourse only one time, and another 30% in each grade group reported they only had intercourse a few times. Most report they had intercourse because they were in love, but a substantial minority (20%) of young men report they were motivated by curiosity.

Country is another source of variability in sexual debut. In recent years, more data have become available that documents this variability. We see lower proportions of sexually active adolescents in the early and middle teen years (ages 13–18) in some Asian countries compared with Western populations, with prevalence of sexual debut prior to age 19 as low as 5% in some areas of China (Zabin et al., 2009) and about 24% of young men and 22% of young women in Taiwan (Strong & Chang, 2019). Data from other countries are more comparable to Western countries

but are still quite variable. For example, in South Africa the average age of sexual debut is about 16.5 for young men and 17.5 for young women (Amoateng & Kalule-Sabiti, 2016), in Ethiopia it is about 17 for young men and 18 for young women (Abebe & Mitikie, 2009), and in Nigeria it is about 15 for young men and 16 for young women (Fatusi & Blum, 2008). Sexual debut may be earlier in other counties, however. For example, in one study, Mexican adolescents reported earlier sexual debut, with an average age of 13.6 for young men and 14.3 for young women (Tapia-Aguirre et al., 2004).

As sexual minority persons have become more visible and laws regarding sex with the same sex have been relaxed and changed in many countries around the world, this has opened the door to more research to describe unique (or similar) experiences of sexual behavior among the approximately 16% (3% gay or lesbian, 9% bisexual, 4% unsure) of US adolescents who do not endorse heterosexual when asked about their sexual orientation (Szucs et al., 2020). In one national study comparing US young adults today (age 18-25) with older cohorts of sexual minority persons, mean age of same-sex sexual debut was earlier at an average of age 16.4 years compared to those aged 34–41 (age 18.5 years, on average) and those age 52-59 (age 19.3 years on average) (Bishop et al., 2020). Perhaps reflecting the gender differences found in non-sexual minority adolescents (see below), gay young men reported somewhat earlier debut than was reported by lesbians and bisexuals. In another study that included gay men aged 18 to 30 years collected in the early 2010s, the mean age of same-sex sexual debut was 18.5 years (Vasilenko et al., 2021).

Race/ethnicity and gender. The potential impact of race/ethnicity and gender has been taken seriously in the study of adolescent sexual behavior; most researchers recognize the importance of gender orientation and race/ethnicity by examining young men and young women separately, limiting a study to racial/ethnic minority adolescents only, or examining young men by racial/ethnic categories. Although the sexual behavior gap between young men and young women is often perceived as closing, this

conclusion is far from unanimous. Many studies still report that boys have their first experiences of intercourse earlier than girls. However, most importantly, when gender and race/ethnicity are jointly considered, there is ample evidence to conclude that gender differences are more often found when the proportion of non-Hispanic Black study participants is relatively higher, indicating that it is Black young men who are reporting the earliest onset of vaginal intercourse, but the gender gap is narrowing in other racial/ethnic groups.

Regarding racial/ethnic patterns of sexual intercourse, a review of the literature (Zimmer-Gembeck & Helfand, 2008) concluded that, compared to white adolescents, non-Hispanic Black young men, but not young women, engage in first sexual intercourse at an earlier age, Asian American adolescents have first intercourse at a later age, and Hispanic and white adolescents are quite similar. For example, collating 10 years of longitudinal studies of US adolescents revealed that a non-Hispanic Black adolescent male was, on average, 2.8 times more likely to initiate first sexual intercourse early (before age 16) compared to white young men. These differences are not explained by other demographic factors that differ between racial/ethnic groups, such as socioeconomic status or parental education. This earlier onset of first sex among African American young men seems associated with the greater increase in positive self-concept, which accompanies sexual behavior for them. Yet, this is also a risk as African Americans continue to be more likely to contract STIs and HIV.

Differences by racial/ethnic group among young women are not as striking. Black and white girls may not differ in their average age of first intercourse or rates of early onset, but there may be US regional differences. In particular, non-Hispanic Black girls residing in the southern parts of the US report earlier onset of sexual behavior compared to non-Hispanic white girls. Further, there is acculturation and migrant status to consider, with some complex results emerging from existing research but the evidence mostly suggesting that earlier sexual debut occurs with greater American acculturation (e.g., Morales-Alemán & Scarinci, 2016).

Sexual activity other than vaginal intercourse and historical changes. In recent years, there has been an increasing focus on understanding sexual activity other than vaginal intercourse and explaining progress from "lighter" to more intimate sexual behavior. In particular, studies show rates of oral sex among teenagers that mimic or are slightly higher than rates of vaginal intercourse (Donatello et al., 2017; Lindberg et al., 2008). Some have questioned whether oral sex has been traded for vaginal sex in the name of engaging in safer sex. Although the debate continues, the evidence tends to support the view that oral sex is initiated close to the time of first vaginal intercourse and may not be any more prevalent today compared to in the 1970s or 1980s. Diverging from what is known about vaginal intercourse, however, oral sex is *more* young men among higher as compared to lower socioeconomic status groups.

Just as for oral sex, when rates of vaginal intercourse among adolescents are compared to rates in previous generations, the picture is one of increasing caution and delay of sexual debut. More adolescents living in Western countries are cautious about sex and delay first intercourse compared to adolescents growing up in the 1970s or 1980s (Kann et al., 2018). Protective sexual health behaviors have also improved, with the rate of having vaginal intercourse without contraceptive falling below 10% in almost all large-scale surveys. Adolescents have more knowledge of and consistent use of condoms than they did in previous decades (Santelli & Melnikas, 2010). What still concerns researchers, practitioners, and policymakers, however, is the too high rate of sexually transmitted infections (which could be due to more awareness and better screening), the belief that early onset of sexual behavior can be emotionally and/or socially detrimental in both the short and the long term, and the concern that sexual behavior will detract from the important educational and vocational goals of adolescents. Some of these concerns are founded in evidence that uncovers the many physical, emotional, social, and financial challenges of an unintended pregnancy, about 10% of adolescents

report being pressured to have sex, and there are physical, social, and emotional costs of infections.

Correlates of Adolescent Sexual Behavior

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Sexual behavior in adolescence is an outgrowth of a complex set of biological, individual, psychological, socioemotional, attitudinal, and environmental phenomena. Fortunately, there have been at least four general reviews published since 2000, which together summarize research since the 1970s on this topic (Buhl & Goodson, 2007; Kirby, 2002; Kotchick et al., 2001; Zimmer-Gembeck & Helfand, 2008). More recently there have been additional reviews, which usually summarize what is known about specific correlates of sexual behavior, a subset of sexual behaviors, or among a demographic group. For example, to list just a few, reviews are available that summarize research on the impact of parental communication on sexual behavior in African American families (McDade et al., 2020), Latinx adolescents and the impact of acculturation on sexual debut (Morales-Alemán & Scarinci, 2016), the role of impulsivity in adolescent risky sexual behavior (Dir et al., 2014), correlates of sexual debut among young people in Cambodia (Rizvi et al., 2020), hooking up and casual sex (Garcia et al., 2012; Olmstead, 2020), the influence of sexually focused media on sex during the teenage years (Ferguson et al., 2017), and the neuropsychology of taking sexual risks (Ross et al., 2016).

General reviews identify a wide-ranging set of correlates of earlier onset of first vaginal intercourse (and, relatedly, similar correlates of an accumulation of more sexual partners, and/or inconsistent contraceptive use). These correlates or "risk factors" include adolescents' earlier physical development and mature stature; problem behaviors such as aggression and alcohol use; less positive school-related behaviors and attitudes, and lower or less clear future aspirations; more lenient or permissive sex-related attitudes; less religiosity and lower church attendance; poorer mental health; personality factors such as higher extraversion; and family and peer factors.

Adolescents who have earlier first vaginal intercourse or more sexual partners report that they experience puberty relatively earlier than their peers, are more aggressive and engage in more substance use, have lower school success and aspirations, have more positive and lenient attitudes toward sex, believe there are fewer costs to having sex, believe their peers engage in sexual behavior, are not as engaged in church attendance, have more depressive symptoms, have parents who are not as involved in monitoring or supervising their behavior, and have steady romantic partners (and many report having sex for the first time because they are in love). Concerns about the body and personality have also been associated with sexual debut, with adolescents who have more body dissatisfaction reporting later debut and those who are more extraverted and outgoing or neurotic reporting earlier debut.

Making this even more complex, when 10 years of longitudinal research was examined closely in one review (Zimmer-Gembeck & Helfand, 2008), three issues emerged. First, when studies are organized by age of the participants, the strength of associations between a range of variables and sexual behavior differs, with stronger associations in studies focused only on early sexual debut (e.g., before age 16) than in studies of sexual behavior between the ages of 16–18. Additionally, there are some unique correlates of delaying first sex until after age 18. Second, what accounts for sexual behavior at different ages can depend on racial/ethnic group, gender, or both in combination. Third, factors associated with adolescent sexual behavior are intercorrelated, which suggests complex pathways to sexual intercourse, with some correlates better conceptualized as distal and other as proximal correlates.

Paying attention to sample age. The expected risk factors do not always apply to every gender and racial/ethnic group or in every study. For example, problem behaviors and socioemotional problems, such as aggression, substance use, depressive symptoms, and lower school grades are correlated with earlier onset of first vaginal intercourse (before age 16), referred to as "early starters" below. In contrast, it is not as clear that

adolescents who have first vaginal intercourse a little later (ages 16–18), referred to as "middle starters," show this same confluence of problems. Thus, the age of the sample can differ across studies, affecting the age of sexual debut under investigation, which can affect study results. Other research also shows that adolescents who are middle starters, compared to early starters, engage in less sexual risk behavior, including having a lower number of different sexual partners and being more likely to use condoms and other contraception consistently, when compared to those who have first sexual intercourse earlier (Siebenbruner et al., 2007). This does not mean that middle starters do not engage in some problems behaviors; they are more likely to report alcohol use than those who delay first sex until after age 18, but middle starters do not seem to have the same school performance problems or lowered educational aspirations that are found among adolescents who have first intercourse earlier. There is also some evidence of positive functioning among middle starters; these young people report more connections to school and have more positive relationships with their peers than those who had first sexual intercourse either earlier or later.

Early and middle starters have many things in common, as well. The common features of these two groups show that adolescent sexual behavior comes with or is part of multiple other developmental tasks of adolescence, such as developing close friendships outside the family, establishing romantic relationships, and developing the capacity for intimate relationships, and this seems to be the case regardless of whether sexual behavior is initiated in early or middle adolescence. In particular, when compared to those who delay first sexual intercourse until after age 18, early and middle starters can each be identified by their greater physical maturity, greater involvement in dating behavior, more permissive attitudes toward sexual behavior, and, when general (not domain specific) measures of self-esteem are used, similar levels of self-esteem. They also have elevated perceptions that their friends are having sex and are more supportive of this behavior, have a greater likelihood of living in families without two biological parents, and report being less monitored by their parents.

Sets of correlates that differentiate two groups of adolescents who report vaginal intercourse before age 18. Multiple theories of the development of adolescent behavior and the above summary of findings converge on the notion that there may be two groups of adolescents who are sexually active in the later teen years, which can be demarcated by different developmental antecedents and correlates. This makes it likely that these two groups of sexually active adolescents may appear similar in adolescence, but they have experienced different combinations of individual and environmental experiences that partially account for or covary with their current sexual behaviors. One group includes teenagers with certain dispositional traits marked by unconventionality and lack of social bonds to family, school, or other social institutions. A second group includes teenagers who have certain biological characteristics (e.g., earlier maturation, particular hormonal levels or patterns), some problem behavior at a level that is more common during adolescence (e.g., experimentation with alcohol, other minor delinquent acts) and, because popularity with peers has been associated with earlier dating (Zimmer-Gembeck et al., 2004), peer group success.

One study supports this notion of two different developmental pathways to sexual behavior during adolescence (Siebenbruner et al., 2007). In this study, higher levels of and more significant deviant behaviors, as well as involvement in dating, marked a pathway to the most high-risk sexual behavior at age 16. The second pathway to sexual behavior in adolescence was more normative and included responsible, lower-risk sexual behavior during adolescence (i.e., limiting the number of sexual partners and using contraception consistently). Adolescents who were sexually active by age 16, but were more responsible than other sexually active youth, did not have negative family and school profiles prior to age 12. Yet, in early adolescence, these young people were relatively more physically mature looking and were more likely to become involved in steady dating relationships. These teenagers also engaged in

other, milder problem behavior in adolescence (but not before) and did not engage in illicit drug use to the degree of high sexual risk-takers.

Correlates of delaying sexual behavior. When compared to those who report an earlier sexual debut, the US adolescents who delay sexual intercourse until after age 18 may be best identified by other factors. Although few studies follow participants beyond age 18, Asian race/ethnicity, religion, family disapproval of sexual behavior, and social anxiety seem to play roles in delaying. In particular, Asian Americans (and adolescents in Asian countries) are more likely to delay first vaginal intercourse until after age 18 than other racial/ethnic groups living in Western countries. In addition, regardless of racial/ethnic group, young women who delay express more commitment to religious beliefs, have a friendship group that has similar commitments, and have families who communicate clear disapproval of adolescent sexual behavior and values that do not support this behavior. Young men who delay the onset of sexual intercourse have some of these same characteristics, but also may be more socially anxious. Given the nature of adolescent dating interactions and dating gender roles, young men who are anxious or shy may be limited in their interactions with the other sex, dating and sexual behavior, and have restricted opportunities for these experiences, as well as being more isolated from social contagion by peers.

Delaying first sex can be challenging for adolescents. Those who delay report increasing pressure to have sex as they get older, and about 25% of 15–19 year-old who have not experience sexual debut engage in oral but not vaginal sex. Adolescents who delay also report lower peer esteem in high school, but often maintain higher family and school esteem. Overall, being off-time from most of one's peers (either experiencing sexual debut very early or very late) tends to be associated with a range of risks and adjustment problems (Boislard et al., 2016).

Race/ethnicity and gender as moderators. As described earlier, sexual behavior patterns do show some differences when racial/ethnic groups or boys and girls are compared. Taking this to another level of analysis, there is also evidence

that the correlates of sexual behavior may differ between racial/ethnic and gender groups (i.e., be moderated by race/ethnicity or gender). Family processes, school attitudes, religion, and parent education may be differently associated with sexual behavior depending on the racial/ethnic or gender group under consideration. Parenting practices, such as monitoring and involvement, are more important correlates of delaying sexual behavior for nonwhite, especially Black and Hispanic, adolescents compared to white adolescents, and for young women compared to young men. School attitudes and educational aspirations are not associated with sexual behavior among young men, especially Black young men, but young women who have first vaginal intercourse earlier report fewer positive attitudes toward school and have lower aspirations. Regarding religion and parent education, delaying sexual intercourse may be more closely linked to religious behavior and attitudes among nonwhite young women, but religion plays a weaker role among other young men and women, and higher parent-education level accompanies greater delay in onset of sexual behavior among white young women but not among other young men and women.

Distal and proximal correlates. The many correlates of adolescent sexual intercourse should be considered as sets of distal and more proximal correlates. For example, family status (e.g., 2-parents in the home, education of parents) and processes (e.g., parental warmth, involvement, monitoring, and neglect) are often correlated with adolescent sexual behavior, but these associations rarely emerge when dating behavior, deviant peers, or adolescent problem behavior are considered at the same time. This suggests that family factors are not unimportant to sexual behavior, but that family factors may be more distal correlates of sexual behavior via the influence of family status and processes on adolesindividual cents' peer relationships and behaviors and attitudes. Hence, families may influence sexual behavior via their influence on adolescents' involvement with their peers, their use of alcohol, their attitudes and perceptions of sexual behavior, and their socioemotional functioning. Similarly, early temperamental characteristics (such as sociability) and pubertal development are more distal correlates linked to sexual behavior via dating and other behaviors and attitudes (Zimmer-Gembeck et al., 2004).

Risks and Benefits of Sexual Behavior

Sexual and related intimate interactions can be some of the most important and rewarding experiences in life. As it is among adults, it is no secret that adolescents think about sex and/or intimacy frequently. Much like adults, the sexual thoughts and experiences of adolescents can involve a spectrum of feelings, reactions, and appraisals. We are finding out that adolescents can experience sex as emotionally and physically satisfying but also caution that sex can prompt significant negative emotional reactions, such as guilt, shame, anger, regret, and disappointment (Impett & Tolman, 2006; Saliares et al., 2017; Smiler, 2016; Zimmer-Gembeck et al., 2015). Hormones contribute to adolescents' growing appreciation of both pleasure and risk taking (Fortenberry, 2013). Hence, it just makes sense that adolescents have desires and want to experience the benefits of sexual behavior, but they also need the time to develop the cognitive and emotional capacity to balance this against the risks. Such acknowledgement of the risks and the benefits of sexual behavior has sparked a major transition in the field of adolescent sexual behavior and sexuality involving a call to focus on the "broader landscape of adolescent sexuality in our culture" (Russell & Consolacion, 2003, p. 499) and consider the complexities of adolescent sexuality (Boislard & Zimmer-Gembeck, 2012; Diamond, O'Sullivan et al., 2007; Vasilenko et al., 2014).

In response to these calls, researchers have conducted investigations of sexual attraction and behavior (Russell & Consolacion, 2003), sexual self-perceptions and development (Hensel et al., 2011; Horne & Zimmer-Gembeck, 2005, 2006), and sexual desire (Tolman & McClelland, 2011). Zimmer-Gembeck and her colleagues (Horne & Zimmer-Gembeck, 2005, 2006; Zimmer-Gembeck et al., 2011, 2015; Zimmer-Gembeck & French, 2016) examined the development of

sexual subjectivity, defined as sexual bodyesteem, perceptions of entitlement to sexual desire and pleasure, and the ability to engage in sexual self-reflection to benefit from experience, and its links with sexual pleasure and well-being among both young men and women. Others have proposed definitions of positive sexuality that include learning about intimacy, learning about sexual roles and responsibilities, body self-esteem, understanding and adjustment to erotic feelings, and learning about societal standards or sexual expression (Bukowski et al., 1993; Buzwell & Rosenthal, 1996), and begun to empirically investigate these aspects of sexuality during adolescence and early adulthood. Such studies and others (Brady & Halpern-Felsher, 2008; Skinner et al., 2008) show that sexual behavior and increasing maturity accompanies improvements in adolescents ability to reflect on their capacity to make autonomous decisions about abstaining or not abstaining from future sexual behavior, helps them to be more selective about and feel more control over their behaviors, assists them to feel more positive about their own sexual feelings and desires, and gives them insights that they use to help others who are struggling with sexuality and the problems that can follow from intimate interactions and sexual behavior development. As described by Ballonoff Suleiman et al. (2017):

...the natural increase in social motivations including interest in sexual and romantic behavior...is likely to represent a normative window of learning-not simply about the mechanical aspects of sexual behavior, but also about the complex emotional and social cognitive processes that are part of navigating the charged, high-intensity emotions involved in developing an identity as a sexual being (p. 210).

Overall, sexual experimentation during adolescence can prompt emotional and cognitive growth that assists with future relationships. Growth can include developing a firmer or more positive sense of what it means to be a sexual partner and producing heightened feelings of confidence in managing sexual and other intimate interactions. Research has shown that a greater range of sexual experiences in late adolescence and early adulthood is associated with enhanced reflection about

the self and relationships, and is associated with greater esteem about one's sexual self, the body, and efficacy in the sexual domain; all of these feelings of sexual esteem and efficacy have been associated with greater general well-being and life satisfaction in late adolescents and early adulthood (Horne & Zimmer-Gembeck, 2005; Zimmer-Gembeck et al., 2011). Also, a 4 year longitudinal study found that sexual self-concept became more positive over time in response to gains in sexual experience, but improvements in sexual self-concept also sparked more involvement in sexual behaviors over time (Hensel et al., 2011). Overall, such emerging research suggests that sexual debut is accompanied by risks and possible benefits, and developmental gains alongside potential threats, distress, and loss. The balance of risk and benefit may tip more toward risk at some times and more toward benefit at other times.

Conclusion

Adolescence is a period of new experiences and significant change and acquisition of skills. Sexual behavior is one of these new experiences that can contribute to development of the capacity for intimacy, care for another, empathy, and autonomous decision making. It involves a complex interplay of individual biological, emotional, cognitive, and behavioral factors combined with the many levels of social forces that are important during this particular phase of life. As with much of the study of adolescent behavior, mapping the rates of behavior and focusing on risks and problems have received the most attention, and it is known that sexual behavior is not without risks especially when it starts too early or is accompanied by lack of control, choice, and pressure. However, sexuality includes a complicated set of behaviors, emotions, cognitions, and actions that overlap with the other major developmental tasks of adolescence. It can be a place where intimacy, identity, and autonomy converge. Hence, sexual behavior can provide a context where adolescents and emerging adults test their capacities, identify their beliefs, and come to understand their values.

Balancing the benefits of such experiences, while reducing the risk, is the challenge that often begins in adolescence and requires support across multiple societal levels – from the family and schools all the way up to the community and broad policies related to sexual behavior and health.

Cross-References

- ▶ Kissing
- ► Sexual Trajectories
- Virginity Loss

References

Abebe, A., & Mitikie, G. (2009). Perception of high school students towards voluntary HIV counselling and testing, using health belief model in Butajira SNNPR. Ethiopian Journal of Health Development, 23(2), 148–153. https://doi.org/10.4314/ejhd.v23i2.53232

Abma, J. C., & Martinez, G. M. (2020). Sexual activity and contraceptive use among teenagers aged 15–19 in the United States, 2015–2017 (NCHS Data Brief, no 366). National Center for Health Statistics. https://pubmed.ncbi.nlm.nih.gov/32487286/

Amoateng, A. Y., & Kalule-Sabiti, I. (2016). Biosocial correlates of age at first sexual intercourse: The case of grade 9 and grade 11 pupils in the North West Province of South Africa. *Journal of Biosocial Science*, 48(1), 20–36. https://doi.org/10.1017/S0021932014000492

Ballonoff Suleiman, A., Galvan, A., Harden, K. P., & Dahl, R. E. (2017). Becoming a sexual being: The 'elephant in the room' of adolescent brain development. *Developmental Cognitive Neuroscience*, 25, 209–220. https://doi.org/10.1016/j.dcn.2016.09.004

Bishop, M. D., Fish, J. N., Hammack, P. L., & Russell, S. T. (2020). Sexual identity development milestones in three generations of sexual minority people: A national probability sample. *Developmental Psychology*, 56(11), 2177–2193. https://doi.org/10.1037/dev0001105

Boislard, M.-A., & Zimmer-Gembeck, M. J. (2012). Adolescent sexual behavior: Current knowledge, challenges and implications for research and policy. In N. E. Peterson & W. Campbell (Eds.), Handbook on sexuality: Perspective, issues, and role in society (pp. 153–168). NOVA Science Publishers.

Boislard, M.-A., van de Bongardt, D., & Blais, M. (2016). Sexuality (and lack thereof) in adolescence and early adulthood: A review of the literature. *Behavioral Sciences*, 6(1), 8. https://doi.org/10.3390/bs601

- Boyce, W., Doherty-Poirier, M., MacKinnon, D., Fortin, C., Saab, H., King, M., & Gallupe, O. (2006). Sexual health of Canadian youth: Findings from the Canadian youth, sexual health and HIV-AIDS study. *The Cana*dian Journal of Human Sexuality, 15, 59–68.
- Brady, S. S., & Halpern-Felsher, B. L. (2008). Social and emotional consequences of refraining from sexual activity among sexually experienced and inexperienced youths in California. *American Journal of Public Health*, 98, 162–168. https://doi.org/10.2105/AJPH. 2006.097923
- Brooks-Gunn, J., & Paikoff, R. (1997). Sexuality and developmental transitions during adolescence. In J. Schulenberg, J. L. Maggs, & K. Hurrelmann (Eds.), Health risks and developmental transitions during adolescence (pp. 190–219). Cambridge University Press.
- Buhl, E. R., & Goodson, P. (2007). Predictors of adolescent sexual behavior and intention: A theory-guided systematic review. *The Journal of Adolescent Health, 40*, 4–21. https://doi.org/10.1016/j.jadohealth.2006.09.027
- Bukowski, W. M., Sippola, L., & Brender, W. (1993). Where does sexuality come from?: Normative sexuality from a developmental perspective. In S. M. Hudson (Ed.), *The juvenile sex offender* (pp. 84–103). The Guilford Press.
- Buzwell, S., & Rosenthal, D. A. (1996). Constructing a sexual self: Adolescents' sexual self-perceptions and sexual risk-taking. *Journal of Research on Adoles*cence, 6, 489–513.
- Capaldi, D. M., Kerr, D. C. R., Owen, L. D., & Tiberio, S. S. (2017). Intergenerational associations in sexual onset: Mediating influences of parental and peer sexual teasing and youth substance use. *Journal of Adolescent Health*, 61(3), 342–347. https://doi.org/10.1016/j. jadohealth.2017.03.003
- Diamond, L. M. (2006). Introduction: In search of good sexual-developmental pathways for adolescent girls. In New directions in child and adolescent development: Rethinking positive adolescent female sexual development (No. 112., Summer, pp. 1–7). Jossey-Bass.
- Dir, A. L., Coskunpinar, A., & Cyders, M. A. (2014). A meta-analytic review of the relationship between adolescent risky sexual behavior and impulsivity across gender, age, and race. *Clinical Psychology Review*, 34(7), 551–562. https://doi.org/10.1016/j.cpr.2014. 08.004
- Donatello, R. A., De Rosa, C. J., Moulton, B. D., Chung, E. Q., Viola, R., Rohrbach, L. A., & Abdelmonem, A. A. (2017). Patterns of sexual experience among urban Latino and African American ninth grade students. *The Journal of Sex Research*, 54(4–5), 619–630. https://doi.org/10.1080/00224499.2016.1164800
- Fatusi, A. O., & Blum, R. W. (2008). Predictors of early sexual initiation among a nationally representative sample of Nigerian adolescents. *BMC Public Health*, 8, 136. https://doi.org/10.1186/1471-2458-8-136
- Ferguson, C. J., Nielsen, R. K. L., & Markey, P. M. (2017). Does sexy media promote teen sex? A meta-analytic

and methodological review. *Psychiatric Quarterly*, 88(2), 349–358. https://doi.org/10.1007/s11126-016-9442-2

11

- Finer, L. B., & Philbin, J. M. (2013). Sexual initiation, contraceptive use, and pregnancy among young adolescents. *Pediatrics*, 131(5), 886–891. https://doi.org/ 10.1542/peds.2012-3495
- Fortenberry, J. D. (2013). Puberty and adolescent sexuality. *Hormones and Behavior*, 64(2), 280–287. https://doi.org/10.1016/j.yhbeh.2013.03.007
- Garcia, J. R., Reiber, C., Massey, S. G., & Merriwether, A. M. (2012). Sexual hookup culture: A review. Review of General Psychology, 16(2), 161–176. https://doi. org/10.1037/a0027911
- Hensel, D. J., Fortenberry, J. D., O'Sullivan, L., & Orr, D. P. (2011). The developmental association of sexual self-concept with sexual behavior among adolescent women. *Journal of Adolescence*, 34(4), 675–684. https://doi.org/10.1016/j.adolescence,2010.09.005
- Horne, S., & Zimmer-Gembeck, M. J. (2005). Female sexual subjectivity and well-being: Comparing late adolescents with different sexual experiences. *Sexuality Research and Social Policy*, 2, 25–40. https://0201. nccdn.net/1_2/000/000/0a2/bf8/srsp_paper.pdf
- Horne, S., & Zimmer-Gembeck, M. J. (2006). The female sexual subjectivity inventory: Development and validation of an instrument for late adolescents and emerging adults. *Psychology of Women Quarterly*, 30, 125–138. https://doi.org/10.1111/j.1471-6402.2006. 00276.x
- Impett, E. A., & Tolman, D. L. (2006). Late adolescent girls' sexual experiences and sexual satisfaction. *Jour*nal of Adolescent Research, 21(6), 628–646. https:// doi.org/10.1177/0743558406293964
- Kann, L., McManus, T., Harris, W. A., Shanklin, S. L., Flint, K. H., Queen, B., . . ., Ethier, K. A. (2018). Youth risk behavior surveillance – United States, 2017. MMWR Surveillance Summary, 67(No. SS-8), 1-114. https://doi.org/10.15585/wr.ss6708a1
- Kirby, D. (2002). Antecedents of adolescent initiation of sex, contraceptive use and pregnancy. American Journal of Health Behavior, 26(6), 473–485. https://doi.org/ 10.5993/AJHB.26.6.8
- Kotchick, B. A., Shaffer, A., Forehand, R., & Miller, K. S. (2001). Adolescent sexual risk behavior: A multi-system perspective. *Clinical Psychology Review*, 21, 493–519. https://doi.org/10.1016/s0272-7358(99) 00070-7
- Lefkowitz, E. A., Wesche, R., & Leavitt, C. E. (2018). Never been kissed: Correlates of lifetime kissing status in U.S university students. *Archives of Sexual Behavior*, 47, 1283–1293. https://doi.org/10.1007/s10508-018-1166-y
- Lindberg, L. D., Jones, R., & Santelli, J. S. (2008). Noncoital sexual activities among adolescents. *The Journal* of Adolescent Health, 43, 231–238. https://doi.org/10. 1016/j.jadohealth.2007.12.010
- Lussier, P., McCuish, E., Mathesius, J., Corrado, R., & Madeau, D. (2018). Developmental trajectories of

child sexual behaviors on the path of sexual behavioral problems: Evidence from a prospective longitudinal study. *Sexual Abuse*, *30*(6), 622–658. https://doi.org/10.1177/1079063217691963

- Mastro, S., & Zimmer-Gembeck, M. J. (2015). Let's talk openly about sex: Sexual communication, self-esteem and efficacy as correlates of sexual well-being. *European Journal of Developmental Psychology, 12*, 579–598. https://doi.org/10.1080/17405629.2015. 1054373
- Mastro, S., & Zimmer-Gembeck, M. J. (2016). Let's talk openly about sex: Sexual communication, self-esteem and efficacy as correlates of sexual well-being. In D. van de Bongardt, R. Yu, M. Deković, & W. Meeus (Eds.), Romantic relationships and sexuality in adolescence and young adulthood.
- McDade, R. S., Vidourek, R. A., Biradar, K. S., King, K. A., & Merianos, A. A. (2020). Impact of parental communication on African American adolescent sexual behavior: A mini literature review. Sexuality & Culture: An Interdisciplinary Quarterly, 24(5), 1579–1593. https://doi.org/10.1007/s12119-019-09678-4
- Morales-Alemán, M. M., & Scarinci, I. C. (2016). Correlates and predictors of sexual health among adolescent Latinas in the United States: A systematic review of the literature, 2004-2015. Preventive Medicine, 87, 183–193. https://doi.org/10.1016/j.ypmed.2016.03.005
- O'Sullivan, L. F., Cheng, M. M., Harris, K. M., & Brooks-Gunn, J. (2007). I wanna hold your hand: The progression of social, romantic and sexual events in adolescent relationships. *Perspectives on Sexual and Reproductive Health*, 39, 100–107. https://doi.org/10.1363/3910007
- Olmstead, S. B. (2020). A decade review of sex and partnering in adolescence and young adulthood. *Journal of Marriage and Family*, 82(2), 769–795. https://doi.org/10.1111/jomf.12670
- Piotrowski, Z. H., & Hedeker, D. (2016). Evaluation of the Be the Exception sixth-grade program in rural communities to delay the onset of sexual behavior. *American Journal of Public Health*, 106 (Suppl 1), S132–S139. https://ajph.aphapublications.org/doi/pdfplus/10.2105/ AJPH.2016.303438
- Rizvi, F., Williams, J., Maheen, H., & Hoban, E. (2020). Using social ecological theory to identify factors associated with risky sexual behavior in Cambodian adolescent girls and young women aged 10–24 years: A systematic review. Asia-Pacific Journal of Public Health, 32(2–3), 71–80. https://doi.org/10.1177/1010539520911493
- Ross, J. M., Duperrouzel, J., Vega, M., & Gonzalez, R. (2016). The neuropsychology of risky sexual behavior. *Journal of the International Neuropsychological Society*, 22(6), 586–594. https://doi.org/10.1017/ S1355617716000400
- Russell, S. T., & Consolacion, T. B. (2003). Adolescent romance and emotional health in the United States: Beyond binaries. *Journal of Clinical Child and*

- Adolescent Psychology, 32(4), 499–508. https://doi. org/10.1207/S15374424JCCP3204_2
- Saliares, E., Wilkerson, J. M., Sieving, R. E., & Brady, S. S. (2017). Sexually experienced adolescents' thoughts about sexual pleasure. *Journal of Sex Research*, 54(4–5), 604–618. https://doi.org/10.1080/ 00224499.2016.1170101
- Santelli, J. S., & Melnikas, A. J. (2010). Teen fertility in transition: Recent and historic trends in the United States. *Annual Review of Public Health*, 31, 371–383. https://doi.org/10.1146/annurev.publhealth.29.020907. 090830
- Siebenbruner, J., Zimmer-Gembeck, M. J., & Egeland, B. (2007). Sexual partners and contraceptive use: A 16 year prospective study predicting abstinence and risk behavior. *Journal of Research on Adolescence*, 17, 179–206.
- Skinner, S. R., Smith, J., Fenwick, J., Fyfe, S., & Hendriks, J. (2008). Perceptions and experiences of first sexual intercourse in Australian adolescent females. *The Jour*nal of Adolescent Health, 43, 593–599.
- Smiler, A. M. (2016). *Dating and sex: A guide for the 21st century teen boy*. Magination Press.
- Smout, A., Newton, N. C., Slade, T., O'Donoghue, B., & Chapman, C. (2020). The relationship between early risk-taking behavior and mental health problems among a nationally representative sample of Australian youth. *Journal of Affective Disorders*, 272, 239–248. https://doi.org/10.1016/j.jad.2020.04.040
- Steinberg, D. B., Simon, V. A., Victor, B. G., Kernsmith, P. D., & Smith-Darden, J. P. (2019). Onset trajectories of sexting and other sexual behaviors across high school: A longitudinal growth mixture modeling approach. Archives of Sexual Behavior; 48, 2321–2331. https://doi.org/10.1007/s10508-019-1414-9
- Strong, C., & Chang, L.-Y. (2019). Childhood adversity and early age sexual activity in Taiwan: Gender differences. *Journal of Early Adolescence*, 39(2), 201–221. https://doi.org/10.1177/0272431617737625
- Szucs, A. E., Lowry, R., Fasula, A. M., Pampati, S., Copen, C. E., Hussaini, K. S., ..., Steiner, R. J. (2020). Condom and contraceptive use among sexually active high school students – Youth Risk Behavior Survey, United States, 2019. MMWR, 69(1). https://www.cdc.gov/ mmwr/volumes/69/su/pdfs/su6901a2-H.pdf
- Tapia-Aguirre, V., Arillo-Santillán, E., Allen, B., Angeles-Llerenas, A., Cruz-Valdéz, A., & Lazcano-Ponce, E. (2004). Associations among condom use, sexual behaviour and knowledge about HIV/AIDS: A study of 13,293 public school students. Archives of Medical Research, 35(4), 334–343. https://doi.org/10.1016/j.arcmed.2004.05.002
- Tolman, D. L., & McClelland, S. I. (2011). Normative sexuality development in adolescence: A decade in review, 2000–2009. *Journal of Research on Adolescence*, 21(1), 242–255. https://doi.org/10.1111/j.1532-7795.2010.00726.x

- Ueda, P., Mercer, C. H., Ghaznavi, C., & Herbenick, D. (2020). Trends in frequency of sexual activity and number of sexual partners among adults aged 18 to 44 years in the US, 2000-2018. JAMA Network Open, 3(6), e203833. https://doi.org/10.1001/ jamanetworkopen.2020.3833
- Vasilenko, S. A., Lefkowitz, E. S., & Welsh, D. P. (2014).
 Is sexual behavior healthy for adolescents?
 A conceptual framework for research on adolescent sexual behavior and physical, mental, and social health.
 New Directions for Child and Adolescent Development, 144, 3–19. https://doi.org/10.1002/cad
- Vasilenko, S. A., Exten, C., & Rosenberger, J. G. (2021). Physical and emotional satisfaction at first same-sex anal sex in young gay and bisexual men. *Archives of Sexual Behavior*; 50, 1047–1055. https://doi.org/10. 1007/s10508-020-01738-3
- Zabin, L. S., Emerson, M. R., Chahua, L., Ersheng, G., Minh, N. H., Chuang, Y., Hurng, B. S., Bishai, D., & Blum, R. W. (2009). Levels of change in adolescent sexual behavior in three Asian cities. *Studies in Family Planning*, 40, 1–12. https://doi.org/10.1111/j.1728-4465.2009.00182.x
- Zimmer-Gembeck, M. J. (2013). Young females' sexualefficacy: Associations with personal autonomy and the couple relationship. Sexual Health, 10, 204–210. https://doi.org/10.1071/SH12139
- Zimmer-Gembeck, M. J., & Collins, W. A. (2008). Biological sex, appearance, alcohol use and dating as correlates of sexual partner accumulation from ages 16 to 26. *Journal of Adolescent Health*, 42, 564–572. https://doi.org/10.1016/j.jadohealth.2007.11.004
- Zimmer-Gembeck, M. J., & French, J. (2016). Associations of sexual subjectivity with global and sexual well-

- being: A new measure for young males and comparison to females. *Archives of Sexual Behavior, 45*, 315–327. https://doi.org/10.1007/s10508-014-0387-y
- Zimmer-Gembeck, M. J., & Helfand, M. (2008). Ten years of longitudinal research on U.S. adolescent sexual behavior: Developmental correlates of sexual intercourse, and the importance of age, gender and ethnic background. *Developmental Review*, 28(2), 153–224. https://doi.org/10.1016/j.dr.2007.06.001
- Zimmer-Gembeck, M. J., Siebenbruner, J., & Collins, W. A. (2004). A prospective study of intraindividual and peer influences on adolescents' heterosexual romantic and sexual behavior. *Archives of Sexual Behavior*, 33, 381–394. https://doi.org/10.1023/B: ASEB.0000028891.16654.2c
- Zimmer-Gembeck, M. J., Ducat, W., & Boislard-P., M. (2011). A prospective study of young females' sexual subjectivity: Associations with age, sexual behavior, and dating. Archives of Sexual Behavior, 40, 927–938. https://doi.org/10.1007/s10508-011-9751-3
- Zimmer-Gembeck, M. J., See, L., & O'Sullivan, L. (2015). Young women's satisfaction with sex and romance, and emotional reactions to sex: Associations with sexual entitlement, efficacy, and situational factors. *Emerging Adulthood*, 3, 113–122. https://doi.org/10.1177/ 2167696814548060
- Zimmer-Gembeck, M. J., O'Sullivan, L. F., Mastro, S., & Hewitt-Stubbs, G. (2016). Adolescent sexuality: Current directions in health and risk-reduction. In M. K. Holt & A. E. Grills (Eds.). Critical issues in schoolbased mental health (Chapter 9, pp. 93–104). Taylor & Francis (Routledge).