

Parenting and Adolescents' Sexual Development in Western Societies

A Literature Review

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Abstract. This review examines associations between parenting styles and the psychosexual development of adolescents. Methods and results of empirical studies of associations between parental support, control, and knowledge and the sexual behavior and sexual health of adolescents are described and evaluated. The results show that, in general, higher scores on support, control, and knowledge relate to a delay of first sexual intercourse, safer sexual practices, and higher sexual competence. Despite the vast amount of literature on this subject, the majority of these studies focus on single dimensions of parenting and unidirectional parenting influences. This review generates hypotheses regarding interactions of different parenting styles and reciprocal associations between parents and their children. There is a need for more dynamic, dialectical studies of parenting, and children's sexual development.

Keywords: parenting, adolescence, sexual development, sexual health

Adolescence can be characterized as a period of growth and development, particularly in the area of sexuality. Most adolescents go through tremendous changes with regard to sexuality. They have their first relational and sexual experiences, have to learn what they like and dislike, how to make sexual experiences mutually rewarding, and how to prevent potentially negative consequences of having sex. Although most young people in Western societies (North America, Western Europe, Australia, and New Zealand) have at least some sexual experiences during adolescence, large individual differences in sexual development also exist. In the Netherlands, about one in ten 14-year-olds has already engaged in sexual intercourse, whereas one in ten 19-year-olds has not even kissed yet (De Graaf, Meijer, Poelman, & Vanwesenbeeck, 2005).

Parents are considered to play a role in these individual differences. A large number of studies report associations between aspects of parenting and sexual behavior (e.g., the timing of first sexual intercourse) or sexual health (e.g., the use of contraception or sexual esteem). Both sexuality-related parenting (e.g., communication about sexual issues) and general parenting styles are studied. For the purpose of reducing the amount of literature and attaining a higher level of homogeneity, this review will focus on three dimensions of general parenting that have been studied rather extensively: support, control, and knowledge (of parents of their child's whereabouts). Studies of associations

between these parenting dimensions and sexual health will be described and evaluated, in order to determine what is currently missing (with respect to content and methodology) and what is needed in future studies.

This review extends beyond a plain description of the separate associations between these three dimensions of parenting and sexual development. Support, control, and knowledge are very likely to be interrelated. We will therefore also describe, if possible, the relative effect of each of these parenting styles and generate hypotheses regarding mediating effects of some parenting styles on others. In addition, we will criticize the unidirectional approach of most empirical studies. Results are usually described as if parents influence their children, not vice versa. In this review, we will suggest alternative, reciprocal explanations for these associations between parenting styles and sexual development.

Literature Search and Selection

Literature was found using PsychInfo, Medline, and Social SciSearch. The search terms were based on the thesauruses of these databases. Descriptors such as "family of origin," "family relations," "family background," "parental characteristics," "parenting style," "parent child-relations,"

“parent-child communication,” “childrearing practices,” “parental role,” and “parental involvement” were used, combined with “psychosexual behavior” and “psychosexual development.” The searches were limited to empirical studies focusing on adolescents or emerging adults (age 12–25), carried out in North America, Western Europe, Australia, or New Zealand. Only studies published in 1990 or thereafter were included, because research on parenting and adolescents’ sexual development largely expanded in this decade. To limit the large number of studies of parenting and age of first sexual intercourse, six studies using small, selective samples (< 200 respondents) were excluded from the final result, which consisted of 55 empirical studies. Characteristics of these studies can be found in Table 1.

Conceptualizing Support, Control, and Knowledge

Support and control are two dimensions generally found in the literature on parenting (Maccoby & Martin, 1983). Support refers to the expression of affection, love, and appreciation; it encompasses warmth, availability, responsiveness, and closeness. In the literature on parenting, there are two sets of measurements that resemble support, but are still distinct: (1) involvement, usually measured as the amount of time parents and children spend together and (2) the perceived quality of or satisfaction with the relationship with the parents. Strictly speaking, one should know how this time is spent together or what aspects of the relationship one is satisfied with, before these constructs can be classified. For pragmatic reasons, however, associations with both these constructs will be described in the sections on support.

Control refers to parenting behavior that is intended to direct the child’s behavior in the manner desired by the parents. This dimension of parenting is less homogeneous than support, as is reflected in the diverse set of measurements in the literature. Measures of control encompass, for example, the number of rules parents set for their children, the level of autonomy children are granted, the child’s involvement in making decisions, and (perceived) strictness. A number of researchers claim that there are actually two kinds of control, which are differentially associated with adolescent development: consistent, clear, and fair demands (structure, authoritative control) and arbitrary, controlling insistence on obedience (coercion, authoritarian control) (Maccoby & Martin, 1983; Skinner, Johnson, & Snyder, 2005). Although we acknowledge that this distinction is useful, in most of the studies reviewed it has not been made yet. For pragmatic reasons, we will therefore describe associations with both dimensions of control in the same paragraph.

Parental knowledge of the child’s whereabouts is a third aspect of parenting that is studied extensively. This knowledge is generally called “monitoring,” which leads to confusion with supervision. It is evident that knowledge of the child’s whereabouts does not necessarily require supervision and that the child at least has to cooperate a little bit for parents to obtain this knowledge (provided that the child spends some time unsupervised). Some researchers claim parental

knowledge is most often the result of the child’s spontaneous disclosure (Stattin & Kerr, 2000). Knowledge thus seems to be rather an interpersonal variable than purely a parental variable and will therefore be treated as a separate concept.

In the sections that follow, we will review successively the literature on parental support, control, and knowledge. Within each section, associations with sexual experience, the use of protection (i.e., contraception and condoms), and the quality of sexual experiences (i.e., positive feelings regarding sexuality and competence in sexual interactions) will be described.

Support

Sexual Experience

Although there are many other forms of sexual behavior adolescents can engage in, most studies focus on sexual intercourse. Almost all of these studies found that a higher score on parental support is associated with a delay of first sexual intercourse. In an American population study of 13–18-year-olds, for example, correlates were found between perceptions of parental care, parental closeness and affection, and satisfaction about the relationship with the parents on the one hand, and a delay of first sexual intercourse on the other hand (Lammers, Ireland, Resnick, & Blum, 2000; Resnick et al., 1997). Other nationally representative studies and a study of African American adolescents resulted in comparable findings (Dittus & Jaccard, 2000; Dittus, Jaccard, & Gordon, 1999; Fingerson, 2005).

Some longitudinal studies confirmed these findings and show that high levels of parental support (at least also) precede relatively little sexual experience. A New Zealand study found that the odds of having had sexual intercourse before the age of 16 are higher for youth coming from families with less cohesion and expressiveness and more conflict at the ages 7, 9, or 13 (Paul, Fitzjohn, Herbison, & Dickson, 2000). Norwegian researchers found that less family affection at the age of 12–14 is associated with a younger median age of first sexual intercourse (Pedersen, Samuelsen, & Wichstrøm, 2003). Other longitudinal studies found comparable results (Davis & Friel, 2001; Longmore, Manning, & Giordano, 2001; Smith, 1997). One longitudinal study did not find any correlation, however, between parenting and sexual behavior (Taris & Semin, 1998).

The association between parental support and experience with sexual intercourse seems to be stronger in the youngest age groups (Lammers et al., 2000; Taris & Semin, 1998). Furthermore, several studies find exclusive or stronger associations for girls than for boys, whereas there are no studies that find the opposite (Davis & Friel, 2001; McNeely et al., 2002; Miller et al., 1997; Rose et al., 2005; Small & Luster, 1994).

Use of Protection

Several studies show that young people use contraception more consistently if they are more satisfied with the

Table 1. Characteristics of literature described in the present study

Study	Description of parenting measure ^a	Description of sexual outcome measure	Sample
Barnett et al. (1991)	Perceived family cohesion and strengths (s); openness of parent-child communication (s)	Pregnancy status	124 sexually experienced females, aged 13–19
Bates et al. (2003)	Perceived parental permissiveness (c); monitoring (k)	Number of sexual partners at ages 16–17	458 adolescents, followed from age 5 till age 16–17
Biglan et al. (1990)	Coercive exchanges (s); monitoring (k); spending time, having fun together (s); family problem-solving skills (s)	Number of (sexual risky) partners, condom use, experience with anal sex	Sample 1: 131 8–12th graders and their parents; Sample 2: 99 8–12th graders
Borawski et al. (2003)	Monitoring (k), opportunity to spend unsupervised time with peers (c), perceived parental trust (s)	Sexual intercourse initiation, number of sexual partners, experience with STD, condom use	692 adolescents in 9th and 10th grade
Capaldi et al. (1996)	Parental supervision of peer group activities (c); limits on unsupervised time (c)	Sexual intercourse initiation, age of first sexual intercourse	201 males, followed from age 10 till age 18
Cotton et al. (2004)	Amount of time spent without adult supervision (c); indirect monitoring (k)	Perception of the timing of first sexual intercourse	127 sexual experienced females, followed from age 12–15 till age 15–18
Crosby, DiClemente, Wingood, and Harrington (2002)	Monitoring (k)	Experience with STD	217 low-income African American females, aged 14–18
Crosby, DiClemente, Wingood, Lang, et al. (2002)	Perceived family support (s)	Communication with sex partners about (safe) sex, self-efficacy to negotiate condom use, condom use	469 low-income African American females, aged 14–18
De Graaf et al. (2005)	Perceived parental responsiveness and affection (s); monitoring (k)	Sexual intercourse initiation, contraceptive and condom use, sexual satisfaction, assertiveness, esteem	4,821 Dutch adolescents, aged 12–25
Dittus and Jaccard (2000)	Satisfaction with maternal relationship (s)	Sexual intercourse initiation, contraceptive use at most recent intercourse, pregnancy	20,745 adolescents, aged 12–18
Dittus et al. (1999)	Satisfaction with maternal relationship (s)	Sexual intercourse initiation	751 African American adolescents, aged 14–17, and their mothers
Doljanac and Zimmerman (1998)	Time spent with parents (s); parental support (s); having a nighttime curfew (c); family problem solving (c)	Sexual intercourse initiation, age of first sexual intercourse, number of sexual partners, condom use	824 9th graders
Fingerson (2005)	Satisfaction with maternal relationship (s)	Number of sex partners	9,530 adolescents, aged 15–18, and their mothers
Frisco (2005)	Involvement in education (s); supervision (check homework, set limits) (c); permissive parenting (c)	Contraceptive use at most recent intercourse	3,828 females, followed from 8th grade till 12th grade
Hope and Chapple (2005)	Maternal attachment (s); parental monitoring (k)	Sexual intercourse initiation, number of sex partners, and relationship to last sex partner	709 adolescents, aged 15–17

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Table 1. Continued.

Study	Description of parenting measure ^a	Description of sexual outcome measure	Sample
Huebner and Howell (2003)	Monitoring (c & k); communication (s); decision making (authoritative vs. nonauthoritative) (c)	Sexual risk (more than one sex partner and/or no condom at most recent intercourse)	1160 sexually experienced adolescents, 7–12th grade
Hutchinson (2002)	Perceived quality of communication with parents (s)	Age of first sexual intercourse, experience with STD, condom use before age 18	234 females, aged 19–21
Jaccard et al. (1996)	Satisfaction with parent-child relationship (s)	Experience with and frequency of sexual intercourse, consistency of contraceptive use	751 African American adolescents, aged 14–17, and their mothers
Jemmott and Jemmott (1992)	Perceived parental level of strictness (c)	Experience with and frequency of sexual intercourse, number of partners, condom use, fathering a pregnancy	200 Black males, aged 11–19
Karofsky et al. (2000)	Perceived quality of communication with parents (s)	Sexual intercourse initiation	203 adolescents, followed from age 12–21 till age 17–26
Lammers et al. (2000)	Perceived availability of a caring adult (s)	Sexual intercourse initiation	26,023 adolescents, 7–12th grade
Longmore et al. (2001)	Parental support (s); coercive control (c); rules, supervision (c)	Age of first date and first sexual intercourse	752 adolescents, aged 13 or older at wave 2, and their parents
Luster and Small (1994)	Monitoring (s & k), perception of parent as caring, fair, available (s)	Number of partners, contraceptive use	2,567 adolescents, aged 13–19
McNeely et al. (2002)	Satisfaction with mother-child relationship (s)	Age of first sexual intercourse	2,006 adolescents, aged 14–15, and their mothers
Meschke and Silbereisen (1997)	Parental monitoring (k)	Age of first sexual intercourse	702 German adolescents, aged 15–18
Metzler et al. (1994)	Availability of parental figures (s); supervision (c)	Number of sex partners, risky partners, contraceptive and condom use, sexual intercourse initiation, experience with anal sex and STD	609 adolescents, aged 14–17; 131 adolescents, aged 15–17; 99 adolescents, aged 15–18
Miller et al. (1997)	Perceived parental permissiveness (rules, keeping track) (c); coercion (spanking, threatening) (s); love withdrawal (s); support and closeness (s)	Age of first sexual intercourse	1,145 children, aged 7–11 (Wave 1), 12–16 (Wave 2), and 18–22 (Wave 3)
Miller et al. (1999)	Maternal monitoring (k), mother-adolescent communication (s)	Sexual intercourse initiation, number of sex partners, age of first sexual intercourse, condom use	907 Black and Hispanic adolescents, aged 14–16, and their mothers
Moore and Chase-Lansdale (2001)	Quality of parent-child relationship (mutual trust, quality of communication, extent of anger and alienation) (s)	Age of first sexual intercourse, pregnancy	289 African American females, aged 15–18, and their mothers

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Table 1. Continued.

Study	Description of parenting measure ^a	Description of sexual outcome measure	Sample
Moore and Davidson (1997)	Perceived communicativeness (s); strictness (c)	Guilt at first sexual intercourse, current sexual satisfaction	570 female college students, aged 18–23
Mueller and Powers (1990)	Parental communicator style (s)	Frequency of sexual intercourse, contraceptive use, sexual knowledge accuracy	160 college students, age unknown
Paul et al. (2000)	Family cohesion (s); expressiveness (s); parent attachment (s)	Sexual intercourse initiation before age 16	1,020 children, followed from age 3 till age 21, and their parents
Pedersen et al. (2003)	Affection (s); control (overprotection) (c); monitoring (k)	Age of first sexual intercourse	1,399 adolescents, followed from age 13 till age 20
Rai et al. (2003)	Perceived parental monitoring (k)	Sexual intercourse initiation, condom use	1,279 low-income African American adolescents, aged 13–16
Ream (2006)	Problem-focused interactions (s)	Sexual intercourse initiation	10,873 adolescents, 7–12th grade
Ream and Savin-Williams (2005)	Perceived love and care (s); satisfaction with communication and relationship (s); shared activities (s); problem-focused interactions (s)	Sexual intercourse initiation	13,570 adolescents, 7–12th grade
Resnick et al. (1997)	Connectedness (closeness, perceived love and care, satisfaction with the relationship) (s); number of shared activities (s); parental presence (s)	Sexual intercourse initiation, pregnancy	26,023 adolescents, 7–12th grade
Roche et al. (2005)	Number of domains where parent makes decisions (c)	Initiation of sexual intercourse between first and second Wave	2,559 adolescents, aged 12–16, virgins at Wave 1
Rodgers (1999)	Perceived parental support (s); monitoring (k); perception of parents' use of guilt as a controlling mechanism (c)	Number of sexual partners, consistency of contraceptive use, effectiveness of contraceptive method, condom use at most recent intercourse	350 sexually experienced adolescents, 9–12th grade
Rose et al. (2005)	Monitoring (k), quality of parent-child relationship, family cohesion (s)	Sexual intercourse initiation, anticipated sexual activity in the next 12 months	408 adolescents, 5th grade
Russell (2002)	Maternal interest in education (s)	Childbearing at age 19 or younger	4,928 British adolescents, surveyed at age 16 and 23
Sionéan et al. (2002)	Family support (s)	Refusal of unwanted sexual activity	522 African American females, aged 14–18
Small and Luster (1994)	Parental monitoring (k), perceived parental support (s)	Sexual intercourse initiation	2,168 adolescents in 7th, 9th, and 11th grade
Small and Kerns (1993)	Monitoring (k), mother-child decision making (authoritative vs. nonauthoritative) (c)	Unwanted touching, unwanted sexual intercourse, no unwanted sexual contact	1,149 female adolescents in 7th, 9 th , and 11th grade
Smith (1997)	Parent attachment (s); child maltreatment (neglect and abuse) (s); supervision (c)	First sexual intercourse at age 15 or younger	803 African American and Hispanian adolescents, followed from age 13 till age 17

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Table 1. Continued.

Study	Description of parenting measure ^a	Description of sexual outcome measure	Sample
Stone and Ingham (2002)	Warmth of relationship with parents (s); perception of parents as trusting and available (s)	(Discussing) contraceptive use at first intercourse	963 adolescents, aged 16–18
Taris and Semin (1997)	Amount of disagreement with regard to going out or sexual issues (c); closeness (s); importance attached to rules and discipline (c)	Sexual intercourse initiation	333 (Wave 1) and 255 (Wave 2) adolescents, aged 14–18, and their mothers
Taris and Semin (1998)	Closeness (s); importance attached to rules and discipline (c)	Sexual intercourse initiation, self-efficacy with regard to asking sexually sensitive questions	253 British adolescents, aged 15–18, and their mothers
Troth and Peterson (2000)	Family conflict resolution (c)	Comfort in discussing safe sex, condom discussion, condom use	237 Australian adolescents, aged 16–19
Van Zessen (1995)	Warmth (s); rejection (s); structure (c); autonomy support (c)	Sexual satisfaction	124 adults with 3 or more sexual partners in past year
Vesely et al. (2004)	Family communication (s)	Sexual intercourse initiation, age at first intercourse, number of sex partners, contraceptive use	1,253 adolescents, aged 13–19, and their parents
Werner-Wilson and Vosburg (1998)	Perceived love and esteem (s)	Experience with risky sex partners, contraceptive and condom use	271 undergraduate students, mean age 20.3
Wight et al. (2006)	Rules for going out in the evening (c)	Sexual intercourse initiation, age at first intercourse, number of sex partners, condom and contraceptive use	5,041 adolescents, aged 13–14 (time 1) or age 15–16 (time 2)

^a(s) = support; (c) = control; and (k) = knowledge.

maternal relationship or if they experience more support, involvement in school, or positive communication styles from their parents (Dittus & Jaccard, 2000; De Graaf et al., 2005; Dittus et al., 1999; Frisco, 2005; Jaccard, Dittus, & Gordon, 1996; Mueller & Powers, 1990). Furthermore, the likelihood of pregnancy is smaller for girls reporting a relatively warm family climate (Barnett, Papini, & Gbur, 1991; Dittus & Jaccard, 2000; Moore & Chase-Lansdale, 2001; Resnick et al., 1997; Russell, 2002).

Results on the role of parental support in condom use are less straightforward. Hutchinson (2002) found that girls who can talk to their mother about important things use condoms more consistently before age 18. Biglan et al. (1990) also reported a negative association between parental support (spending much time together, having fun) and “sexual risk behavior” (intercourse with multiple, promiscuous, or casual partners without the use of condoms). Other studies found no associations between parental support and condom use (Miller, Forehand, & Kotchick, 1999), or only associations for sex with steady partners (Crosby, DiClemente, Wingood, & Harrington, 2002) or, on the opposite, casual partners (De Graaf et al., 2005). Some studies only found

associations between parental support and condom use for girls (Werner-Wilson & Vosburg, 1998) or for African American youth (Huebner & Howell, 2003). Doljanac and Zimmerman (1998) found, on the opposite, stronger associations for white than for African American youth.

Pleasurable Sexual Experiences

Sexual health also encompasses the ability to have pleasurable sexual experiences (WHO, 2007). A number of studies report associations between parental support and positive feelings regarding sexuality or competence in sexual interactions. Dutch girls are, for example, more satisfied with their sex lives when they receive more parental support (De Graaf et al., 2005). Another study reports associations between uncommunicative parents and girls’ feelings of guilt regarding first sexual intercourse (Moore & Davidson, 1997). Furthermore, young people who perceive their parents as more affectionate seem to be more capable of feeling close, talking about (safe) sex, and refusing unwanted sexual contact in sexual interactions (Crosby, DiClemente, Wingood, Lang, et al.

2002; Sionéan et al., 2002; Stone & Ingham, 2002; Taris & Semin, 1998; Troth & Peterson, 2000; Van Zessen, 1995).

Control

Sexual Experience

Most studies of parental control and sexual experience find that higher levels of control (less permissiveness, more supervision, and parents perceived as more strict) correlate with a delay of first sexual intercourse (Bates, Alexander, Oberlander, Dodge, & Pettit, 2003; Borawski, Ievers-Landis, Lovegreen, & Trapl, 2003; Capaldi, Crosby, & Stoolmiller, 1996; Jemmott & Jemmott, 1992; Longmore et al., 2001; Smith, 1997; Taris & Semin, 1997). Almost all of these studies are longitudinal, thus showing that postponement of sexual experience (also) follows parental control.

Some other studies, however, showed opposite results. This appears to depend on the operationalization of control: authoritarian control or overprotection seems to correlate with earlier sexual experience. Children are more likely to be sexually experienced, for example, if mothers attach more importance to strict obedience and discipline (Taris & Semin, 1998). A Norwegian longitudinal study found that adolescents who are not allowed to make their own decisions are more likely to have their first sexual intercourse at a younger age (Pedersen et al., 2003). Roche et al. (2005) found that sexual experience is indeed highest if parents do not set any rules at all, but also higher when parents are very strict, compared to moderately strict parents. In addition, setting more rules correlates with higher levels of sexual experience in socioeconomically advantaged neighborhoods in this study. Possibly, adolescents are relatively likely to perceive very strict rules as unnecessary and therefore unfair in these neighborhoods, leading to disadvantageous outcomes.

Use of Protection

Results on associations between parental control and adolescents' safe sex behavior are inconsistent, possibly because control is defined in many different ways. A certain amount of rules or parental input in decision making seems to be beneficial. White 9th graders, for example, use condoms more frequently if they have a nighttime curfew (Doljanac & Zimmerman, 1998). Male adolescents who perceive the father as more strict use condoms more consistently (Jemmott & Jemmott, 1992). Frisco (2005) also found a negative association between permissive parenting and contraceptive use in female adolescents. A certain amount of autonomy granting, however, is also desirable. Borawski et al. (2003) found that young people use condoms more consistently if they are allowed to spend more unsupervised time with peers. Another study that reported only multivariate associations found, on the opposite, no direct effect for

authoritative parenting on sexual risk behavior (Huebner & Howell, 2003).

Pleasurable Sexual Experiences

High levels of (authoritarian) control are not beneficial for having pleasurable experiences. One study found that women with overly strict father figures reported higher levels of guilt with regard to first sexual intercourse (Moore & Davidson, 1997). Adolescents whose mothers attach more importance to strict obedience and respect for authority expect to have more difficulty in sexual communication with potential partners (Taris & Semin, 1998). In addition, girls more often report unwanted sexual contact if their parents do not use an authoritative parenting style (Small & Kerns, 1993).

Knowledge of the Child's Whereabouts

Sexual Experience

Unlike control, higher levels of parental knowledge are unambiguously related to adolescents' sexual behavior. Both cross-sectional and longitudinal studies found that higher levels of knowledge are related to a delay of first sexual intercourse (Borawski et al., 2003; Meschke & Silbereisen, 1997; Rose et al., 2005; Small & Luster, 1994). Hope and Chapple (2005) found that young people who informed their parents of their whereabouts at ages 11–13 were less sexually experienced when they reached age 15–17. Bates et al. (2003) reported a negative association between the level of parental knowledge at age 13 and the number of sexual partners at age 16 or 17. In Norway, a positive correlation between parental knowledge at ages 12–14 and the median age of first sexual intercourse was found (Pedersen et al., 2003).

Use of Protection

Studies suggest that young people whose parents know more about their whereabouts use condoms more consistently and/or have lower scores on measures of sexual risk behavior (Borawski et al., 2003; Huebner & Howell, 2003; Luster & Small, 1994; Metzler, Noel, Biglan, Ary, & Smolkowski, 1994; Miller et al., 1999; Rodgers, 1999). The one study that did not confirm this finding focuses on condom use only (Rai et al., 2003). In a prospective study among African American girls, lower levels of knowledge were also found to relate to a higher chance of contracting a sexually transmitted infection (STI) in the next 18 months (Crosby, DiClemente, Wingood, Lang, & Harrington, 2002). In addition, higher levels of knowledge are associated with more consistent contraceptive use and lower odds of unwanted pregnancy (De Graaf et al., 2005).

Pleasurable Sexual Experiences

Young adolescents who perceive the timing of their first sexual experiences as “just right” report that their parents know more about them (Cotton et al., 2004). Furthermore, higher levels of parental knowledge correlate with higher levels of satisfaction, assertiveness, and self-confidence in sexual interactions (De Graaf et al., 2005) and lower odds of unwanted sexual activity (Small & Kems, 1993).

Summary and Conclusions

Most studies of associations between parental support, control, and knowledge on the one hand and adolescents’ sexual experience and sexual health on the other focus on experience with sexual intercourse. Sexual experience per se is not a very good measure of sexual health. After all, almost everyone has sexual intercourse at some point in his or her life. There are, however, some indications that having sex at a very young age (age 14 or before) is unfavorable. Sexual intercourse at this age is more often the result of persuasion or coercion and more often unprotected than among older adolescents (De Graaf et al., 2005).

Higher levels of parental support correlate with a delay of first sexual intercourse. This association is indeed particularly evident for younger adolescents. Furthermore, parental support correlates with higher levels of contraceptive and condom use among sexually active adolescents, more positive feelings regarding sexuality, and higher levels of competence in sexual interactions.

Control refers to the rules parents set for their children, their level of supervision, and the involvement of the children in making decisions (authoritative vs. authoritarian). Control is a more complicated parenting dimension than support. Both too much control and a lack of control can be disadvantageous. Some researchers make a distinction between authoritative control (clear and fair demands) and authoritarian control (an arbitrary insistence on obedience) (Maccoby & Martin, 1983; Skinner et al., 2005). Clear and fair demands seem to correlate with a delay of first sexual intercourse and less unwanted sexual experiences. Which demands are perceived as reasonable varies among life domains and age groups. Having a curfew can be reasonable for a 14-year-old, whereas not being allowed to spend any time with friends may not.

There are a number of possible explanations for these associations with parental support and control. One explanation could be that adolescents who are close to their parents and who perceive their rules as fair are more inclined to live up to their parents’ wishes. This does not explain, however, why adolescents who grow up in a loving and supportive family are also more competent in sexual interactions and subsequently report higher levels of sexual satisfaction. Possibly, higher levels of support and authoritative control create psychologically healthy young people. The positive relation between parental support and self-esteem or

adequate social skills has been demonstrated in earlier research (Barber, 1997). As a result, young people who grow up in loving and supportive families could be more aware of their own needs and more able to express them adequately in social relationships.

For both parental support and control, associations with condom use are less straightforward than associations with age of first intercourse, contraceptive use, and the quality of sexual interactions. Condom use may not be as much a comprehensive indication of sexual health as the other outcome measures. Other sensible decisions can also be made in STI prevention, such as having a monogamous relationship with someone who did not have sexual intercourse before.

Having knowledge of the child’s whereabouts is said to be a parenting strategy that bridges the gap between the parental desire for control and the child’s increasing desire for autonomy. Children are allowed to spend unsupervised time with peers, but tell their parents what they do and with whom. Young adolescents who claim their parents know more about them tend to be less sexually experienced and when they do become sexually active, those adolescents report more often that the timing was “just right,” they protect themselves better against STI’s and unwanted pregnancy and they are more satisfied, assertive, and self-confident in sexual interactions. Parental knowledge enables parents to steer and correct the child’s experiences and decisions, possibly resulting in improving the child’s decision making.

All of these explanations are, however, unilateral, just like the majority of the studies reviewed. It is unlikely that parental behavior is not at least partly a response to the child’s behavior. Although barely investigated, the relationship between parents and children could also deteriorate as a result of children becoming sexually active. Researchers who did look for reciprocal explanations indeed found evidence for this hypothesis (Karofsky, Zeng, & Kosorok, 2000; Ream, 2006). Possibly, parents unconsciously blame their children for not living up to their expectations, or perhaps it is just a natural reaction to a sign that the child is approaching adulthood. An explanation for the decline in parental knowledge could be that children who do things that their parents might not like (like having sexual intercourse) have a lower tendency to self-disclose (Darling, Cumsille, Caldwell, & Dowdy, 2006).

It is also possible that changes in parental support, control, and knowledge and adolescents’ sexual experience are all part of the same developmental process and that there is no causal relation. Growing up means taking more distance from one’s parents, gaining more autonomy, and telling less to your parents and more to your friends and possible partners. Sexual development runs parallel to these changes in the parent-child relationship. Some studies have found evidence for this hypothesis. Ream and Savin-Williams (2005) showed that decreases in the quality of the parent-child relationship and in the time spent together preceded as well as followed becoming sexually active. Wight, Williamson, and Henderson (2006) found comparable results for the amount of rules parents set before and after the first sexual intercourse.

Directions for Future Research

This review is limited to associations between parenting styles and the psychosexual development of adolescents. It thus produces no insight into the relative importance of parenting. Numerous other factors, such as violence, stigma, poverty, and relationships with peers, could influence sexual health decision making. Furthermore, this review does not give any information on mediating processes. A review of the literature on antecedents of sexual health and subsequently on the role of parenting within these antecedents would be helpful in explaining the associations described in the present study.

In addition, a meta-analysis would be desirable in order to gain insight into the effect-sizes of the associations described in this study. However, a meta-analysis is only properly applicable if the data summarized are homogeneous: samples and measures must be similar or at least comparable. This is not the case with regard to adolescents' sexual health. More homogeneity in methodologies is advisable, in order to be able to perform a meta-analysis in the future.

None of the studies included in this review gave insight in to which of the three parenting dimensions is most important or proximal. Furthermore, studies of parental knowledge do not give us direct information about which parenting strategies are most effective in gaining this knowledge, for example, how parents could enhance the child's self-disclosure. It is likely that parental knowledge itself is related to support and control. Parental trust in their children making the right decisions and not acting secretly is found to be related to greater parental knowledge of the child's whereabouts (Kerr, Stattin, & Trost, 1999). In addition, children of authoritative parents are more likely to disclose on issues they disagree with than children of nonauthoritative parents (Darling et al., 2006).

In line with these findings, we hypothesize that support and authoritative control are prerequisites for knowledge. This results in two alternative explanations for the relation between knowledge and sexual behavior that have yet to be tested. The first explanation is that support and control set the basis for parental knowledge, which in turn has its effect on sexual behavior. The second is that knowledge and sexual behavior are both responses to the right amounts of support and control, but not interrelated. In this case, the correlation between knowledge and sexual behavior and sexual health is spurious.

The studies summarized in this review have several methodological limitations. The majority of these studies use cross-sectional designs, thus gathering data at one point in time. This makes the hypotheses on reciprocity we generated largely speculative. The longitudinal studies in this review also gave no insight into possible reactions of parents to children, since they almost exclusively use nonrecursive designs (investigating only the effect of parents on children, not the other way around). Even in the longitudinal studies that controlled for sexual behavior at first measurement, other behavioral and psychological variables that usually precede sexual initiation (such as

sexual interest, dating, or noncoital behaviors) were not taken into account. In addition, most studies focus on one or two dimensions of parenting, making conclusions about interactions or mediation between these variables impossible. In short, there is a need for more dynamic, dialectical studies of parenting and children's sexual development.

Despite these limitations, the present review shows parenting styles, which are described to have beneficial effects on a large variety of life domains, also hold positive associations with healthy sexual development. Parental support, age-appropriate levels of control, and knowledge of the child's whereabouts correlate in Western societies with adolescents' healthy decision making, also with regard to sexuality. Thereby parents can contribute to their child's general well-being and reduce the emotional, medical, and financial costs associated with sexual risks.

References

- Barber, B. K. (1997). Adolescent socialization in context: The role of connection, regulation, and autonomy in the family. *Journal of Adolescent Research, 12*, 5–11.
- Barnett, J. K., Papini, D. R., & Gbur, E. (1991). Familial correlates of sexually active pregnant and non-pregnant adolescents. *Adolescence, 26*, 457–472.
- Bates, J. E., Alexander, D., Oberlander, S., Dodge, K. A., & Pettit, G. S. (2003). Antecedents of sexual activity at ages 16 and 17 in a community sample followed from age 5. In J. Bancroft (Ed.), *Sexual development in childhood* (pp. 206–237). Bloomington: Indiana University Press.
- Biglan, A., Metzler, C. W., Wirt, R., Ary, D., Noell, J., Ochs, L., et al. (1990). Social and behavioral factors associated with high-risk sexual behavior among adolescents. *Journal of Behavioral Medicine, 13*, 245–261.
- Borawski, E. A., Ievers-Landis, C. E., Lovegreen, L. D., & Trapl, E. S. (2003). Parental monitoring, negotiated unsupervised time, and parental trust: The role of perceived parenting practices in adolescent health risk behaviors. *Journal of Adolescent Health, 33*, 60–70.
- Capaldi, D. M., Crosby, L., & Stoolmiller, M. (1996). Predicting the timing of first sexual intercourse for at risk adolescent males. *Child Development, 57*, 344–359.
- Cotton, S., Mills, L., Succop, P. A., Biro, F. M., & Rosenthal, S. L. (2004). Adolescent girls' perceptions of the timing of their sexual initiation: "too young" or "just right"? *Journal of Adolescent Health, 34*, 453–458.
- Crosby, R. A., DiClemente, R. J., Wingood, G. M., & Harrington, K. (2002). HIV/STD prevention benefits of living in supportive families: A prospective analysis of high risk African American female teens. *American Journal of Health Promotion, 16*, 142–145.
- Crosby, R. A., DiClemente, R. J., Wingood, G. M., Lang, D. L., & Harrington, K. (2002). Infrequent parental monitoring predicts sexually transmitted infections among low-income African American female adolescents. *Archives of Pediatrics and Adolescent Medicine, 157*, 169–173.
- Darling, N., Cumsille, P., Caldwell, L. L., & Dowdy, B. (2006). Predictors of adolescents' disclosure to parents and perceived parental knowledge: Between- and within-person differences. *Journal of Youth and Adolescence, 35*, 667–678.
- Davis, E. C., & Friel, L. V. (2001). Adolescent sexuality: Disentangling the effects of family structure and family context. *Journal of Marriage and the Family, 63*, 669–681.

- De Graaf, H., Meijer, S., Poelman, J., & Vanwesenbeeck, I. (2005). *Seks onder je 25^e: Seksuele gezondheid van jongeren in Nederland anno 2005* [Sex under 25: Sexual health of young people in the Netherlands in the year 2005]. Delft, The Netherlands: Eburon.
- Dittus, P. J., & Jaccard, J. (2000). Adolescents' perceptions of maternal disapproval of sex: Relationship to sexual outcomes. *Journal of Adolescent Health, 26*, 268–278.
- Dittus, P. J., Jaccard, J., & Gordon, V. V. (1999). Direct and non-direct communication of maternal beliefs to adolescents: Adolescent motivations for premarital sexual activity. *Journal of Applied Social Psychology, 29*, 1927–1963.
- Doljaanac, R. F., & Zimmerman, M. A. (1998). Psychosocial factors and high-risk sexual behavior: Race differences among urban adolescents. *Journal of Behavioral Medicine, 21*, 451–467.
- Fingerson, L. (2005). Do mothers' opinions matter in teens' sexual activity? *Journal of Family Issues, 26*, 947–974.
- Frisco, M. L. (2005). Parental involvement and young women's contraceptive use. *Journal of Marriage and the Family, 67*, 110–121.
- Hope, T. L., & Chapple, C. L. (2005). Maternal characteristics, parenting, and adolescent sexual behavior: The role of self-control. *Deviant Behavior, 26*, 25–45.
- Huebner, A. J., & Howell, L. W. (2003). Examining the relationship between adolescent sexual risk-taking and perceptions of monitoring, communication, and parenting styles. *Journal of Adolescent Health, 33*, 71–78.
- Hutchinson, M. K. (2002). The influence of sexual risk communication between parents and daughters on sexual risk behaviors. *Family Relations, 51*, 238–247.
- Jaccard, J., Dittus, P. J., & Gordon, V. V. (1996). Maternal correlates of adolescent sexual and contraceptive behavior. *Family Planning Perspectives, 28*, 159–165.
- Jemmott, L. S., & Jemmott, J. B. (1992). Family structure, parental strictness, and sexual behavior among inner-city Black male adolescents. *Journal of Adolescent Research, 7*, 192–207.
- Karofsky, P. S., Zeng, L., & Kosorok, M. R. (2000). Relationship between adolescent-parental communication and initiation of first intercourse by adolescents. *Journal of Adolescent Health, 28*, 41–45.
- Kerr, M., Stattin, H., & Trost, K. (1999). To know you is to trust you: Parents' trust is rooted in child disclosure of information. *Journal of Adolescence, 22*, 737–752.
- Lammers, C., Ireland, M., Resnick, M., & Blum, R. (2000). Influences on adolescents' decision to postpone onset of sexual intercourse: A survival analysis of virginity among youths aged 13 to 18 years. *Journal of Adolescent Health, 26*, 42–48.
- Longmore, M. A., Manning, W. D., & Giordano, P. C. (2001). Preadolescent parenting strategies and teens' dating and sexual initiation: A longitudinal analysis. *Journal of Marriage and the Family, 63*, 322–335.
- Luster, T., & Small, S. A. (1994). Factors associated with sexual risk-taking behaviors among adolescents. *Journal of Marriage and the Family, 56*(3), 622–632.
- Maccoby, E., & Martin, J. (1983). Socialization in the context of the family. Parent-child interaction. In E. M. Hetherington (Ed.), *Handbook of child psychology* (Vol. 4, pp. 1–101). New York: Wiley.
- McNeely, C., Shew, M. L., Beuhring, T., Sieving, R., Miller, B. C., & Blum, R. W. (2002). Mothers' influence on the timing of first sex among 14- and 15-year-olds. *Journal of Adolescent Health, 31*, 256–265.
- Meschke, L. L., & Silbereisen, R. K. (1997). The influence of puberty, family processes, and leisure activities on the timing of first sexual experience. *Journal of Adolescence, 20*, 403–418.
- Metzler, C. W., Noell, J., Biglan, A., Ary, D., & Smolkowski, K. (1994). The social context for risky sexual behavior among adolescents. *Journal of Behavioral Medicine, 17*, 419–438.
- Miller, B. C., Norton, M. C., Curtis, T., Hill, E. J., Schvaneveldt, P., & Young, M. H. (1997). The timing of sexual intercourse among adolescents: Family, peer and other antecedents. *Youth and Society, 29*, 54–83.
- Miller, K. S., Forehand, R., & Kotchick, B. A. (1999). Adolescent sexual behavior in two ethnic minority samples: The role of family variables. *Journal of Marriage and the Family, 61*, 85–98.
- Moore, M. R., & Chase-Lansdale, P. L. (2001). Sexual intercourse and pregnancy among African American girls in high-poverty neighborhoods: The role of family and perceived community environment. *Journal of Marriage and the Family, 63*, 1146–1157.
- Moore, N. B., & Davidson, J. K. Sr. (1997). Guilt about first intercourse: Antecedent of sexual dissatisfaction among college women. *Journal of Sex & Marital Therapy, 23*, 29–46.
- Mueller, K. E., & Powers, W. G. (1990). Parent-child sexual discussion: Perceived communicator style and subsequent behavior. *Adolescence, 25*, 469–482.
- Paul, C., Fitzjohn, J., Herbison, P., & Dickson, N. (2000). The determinants of sexual intercourse before age 16. *Journal of Adolescent Health, 27*, 136–147.
- Pedersen, W., Samuelsen, S. O., & Wichstrøm, L. (2003). Intercourse debut age: Poor resources, problem behavior, or romantic appeal? A population based longitudinal study. *The Journal of Sex Research, 40*, 333–345.
- Rai, A. A., Stanton, B., Wu, Y., Li, X., Galbraith, J., Cottrell, L., et al. (2003). Relative influences of perceived parental monitoring and perceived peer involvement on adolescent risk behaviors: An analysis of six cross-sectional data sets. *Journal of Adolescent Health, 33*, 108–118.
- Ream, G. L. (2006). Reciprocal effects between the perceived environment and heterosexual intercourse among adolescents. *Journal of Youth and Adolescence, 35*, 771–785.
- Ream, G. L., & Savin-Williams, R. C. (2005). Reciprocal associations between adolescent sexual activity and quality of youth-parent interactions. *Journal of Family Psychology, 19*, 171–179.
- Resnick, M. D., Bearman, P. S., Blum, R. W., Bauman, K. E., Harris, K. M., Jones, J., et al. (1997). Protecting adolescents from harm: Findings from the National longitudinal study on adolescent health. *Journal of the American Medical Association, 278*, 823–832.
- Roche, K. M., Mekos, D., Alexander, C. S., Astone-Nan, M., Bandeen-Roche, K., & Ensminger, M. E. (2005). Parenting influences on early sex initiation among adolescents: How neighborhood matters. *Journal of Family Issues, 26*, 32–54.
- Rodgers, K. B. (1999). Parenting processes related to sexual risk-taking behaviors of adolescent males and females. *Journal of Marriage and the Family, 61*, 99–109.
- Rose, A., Koo, H. P., Bhaskar, B., Anderson, K., White, G., & Jenkins, R. R. (2005). The influence of primary caregivers on the sexual behavior of early adolescents. *Journal of Adolescent Health, 37*, 135–144.
- Russell, S. T. (2002). Childhood developmental risk for teen childbearing in Britain. *Journal of Research on Adolescence, 12*, 305–324.
- Sionéan, C., DiClemente, R. J., Wingood, G. M., Crosby, R., Cobb, B. K., Harrington, K., et al. (2002). Psychosocial and behavioral correlates of refusing unwanted sex among African American adolescent females. *Journal of Adolescent Health, 30*, 55–63.
- Skinner, E., Johnson, S., & Snyder, T. (2005). Six dimensions of parenting: A motivational model. *Parenting: Science and Practice, 5*, 175–235.

- Small, S. A., & Kerns, D. (1993). Unwanted sexual activity among peers during early and middle adolescents: Incidence and risk factors. *Journal of Marriage and the Family*, 55, 941–952.
- Small, S. A., & Luster, T. (1994). Adolescent sexual activity: An ecological, risk-factor approach. *Journal of Marriage and the Family*, 56, 181–192.
- Smith, C. A. (1997). Factors associated with early sexual activity among urban adolescents. *Social Work*, 42, 334–346.
- Stattin, H., & Kerr, M. (2000). Parental monitoring: A reinterpretation. *Child Development*, 71(4), 1072–1085.
- Stone, N., & Ingham, R. (2002). Factors affecting British teenagers' contraceptive use at first intercourse: The importance of partner communication. *Perspectives on Sexual and Reproductive Health*, 34, 191–197.
- Taris, T. W., & Semin, G. R. (1997). Parent-child interaction during adolescence, and the adolescent's sexual experience: Control, closeness, and conflict. *Journal of Youth and Adolescence*, 26, 373–398.
- Taris, T. W., & Semin, G. R. (1998). How mothers' parenting styles affect their children's sexual efficacy and experience. *Journal of Genetic Psychology*, 159, 68–81.
- Troth, A., & Peterson, C. C. (2000). Factors predicting safe-sex talk and condom use in early sexual relationships. *Health Communication*, 12, 195–218.
- Van Zessen, G. (1995). *Wisselend contact: Seksuele levensverhalen van mensen met veel partners* [Changing partners: Sexual life histories of people with multiple partners]. Leiden, The Netherlands: DSWO Press.
- Vesely, S. K., Wyatt, V. H., Oman, R. F., Aspy, C. B., Kegler, M. C., Rodine, S., et al. (2004). The potential protective effects of youth assets from adolescent sexual risk behaviors. *Journal of Adolescent Health*, 34, 356–365.
- Werner-Wilson, R. J., & Vosburg, J. (1998). How do contextual factors and gender differences influence college students' safer sex practices? *Journal of HIV/AIDS Prevention & Education for Adolescents & Children*, 2, 33–49.
- Wight, D., Williamson, L., & Henderson, M. (2006). Parental influences on young people's sexual behaviour: A longitudinal analysis. *Journal of Adolescence*, 29, 473–494.
- World Health Organization. (2007). http://www.who.int/reproductive-health/gender/sexual_health.html.

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