

Parent-Child Interaction During Adolescence, and the Adolescent's Sexual Experience: Control, Closeness, and Conflict

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It is often assumed that a good parent-child relationship leads to a later sexual initiation of the adolescent. Using a representative longitudinal sample of 332 (Time One) to 255 (Time Two) mother-adolescent pairs, we sought to reexamine the relations between distal variables (including socioeconomic status, age of mother and child, presence of the father), proximate variables (rearing styles, sexual permissiveness), and the amount of intrafamily conflict and adolescent sexual behavior, by means of structural modeling techniques and logistic regression analysis. Our results did not support the notion of delayed sexual initiation of adolescents as a consequence of positive parent-child relationships. On the contrary, we find that the stronger parental desire to maintain a good relationship with their adolescents, the more likely it is that their sexual initiation will be at a younger age.

A decrepit father takes delight
To see his active child do deeds of youth.
—Shakespeare, *Sonnet 37*

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INTRODUCTION

If you have ever had a teenage son or daughter (or have been one), you will probably know that certainly not all "deeds of youth" elicit delight from parents. The literature identifies a wide range of *adolescent problem behaviors*, one of which is having "underage sex" (e.g., Barnes and Farrell, 1992; Jessor and Jessor, 1974; Stern *et al.*, 1984). As similar research on parent-child relationships and adolescent sexuality, the current study is guided by the assumption that parents can influence their teenager's sexual behavior, by consciously or unconsciously employing tactics such as disciplining and socializing their children. A central concept in the current study is the amount of *intrafamily* (i.e., parent-child) *conflict regarding sexual issues*. It is assumed that the quality of the family relationship (of which we consider the amount of intrafamily conflict an indicator) contributes to the type of sexual relationships that the adolescent forms. More specifically, following Inazu and Fox (1980) and Miller and Simon (1974), we assume that while a poor parent-child relationship may lead the adolescent into forming intimate love relationships outside the family, a good parent-child relationship may be conducive to the internalization of parental standards.

At the core of the current study are two interrelated research questions: (1) Given that intrafamily conflict is a dyadic event that involves *two* parties (parent and child) and takes place in the *family* context, it is of importance to examine how family, adolescent, and parent characteristics are linked to intrafamily conflict. Thus, our first research question concerns the effects of family, adolescent, and parental characteristics, and selected parent/adolescent attitudes toward sexuality and upbringing, upon the amount of intrafamily conflict regarding sexual matters. Having examined the effects of the aforementioned variables in intrafamily conflict, it then becomes of interest to examine: (2) How *effective* these variables (including amount of conflict) are in bringing about the desired teenage behavior, namely, the prevention of early sexual initiation.

There is a substantive body of research relating to both issues (e.g., Barnes and Farrell, 1992; Cooper, 1988; Rueter and Conger, 1995; Steinberg, 1990; De Gaston *et al.*, 1995; Inazu and Fox, 1980; Miller and Olson, 1988; Rodgers, 1983; Rodgers and Rowe, 1988; Træen and Lewin, 1992; *inter alia*), but many of these studies have two important drawbacks. First, the findings often stem from correlational (cross-sectional) and/or retrospective studies, where a longitudinal design would have been more adequate (cf. Breakwell and Fife-Shaw, 1992). In cross-sectional studies the causal direction among the constructs cannot properly be unraveled, while retrospective reports may be distorted by memory effects (Schwarz and Sudman, 1994). Though the evidence presented in earlier studies is cer-

tainly suggestive, a longitudinal design is better suited to unravel causal relations among the constructs in a study.

The second drawback is that many studies focus on a small subset of variables (for example, the impact of socioeconomic status variables on the timing of adolescent's sexual initiation). This implies that it is difficult, if not downright impossible, to compare the *relative* influence of different sets of explanatory variables on the criterion variables. It also impedes gaining a proper understanding of the structure of the process determining adolescent sexual behavior, as it is often likely that a particular set of variables is correlated with variables in another set. This opens the possibility that the effects of particular sets of variables on adolescent sexual behavior are *mediated* through other sets, or that the effects of one set *disappear* after controlling another. For example, it seems plausible that the often-reported effects of SES—a *distal* variable, using Jessor and Jessor's (1974) terminology—upon adolescent sexual behavior must be interpreted in terms of the differential attitudes (a *proximate* variable) held by subjects from different social backgrounds. Thus, only if *both* sets of variables (socioeconomic status variables as well as attitudes) are included in a study can the net effects of the variables belonging to these sets be examined. It is in this sense that the current study—employing a longitudinal two-wave panel design, and involving variables from different sets of variables—can be considered as an, admittedly modest, attempt to systematize and integrate a significant part of the literature on the factors affecting adolescent sexual behavior.

We first present a selective overview of the relevant literature. Deriving from this review we propose a model that links adolescent/parent/family variables (such as age, sex, and socioeconomic status), via adolescent/parent attitudes towards sexuality and upbringing, to intrafamily conflict and adolescent sexual behavior. This model is then tested using a representative longitudinal sample of 302 (time one) to 255 (time two) British adolescent/mother pairs, by means of structural modeling techniques and logistic regression analysis.

Family Influences on Adolescent Sexual Behavior

A number of studies have focused upon the role of the family environment in determining adolescent sexual behavior. Two factors that have often attracted the interests of researchers are socioeconomic status and the structure of the family the adolescent lives in (especially whether or not the natural father of the adolescent is present).

Socioeconomic Status (SES)

Reiss (1967) argued early on that families are members of class or status groupings, which are the source of transmitters of differing sexual standards. Parents transmit to their children sexual values that are congruent with those of their social groupings. Social status will also be likely to influence whom the adolescent has for peers, the adult models they are exposed to, and their consumption patterns, including mass media consumption. Thus, the variables subsumed under SES are a potentially potent influence upon adolescent sexuality. Consistent with this notion, a number of studies have reported a negative relation between measures of SES such as family income, parental education, and place of residence and adolescent sexual experience (e.g., Hogan and Kitagawa, 1985; Inazu and Fox, 1980; Leigh *et al.*, 1988; Miller and Olson, 1988). Fairly typical are the findings of Vener *et al.* (1972) about adolescent coital rates from three white Michigan communities: a professional managerial community, a blue-collar community, and a mixed (for SES) community. For girls aged between 13 and 17, there was a marked community effect, with girls from the professional-managerial community having substantially lower rates of coital experience; for girls aged 17 and over from the higher SES community reported coital experience was 12%, compared with 40% from the blue-collar community. For boys the pattern was comparable, though less clear.

Regarding *sexual attitudes*, there appear to be fewer studies that have found associations with SES variables, though when an effect was found, more permissive attitudes were negatively related to SES (e.g., Chilman, 1983; Harris and Associates, 1986; Reiss, 1967). Delameter and MacCorquodale (1979) found no relationship between SES and sexual attitudes among their college sample, but this may have been due to the restricted range of SES among college-educated subjects as entry into higher education is positively associated with SES variables.

Living with a Single Parent

A substantial number of studies have shown that adolescents not living with both biological parents are significantly more likely to have experienced sexual intercourse and/or hold more permissive sexual attitudes than adolescents living with both biological parents. The results have held up for both whites and blacks, as well as for male and female adolescents, and for adolescents from a wide range of social backgrounds (e.g., Miller and Olson, 1988; Newcomer and Udry, 1987; Hogan and Kitagawa, 1985; Stern *et al.*, 1984). This relationship persists when other relevant "contami-

nating" variables such as SES, parental education, and age, are controlled (Rodgers, 1983). There are several interpretations of this effect, though their relative importance remains unknown. When a marriage is in the process of breaking up, parents may be more likely to lose control of their children's behavior (Newcomer and Udry, 1987). This might be for reasons such as an increased rebelliousness of the adolescent, emotional and/or practical problems of the parents meaning that quality of parent-child relationships suffer, or that surveillance and disciplining of the child is diminished. Stern *et al.* (1984) argue that the father is a key figure in the transmission of values and is a role model in the life of an adolescent. The father can also be a disciplinary force whose absence means that there is less of a deterrent to the adolescent to engage in "problem behaviors." A further factor might be that in single-parent families, the role model that the sexually active, dating single mother/father presents to the child increases the likelihood of sexual activity on the part of the adolescent (Newcomer and Udry, 1987).³

How Parents May Influence Their Child's Sexual Behavior

Parents as Sex Educators?

Parents can in principle be a source of information for their children on sex-related issues. In this sense, they may influence their teenager's sexual behavior directly, by giving them advice about factual issues (such as how to use contraceptives, etcetera), as well as by discussing subjective and value-laden matters, such as when it is all right to engage in sexual intercourse. However, apparently parents do not fulfill their roles as sex educators to the satisfaction of their offspring. For example, Gordon and Snyder (1986) reported that only 15% of the adolescents in their sample said to be satisfied by their parents when acting as sex educators, a finding that matches well with Philliber's (1980) result that parent/adolescent discussions about sex-related matters tend to be one-sided and characterized by strain and uncertainty. Consequently, parents usually play a minor role in the sex education of their children; friends are found to be considerably more important (Moore and Erickson, 1985).

³A third variable that belongs to the cluster of family variables is *family configuration* (such as the number of siblings, and the number of younger/older siblings). For example, earlier research has revealed that older siblings are less permissive than younger siblings (e.g., Reiss, 1967; Rodgers and Rowe, 1988). Unfortunately, in the current study only information about the *total* number of siblings in the family was available. Preliminary analyses of the various models reported in this paper revealed, however, that the total number of siblings was not significantly related to any of the variables of interest. Therefore, this variable was omitted.

Parents as a Socializing Agency: Close Relationships

It would appear that the role of parents with regard to the sexual education of their children is of limited importance. However, while their significance as sex educators is probably unimportant, parental influence as a *socializing agency* may be more substantial. A considerable amount of research has dealt with the quality of family relationships as a factor in adolescent sexuality. This research focuses on qualities such as the adolescent's satisfaction with the parent-child relationship, whether the adolescent can confide in parents, whether there is love for or closeness to the parents and expression of this, but also on how often there is communication between parent and child on sexual issues, etc. For instance, Delameter and MacCorquodale assert that parental sexual standards are the earliest to which the child is exposed and thus "provide the foundation for subsequent sociosexual development" (p. 25). Fisher (1986) suggests that *if* there is an effect of parents on their children's sexual activities, then it is likely that this works via the transmission of attitudes and values. Thus, the quality of parent-child interaction may be important in conveying parents' sexual standards to their children.

The assumption underlying the current report is that poor parent-child relationships may lead the adolescent into forming intimate love relationships, and, conversely, that good parent-child relationships are conducive to the internalization of parental standards (e.g., Inazu and Fox, 1980; Jessor and Jessor, 1974). Evidence that parents' and children's sexual standards correspond more closely where their relationship is characterized by openness, understanding, love, and respect is provided by among others Burgess (1973) and Delameter and MacCorquodale (1979). Given that adolescents generally regard their parents' sexual standards as more conservative than their own (Reiss, 1967; Zelnik and Shah, 1981); indeed, parents and older people *are* more conservative in their sexual attitudes (cf. Fisher, 1986; Harding, 1988), and that adolescents' attitudes and behavior are in close correspondence (Delameter and MacCorquodale, 1979; Taris and Semin, 1995, 1997), then it would be reasonable to expect that close, understanding relationships with parents would be associated with less sexual experience.

Parental Supervision and Control

Parents may not merely affect their children's sexual behavior by having discussions about sex-related matters and maintaining close relationships. Especially in the case of young adolescents, *parental supervision and control* may be effective. There is a widespread belief that the lack

of parental control is (at least in part) responsible for adolescent's involvement in underage sex. Newcomer and Udry (1987) cite diminished parental control over adolescent behavior during marital disruption or separation as a possibly important reason for increased levels of sexual activity among adolescents from disrupted or one-parent homes. Given this belief, it is surprising to note that relatively little research addresses the relation between parental supervision and control on the one hand, and adolescent sexuality on the other. Among the relevant studies in this field are Jessor and Jessor (1975), who report that nonvirgins tended to perceive less parental control during their adolescent years than virgins; Hogan and Kitagawa (1985), who demonstrate among a sample of black adolescent females from Chicago that perceived parental control of early dating was negatively related to rates of teenage pregnancy; and Barnes and Farrell (1992) who found that their measure of adolescent "deviance" (which included "having sexual relations with someone" as one of their more serious deviant behaviors) was positively associated with the amount of parental monitoring of the adolescent's behavior. Finally, Inazu and Fox (1980) did not find a significant relationship between parental supervision of their daughter's dating and her sexual experience. Thus, while there seems some reason to assume that parents are able to control their children's sexual behavior by setting rules and supervision, there is still a need to replicate and reexamine the relations between supervision and control on the one hand, and adolescent sexual behavior on the other.

Adolescent Attitudes Toward Sexuality and Their Parents

Up until now we have predominantly focused on the relations between family variables and parental attitudes on the one hand, and the quality of family life and adolescent sexual behavior on the other. The "missing link" in the picture that has been sketched so far is, of course, the influence of adolescent characteristics on the variables of interest.

Variables Affecting Adolescent Sexual Experience

Earlier research has shown that adolescent biographical background characteristics are significantly related to adolescent sexual experience. That is, older subjects and subjects having a steady relationship are more likely to have lost their virginity than younger subjects and subjects that have never had a relationship (e.g., Bowie and Ford, 1989; Delameter and MacCorquodale, 1979; Taris and Semin, 1995, 1996). Less trivial is the in-

fluence of *attitudinal variables*. Chief among these is probably how *sexually permissive* an adolescent is. Earlier research has firmly supported the intuitively plausible notion that sexual permissiveness and sexual experience are interrelated. That is, the more permissive a subject is, the more likely it becomes that a particular subject will be sexually experienced (see Taris and Semin, 1997; Træen and Lewin, 1992; *inter alia*).⁴ The often reported relation between adolescent religious commitment (a distal variable) and sexual experience probably has to be interpreted in terms of the lower sexual permissiveness of religiously committed subjects.

Intrafamily Conflict

It also appears likely that sexual permissiveness will be positively linked to the amount of intrafamily conflict with regard to sexual issues. Parents will probably be aware of the relation between permissiveness and an early sexual initiation, and they may therefore try to control the sexual behavior of an overly permissive teenager. This in turn will most likely lead to an increase in intrafamily conflict. This may even increase if parents suspect that their child has already had sex.

It is likely that a teenager's efforts to understand and be close to their parent will lead to a lower amount of intrafamily conflict. Similarly, if an adolescent feels that a parent has the right to try to exert control over an adolescent's life, the amount of intrafamily conflict will be considerably less than when an adolescent feels that s/he has the right to live a life of his own, without (much) parental control.

Factors Affecting Teenage Sexual Experience, and Intrafamily Conflict: A Model

On the basis of the theoretical notions discussed above, we propose a longitudinal model for the relations among adolescent sexual experience, adolescent and mother's attitudes, adolescent and mother's biographical background variables, and family variables (Fig. 1). Of the variables in this

⁴It has been argued that the causal direction of the relation between sexual permissiveness and sexual experience may be from sexual experience to sexual permissiveness—the exact reverse of the relation as it is usually assumed (cf. Billy *et al.*, 1988; Delameter and MacCorquodale, 1979; Reiss, 1967). It is certainly conceivable that having sexual intercourse has a profound impact on attitudes towards sexual attitudes. Therefore, in an earlier paper (Taris and Semin, 1995) we examined for the current data set whether sexual experience affected sexual attitudes (permissiveness), whether the reverse effect applied, or that both effects were supported. We found no evidence at all that sexual experience affected sexual attitudes; rather the reverse effect applied.

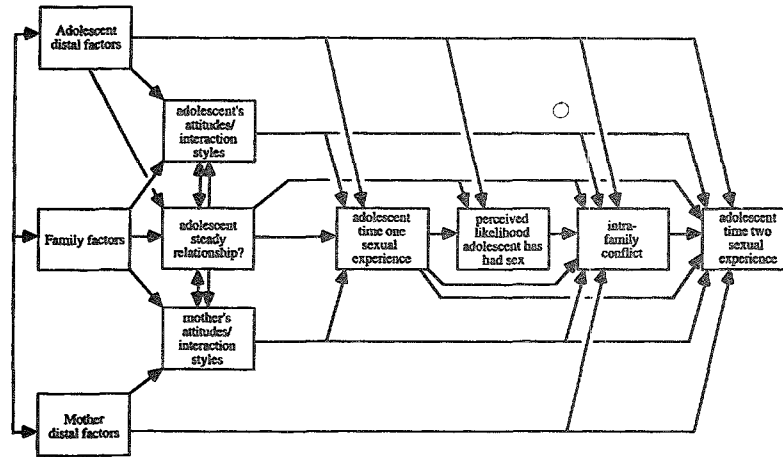


Fig. 1. The structural relations among the clusters of variables used in this study.

model, Time Two sexual experience was measured one year after measuring the other variables (that were measured at the first wave of the study, Time One). This model may be taken as a set of largely theory-guided hypotheses regarding the relations among these variables, and thus as a set of null hypotheses to be either confirmed or rejected. In the remainder we will therefore refer to this model as the *baseline* or *null* model.

Figure 1 shows that the principal dependent variable—*Time Two Sexual Experience*—is assumed to be dependent on all other variables in the model, including the amount of *Intrafamily Conflict*. The latter variable may not only be considered an indicator of the quality of family life; conflict situations also serve as an *opportunity to exchange views* regarding the proper conduct in a particular situation, though much less pleasantly than other situations (cf. Cooper, 1988; Galatzer-Levy and Cohler, 1993; Rueter and Conger, 1995; Steinberg, 1990). Thus, one effect of a parent-child quarrel over sexual issues may be that both parties know what they think of particular matters, and it is in this sense that such quarrels or conflicts may be considered as *functional* in socializing the adolescent's sexual conduct (cf. Rueter and Conger, 1995). Indeed, this is probably the effect of quarreling about sexual matters that the parents desire. It conveys to their children not only *how they feel* about particular issues, but also *how strongly* they view this issue. Without such an effect, simply giving in to the adolescent's whims might be considerably more economical in terms of the quality of intrafamily life. Thus, "folk theory" predicts a positive relation between Intrafamily conflict and Sexual Experience.

The amount of intrafamily conflict is considered to be primarily dependent on the socialization style of the parents, the degree to which both parties try to be close to and understand each other, and the degree parents suspect their teenager to be sexually experienced. The latter variable in turn is presumably a function of the Time One Sexual Experience of the adolescent (i.e., the relation between Sexual Experience and Amount of Intrafamily Conflict is—at least partly—mediated by parental suspicions that their child has had sex), as well as variables that may be considered to provide clues as to the likelihood that someone is sexually experienced, i.e., adolescent background variables such as age and having a steady relationship, but probably also adolescent sexual permissiveness.

Finally, adolescent attitudes toward sexuality and upbringing are considered to be primarily dependent upon family factors and adolescent biographical background characteristics, whereas parental attitudes are expected to depend mainly on family factors and parental biographical background factors. Thus, the current research addressed the relationship between a more comprehensive set of proximal (e.g., adolescent and parental attitudes) and distal variables (e.g., parental and adolescent background variables, and family factors) with a view to elucidating their contribution to the onset of adolescent sexual experience. Most importantly, the research strategy adopted here was a longitudinal one in which the influence of the proximate and distal variables upon becoming sexually experienced was investigated. Thus, we attempted to combine both the effect of distal and proximal mediating variables upon the age at which sexual experience is acquired by considering the context of a systemic unit—namely the family. The research reported below was conducted on a sample of 302 adolescent–mother pairs who were interviewed twice individually with a year's interval.

METHOD

Sample

The data were collected as part of a two-wave panel study. The waves of the study were conducted in 1989 and 1990, respectively, in the Brighton and Hove area, Sussex, England. In the first wave, 333 adolescent–mother pairs completed a structured questionnaire administered individually in the presence of an interviewer. The adolescents were 14–18 years old ($M_{\text{age}} = 15.80$, $SD = 1.08$). Only mothers were interviewed as previous research has shown that mothers are considerably more involved in sex education and discussions about sexual matters than fathers (Inazu and Fox, 1980);

fathers are often not involved at all. Additionally, as fathers will usually have employment, mothers are in a much better position to effectuate their views regarding the upbringing of their children than fathers. Thus, we expected a relatively strong relation between the mother's views and adolescent's sexual attitudes and behaviors, but less so for the father.

Our questionnaire addressed, among other things, sexual behavior, attitudes toward sex-related issues, intimate relationships, disagreement/conflict between mother and child on several sex-related domains, as well as background variables such as age, gender, and socioeconomic status. Non-response at the second wave decreased the sample to 255 adolescent-mother pairs. Subsequent analysis of the nonresponse showed that attrition was not systematically affected by age, gender, religion, political preference, or socioeconomic status, and that the sample was representative for the target population. Comparison of the Time One scores of the subjects in the final sample and the Time Two dropouts revealed no systematic differences concerning the variables used in this study.

Measures

Amount of Disagreement/Conflict

Both mother and child were asked to rate the amount of disagreement with regard to 19 selected issues on a 5-point scale (1 = *we never disagree about this*; 5 = *we very often disagree about this*). For the adolescents, exploratory factor analysis revealed that the 8 items measuring sex-related issues clearly tapped two factors, one of which applied to "going out" in general, while the other was more directly related to sex-related matters. Together the two factors accounted for 61.7% of the variance of the items. This result was cross-validated using the mothers sample. Again, two clearly interpretable factors turned up, with the same items loading on each factor. Here the two factors accounted for 66.5% of the variance.

Typical items of the 5-item Going Out scale were "not telling them where you are going when you go out," "that you mix with the 'wrong' people," and "that you go out too often" (α for the adolescents was .79, for the mothers .87). The three items of the Sex-Related scale were "getting into a sexual relationship with the 'wrong sort' of partner," "having an unwanted pregnancy or getting a girl pregnant," and "having sex with somebody" (α for the adolescents was .80, for the mothers α was .72).

A difficulty in measuring intrafamily conflict is whether one should take the adolescent's or the parent's (mother's) account of the amount of disagreement between them. Typically, the correlations between their re-

spective accounts are rather low. In order to circumvent this difficulty, we decided to use *both* the mother's and the adolescent's account of the amount of disagreement with regard to sex-related matters and going out, to create a *latent* variable that tapped intrafamily conflict (cf. Rueter and Conger, 1995). As we saw no reason to favor either the mother's or the adolescent's subjective account of the amount of disagreement over the other's account, we decided that the loadings of the two variables that measured amount of disagreement on a particular domain coming from either source must be equal. A preliminary confirmatory factor analysis (Jöreskog and Sörbom, 1993) revealed that such a specification fitted the data rather well (χ^2 with 5 *df* was 7.00; $p = .22$), and therefore we decided to retain this specification of the model for intrafamily conflict for the extended model (involving structural relationships among the concepts) as well.

Sexual Permissiveness

This concept was tapped by means of three separate scales, which were available for both mother and child. The three scales were (1) *Morality in Having Sex*. This was a 6-item scale with a reliability (Cronbach's α) of .70 (adolescents) and .75 (mothers), respectively. Typical items were "it is all right to have sex before marriage if the partners love each other"; "it is o.k. to have sex with somebody you have met recently and don't know very well, as long as both of you are attracted to each other"; and "adultery is sinful under all circumstances" (reversed; 1 = *disagree strongly*; 7 = *agree strongly*). (2) *Importance of Loving the Partner Before Having Sex*. This 6-item scale tapped the degree to which one felt that in an intimate relationship particular conditions had to be fulfilled before it was o.k. to have sex in that relationship. Three exemplary items of this scale were (for the mother's version) "they would have to be married to the person," "they would have to be in a long-term, committed relationship with the person," and "they would have to be in love with the person" (1 = *yes*; 0 = *no*). For the adolescents the items were slightly reworded, for example, the first item became "I would have to be married to the person." While answering the questions, the mothers were explicitly asked to keep the son or daughter who was also participating in the study in mind, and not any of their other children. This scale was shown to constitute a good Guttman scale with reliabilities of .80 (ρ ; mothers) and .83 (adolescents). We refer to this scale as the Need to Love scale. (3) *Importance of Knowing the Partner before Having Sex*. This 2-item scale tapped the degree to which one had to know the partner well before engaging in sexual intercourse in a

relationship. The items of this scale were (for the mother's version) "they would have to know some things about the persons sexual history (how many partners they had had, for example)" and "they would have to know the person very well" (1 = *yes*; 0 = *no*). Again, for the adolescents the items were reworded, in a similar fashion as the Need to Love scale. These items also constituted a Guttman scale, with reliabilities of .94 (ρ mothers) and .46 (adolescents). We refer to this scale as the Need to Know scale.

Again, using confirmatory factor analysis we first examined whether a model specification involving one latent variable (Sexual Permissiveness) with the three manifest variables discussed above as indicators fitted the data acceptably well. This was the case for both mother and child. Therefore, we decided to retain this model specification for the final (extended) model.

Mother-Adolescent Interaction Styles: Discipline and Closeness

A set of 13 items was designed to tap the way mother and child interacted with each other. Starting with the mothers, exploratory factor analysis revealed two interpretable factors. After omitting 3 items that loaded on both factors (loadings $>.35$), two clearly interpretable factors remained that accounted for 65.6% of the total variance. Again, these findings were cross-checked for the adolescents. Here the same pattern of results was obtained; two factors that accounted for 72% of the variance in the items. The first scale consisted of 7 items, measuring the degree to which mother and child felt close to each other. Typical items were (in the wording for the mothers) "I always listen to what my son/daughter has to say," "my son/daughter tells me most of the things that he/she does," and "I try hard to understand my son/daughter." For the adolescents, the items were slightly reworded: the first item, for instance, became "my parents always listen to what I say" (1 = *disagree strongly*; 7 = *agree strongly*). The reliability of this scale (α) was respectively .76 (adolescents) and .68 (mothers).

The second scale tapped the importance mother and child attached to discipline in a parent-child relationship. The three items of this scale were "it is important for parents to discipline their children," "it is important that teenagers do what their parents tell them," and "it is important that children are brought up to respect authority" ($\alpha = .81$ for the adolescents and .73 for the mothers, respectively). The items of this scale were the same for both mother and child. Confirmatory factor analysis revealed that these two parent-child interaction styles could *not* be taken as indicators of the same latent construct. Thus, they were entered as separate variables in all subsequent analyses.

Family Variables

On the basis of the above literature review, we selected two variables for inclusion in the cluster of distal family variables. The first of these was *Socioeconomic Status* (SES). The second of the family variables to be included was a measure of whether or not the child's mother was currently married to and living with the child's natural father (a variable we will refer to as *Father present*).

Mother's Characteristics

This cluster of variables included *age*, *level of education*, and mother's *religious commitment*. The last concept was measured with a single item, asking how committed one was to one's religion (1 = *not at all*, 7 = *extremely*). Finally, we asked *how likely* the mother felt it was that her son/daughter had already had sex (1 = *not at all likely*, 7 = *very likely*).

Adolescent's Characteristics

Here we included *age* and *sex* of the adolescent, his/her *religious commitment*, whether or not one was currently having a *steady relationship*, and whether the adolescent had *ever had sex* with anyone (0 = *no*, 1 = *yes*). This question was asked at both time points. At the first occasion, 35% of the females and 38% of the males already had been sexually initiated. One year later, these percentages were 64 and 62, respectively, showing that men and women were about equally likely to have had sex at both time points.

Table I presents the means and standard deviations for all variables mentioned above. This table revealed significant mother-child differences for all attitudinal variables. The amount of conflict perceived by the mother with regard to sexual matters and especially going out was lower than what their child experienced. Regarding the rearing styles, mothers attached more importance to discipline than their children. Mothers felt considerably closer to their child than vice versa (*M*'s 5.8 and 4.9, respectively). Concerning the three Permissiveness indicators, mothers were less permissive, attached more importance to love, and knowing their child's partner than their children.

Procedure: Specification and Fitting of the Model

The null model presented in Fig. 1 was tested by means of structural equation modeling (Jöreskog and Sörbom, 1993). After preliminary analy-

Table 1. Means and Standard Deviations for the Variables Used in This Study
($N = 302$ for all variables, Except Time Two Sexual Experience $N = 255$)

	Adolescent		Mother		T ^a
	<i>X</i>	<i>SD</i>	<i>X</i>	<i>SD</i>	
T ₂ sexual experience ^{b,c}	.63	.49			
Likelihood child sexually experienced			3.11	2.36	
Steady relationship ^b (high = yes)	.67	.48			
T ₁ sexual experience ^{b,c}	.37	.38			
Rearing styles					
Discipline	5.11	1.31	5.69	1.09	5.91 ^f
Closeness	4.95	1.21	5.81	.83	10.19 ^f
Conflict areas					
Sex related	.51	.49	.43	.59	2.33 ^d
Going out	2.29	1.01	.64	.43	10.29 ^f
Permissiveness					
Morality in having sex	4.33	1.14	3.77	1.29	5.65 ^f
Need to love	.55	.25	.68	.23	6.65 ^f
Need to know	.81	.31	.98	.23	7.65 ^f
Age	15.81	1.11	42.67	5.42	
Religious commitment	2.60	2.09	3.64	2.13	6.06 ^f
Education			2.83	.23	
Gender ^b (high = male)	.53	.77			
SES		2.54 (1.32)			
Father present ^b (high = present)		.67 (.51)			

^aAll comparisons have (1,301) *df*.

^bDichotomous variable.

^cHigh = sexually experienced.

^d $p < .05$.

^e $p < .01$.

^f $p < .001$ (two-tailed test).

ses concerning the measurement models of the three latent variables (Amount of Intrafamily Conflict, and Mother and Adolescent Permissiveness—see above), we tested the full model including the structural relations among the variables in the model. The fit of the null model was acceptable, χ^2 with 168 *df* = 230.10, NNFI = .91.⁵ However, many effects were not

⁵Many measures that are routinely used to assess the fit of a particular model to the data (including the standard chi-square test) depend strongly on sample size, such that in moderate to large samples minor deviations from the “true” model lead to a rejection of the model, while in small samples large deviations from the true model remain undetected. Thus, in assessing the fit of a particular model one should rely on fit measures that are insensitive to sample size. Marsh *et al.* (1989) suggest to use Bentler and Bonett’s (198) non-normed fit index (NNFI), as this was the fit measure that was the least dependent on sample size among over 30 fit indexes included in their study. Bentler and Bonett (1980) recommend that NNFI must be .90 or higher; lower values indicate a poor fit.

significantly different from zero. These were omitted in a stepwise fashion, until all remaining effects were significant. Inspection of this model revealed that one variable that was initially included in the model (Adolescent Discipline) affected none of the other variables in the model. This variable was therefore omitted, resulting in a final model with 203 *df* and a chi-square value of 262.39; NNFI = .93. These values indicate that this model represented the observed data reasonably well, and that, empirically speaking, there was no reason to reject the model.

RESULTS

Correlates of the Amount of Disagreement Between Mother and Child

Table II presents the LISREL parameter estimates for the effects in the final model (completely standardized solution), with as the ultimate dependent variable the amount of intrafamily conflict regarding sexual matters.

Amount of Intrafamily Conflict

Taken together, the variables in our model account for a very respectable 44% of the variance in the amount of intrafamily conflict. It turns out that the amount of conflict is greatly enhanced if the mother suspects that her child has had sex (a standardized effect of .30, $p < .001$). The strong and very significant effect of .40 of actual sexual experience on mother's suspicion shows that this suspicion is often justified. Other indicators that make mothers think that their child has had sex are, not surprisingly, the duration of her child's relationship (.15, $p < .01$), and her child's age (.22, $p < .001$). These variables account for 40% of the variance in the perceived likelihood that one's child has had sex.

Two other variables that account for the amount of intrafamily conflict are the effort that mother and child put into maintaining good relationships with each other and into understanding each other (standardized effects of $-.31$, $p < .001$, and $-.39$, $p < .001$, for mother and child, respectively). Thus, the harder both parties try to understand each other and the closer they feel to each other, the lower the amount of intrafamily conflict. Both closeness variables are positively affected by socioeconomic status, such that in high SES families both parties appear to try less hard to understand each other (a standardized effect of .16, $p < .01$, in both cases), resulting in a small negative indirect total effect of SES on amount of intrafamily conflict ($-.04$).

Table II. LISREL Maximum Likelihood Estimates for the Parameters in the Final Model Predicting Amount of Parent-Child Disagreement ($N = 302$, $df = 203$, $\chi^2 = 262.39$, Completely Standardized Solution)^a

	Intrafamily conflict ^a	Likelihood child sexually experienced	A Sexual Experience	A Steady Relationship	M permissivity ^b	M Discipline	M Closeness	A Permissivity ^c	A Closeness
Likelihood child sexually experienced	.30 ^f								
A Time One sexual experience		.40 ^f							
A steady relationship		.15 ^e	.36 ^f						
M permissivity ^b		-.17 ^e							
M discipline	.20 ^f								
M closeness	-.31 ^f								
A permissivity ^c			-.40 ^f						
A closeness	-.39 ^f						.16 ^e		.16 ^e
SES									-.12 ^d
Father present			.10 ^d						.16 ^e
M Age					-.20 ^f				
M religious commitment					-.35 ^f	.18 ^e		.17 ^e	
M education					.18 ^e	-.32 ^f		.15 ^d	.17 ^e
M age	-.21 ^e	.22 ^f	.17 ^e	.18 ^e				-.36 ^f	
A religious commitment				-.19 ^f	.16 ^e			.11 ^d	
A gender									
R ²	.44	.40	.37	.07	.19	.11	.03	.23	.06

^aThis is a latent variable with manifest indicators Going Out and Sex-Related intrafamily Conflict, estimated by mother and child separately. The mother's and the child's judgments were assigned equal loadings. The loading of sex-related conflict was .37 (fixed for identification purposes), and the loading of going out was .68 ($p < .001$).

^bThis latent variable has manifest indicators Morality in Having Sex, Need to Love, and Need to Know (measured for mother). The loadings of these variables were .61 (fixed for identification purposes), 0.79 ($p < .001$), and .38 ($p < .001$), respectively.

^cThis latent variable has manifest indicators Morality in Having Sex, Need to Love, and Need to Know (measured for adolescent). The loadings of the observed variables were .67 (fixed for identification purposes), .80 ($p < .001$), and .38 ($p < .001$), respectively.

^d $p < .05$.

^e $p < .01$.

^f $p < .001$.

As expected, the importance a mother attaches to disciplining her child is positively related to the amount of intrafamily conflict (.20, $p < .01$). Thus, attaching much importance to setting rules for one's children is likely to lead to an increase of conflict. Table II shows that especially religiously committed mothers (a standardized .18, $p < .01$) and mothers with a low education ($-.32$, $p < .001$) are like to attach much importance to discipline.

Time One Sexual Experience

As indicated above, the adolescent's actual sexual experience at Time One is a strong predictor of the amount of sex-related intrafamily conflict, though its effect is mediated through the mother's perceptions of the chance that her child has had sex. What are the variables that are systematically related to this sexual experiencedness? Table II reveals that the duration of the adolescent's relation is one strong predictor of sexual experience (a standardized .36, $p < .001$). Additionally, older subjects are more likely to be sexually experienced (a small but significant .17), while less permissive adolescents are more likely to be virgins (a strong $-.40$, $p < .001$). Finally, we observed an effect of presence of the father on sexual experience; those subjects whose natural father is not present are more likely to be sexually experienced. Though this effect supports our hypothesis, it is very small although significant (a standardized .10, $p < .05$). Taken together, these variables account for 37% of the variance in Time One Sexual Experience.

Mother's Attitudes

Table II shows that two of the three attitudes of the mother that were incorporated in the model were important in determining the amount of intrafamily conflict. The third variable, Mother's Permissiveness, is not of direct relevance in understanding the amount of conflict. Permissiveness relates only indirectly, via the perception of the mother that her child has had sex, to the amount of conflict. The total effect of Mother's Permissiveness on conflict is therefore extremely small, and negligible for practical purposes (a total effect of $-.03$). However, of the three maternal attitude variables it is the one that is most systematically related to the independent variables in this model ($R^2 = .19$). Older mothers and more religiously committed mothers were less likely to hold permissive attitudes, while highly educated mothers felt love was less important in deciding whether or not sex is o.k. at a particular stage in a relationship. Finally, there is a hint of a "double standard" regarding Mother's Permissiveness; mothers

who filled out our questionnaire with a *son* in mind were likely to attach *less* importance to Love in judging whether or not they felt it was o.k. for her child to have sex than mothers having a *daughter* in mind (a significant $-.16, p < .01$). Interesting as this effect may be, it is of very little relevance in explaining any of the key variables in our model.

Adolescent's Attitudes

Two of the adolescent attitude scales were relevant in explaining the amount of intrafamily conflict, either directly (closeness) or indirectly (Adolescent Permissiveness, via Time One Sexual Experience). The third scale, the importance the adolescent attached to parents disciplining their children, was not related to any of the other variables in the model and thus omitted. Adolescent's Permissiveness was negatively related to Adolescent and Mother religious commitment, while it was positively affected by age (older subjects were more likely to be permissive) and gender (boys were more permissive than girls). Together these variables account for 23% of the variance in permissiveness. Adolescents from a high socioeconomic background, and with an older mother, were more likely to feel close to their mother; if their natural father was not present, adolescents felt less close. Additionally, older subjects felt closer. Though the effects of three out of these four variables were significant at $p < .01$, these variables account for merely 6% of the variance in Adolescent Closeness.

Adolescent's Sexual Experience at Time Two: A Logistic Regression Analysis

An auxiliary question that now becomes salient is whether all this disagreement indeed leads to the outcome that is desired by the mother—i.e., that her child, either consciously or subconsciously, decides to postpone having sexual intercourse. In order to provide an answer to this question, we conducted a logistic regression analysis with a variable indicating whether or not the adolescent was sexually experienced at time two as the dependent variable, and all other variables mentioned above as independent variables. As a logistic regression analysis does not allow for latent variables (as structural equation modeling does; see above), we substituted three manifest variables for the three concepts that were latent variables in the previous analysis. These manifest variables were computed as the weighted mean of the variables that were indicators of a particular latent variable, with the LISREL factor loadings presented in Table II as weights.

Table III. Estimates of a Logistic Regression Analysis on Time Two Sexual Experience, $N = 255$.

	Significant Effects	
	Full Equation	Only
Amount of intrafamily conflict	-.15 ^a	-.13 ^a
Likelihood child sexually experienced	-.10	
Time one sexual experience (high = sexually experienced)	1.57 ^c	1.72 ^c
Steady relationship (high = yes)	.61 ^a	.67 ^b
Permissiveness (mother)	.69 ^b	.83 ^c
Discipline (mother)	-.12	
Closeness (mother)	.00	
Permissiveness (adolescent)	.38	
Discipline (adolescent)	-.04	
Closeness (adolescent)	-.12	
Age (mother)	.03	.04 ^a
Religious commitment (mother)	-.01	
Education mother	.03	
Age (adolescent)	-.36	
Religious commitment (adolescent)	.00	
Gender (high = male)	-.17	
SES	-.13	-.25 ^a
Father present? (high = present)	-.36	-.42 ^a

^a $p < .05$.

^b $p < .01$.

^c $p < .001$.

Table III below presents the parameter estimates, for a model containing all variables as well as the model in which the nonsignificant effects were omitted in a stepwise fashion.

Table III shows that children of older mothers are more likely to experience their sexual initiation at a younger age (an effect of .04), while the adolescents who were having a steady relationship at Time One were more likely to be sexually experienced at Time Two. There is a strong effect of Time One Sexual Experience on Time Two Sexual Experience (1.72; $p < .001$), but this merely shows that losing virginity is an irreversible event. Of considerable more interest is the fact that children of permissive mothers are more likely to experience a first sexual intercourse than children of less permissive mothers (.83; $p < .001$). Thus, if mothers feel that having sex may well occur before marriage and that it is unimportant to have a steady relationship, their children also behave in a more permissive fashion. Our results also supported the expectation that family variables

would affect the timing of becoming sexually experienced (negative effects of SES and presence of the father, both effects $p < .05$). Finally, Table II shows that the amount of disagreement between mother and child indeed predicted sexual experience at Time Two. A small effect of $-.13$ shows that the more conflict both parties report, the lower the likelihood becomes that the adolescent will be sexually experienced at Time Two.

DISCUSSION

The objective of the current study was to provide answers to the following two general research questions: (1) How are family, adolescent, and parental characteristics, and parent/adolescent attitudes toward sexuality and upbringing, related to the amount of intrafamily conflict regarding sexual matters? (2) How are these variables related to the timing of sexual initiation?

Age and Intrafamily Conflict

As to the first question, we expected that the effects of distal variables (including SES, age of the adolescent, and religious commitment) on intrafamily conflict would be mediated through proximate variables such as sexual permissiveness and attitudes toward upbringing. Our results show that this is only partly the case. Whereas the effects of mother related distal factors (age, religious commitment, and level of education) on conflict were indeed mediated through mother's attitudes toward upbringing and sexuality (and, to some degree, also through the adolescent's attitudes), this was not the case for the effects of the adolescent distal factors. Especially the effects of the adolescent's age proved to be difficult to explain through the other variables in the model. The negative direct effect of age on intrafamily conflict suggests that the amount of conflict decreases with the adolescent's age; this effect is not fully compensated by the other—indirect—effects, as an inspection of the total effects (i.e., the weighted sum of all effects; cf. Jöreskog and Sörbom, 1993) shows. The total effect of age on intrafamily conflict is $-.059$; thus, all in all, the amount of intrafamily conflict decreases somewhat with age, despite the fact that age increases the likelihood that the adolescent is sexually experienced, and that sexual experience increases the amount of intrafamily conflict.

It could be the case that the ability of adolescents to see the interests of their parents more clearly grows when they get older; this notion is supported by the positive effect of age on the degree to which the adolescent feels close and tries to understand his/her parents. On the other hand, the

degree to which mother feels close to her child is *not* affected by the adolescent's age. Thus, if this interpretation is correct, the data suggest an asymmetrical process of adjustment of the adolescent's norms and values to those of his/her mother.

Mutual Understanding/Controlling the Teenager's Behavior

The amount of intrafamily conflict was strongly affected by the degree to which adolescent and mother sought to understand and be close to each other. Indeed, these were the two variables that affected intrafamily conflict the strongest. In contrast, a parent who tries to exert control over their adolescent's life must be prepared for a heavy *increase* of the amount of conflict and a deterioration of the quality of family life. This finding supports the theoretical formulations of Cooper (1988) and Steinberg (1990), and is consistent with the results of Reuter and Conger (1995). Thus, if the assumption that having close parent-child relationships lead to a later sexual initiation would be correct, it would seem wise to opt for an increase in mutual understanding, rather than to increase control.

Adolescent Sexual Experience

Our second research question related to the factors that affected the adolescent's sexual experience. One noteworthy result here is that it appears that the adolescent's attitudes do not seem to matter much in determining whether s/he is sexually experienced at Time Two (though there are some indirect effects, via for example the Amount of Intrafamily Conflict and Time One Sexual Experience). Interestingly, the mother's features seem to be of much greater importance in predicting the timing of the sexual initiation of her child. The degree to which the mother holds permissive attitudes is strongly and systematically related to Adolescent Sexual Experience at Time Two, such that children of permissive mothers are more likely to have lost their virginity than children of sexually conservative mothers. One explanation might be that permissive mothers find it less desirable to control their teenager's conduct where it concerns sexual issues than less permissive mothers (note that our measure of the subjective importance of controlling teenager behavior was a *general* one, and not a measure that was geared to tap the subjective desirability of controlling adolescent *sexual* behavior).

Another possibility is that permissive mothers may "prepare" their teenagers for the possibility that they may be faced with the opportunity to have sex. For example, permissive mothers may be more likely to agree

if their daughters indicate they want to use the pill; thus, they are likely to remove one of the important deterrents of having intercourse (the risk of getting pregnant). They may also react less negatively if they would discover that their child has had sex, and, consequently, the teenager may not fear her reaction. If these interpretations are correct, permissive mothers may be said to *facilitate* an early transition toward nonvirginity of their children. Finally, permissive mothers may act as a role model for their children (cf. Newcomer and Udry, 1987). However, in that case one would expect that the relation between Mother's Permissiveness and Adolescent Sexual Experience is mediated through the attitudes of the adolescent, which is *not* the case here. Thus, this explanation seems less probable.

Additionally, the mother's age was also related to Time Two Sexual Experience: children of older mothers were more likely to be nonvirgins than children of younger mothers. Though the importance of this result must not be exaggerated (this effect was only significant at $p < .05$), a tentative account for this unexpected result might be that older mothers may be less able to control and supervise their child's behavior, irrespective of what their attitudes toward control are. Alternatively, it could be the case that older mothers experience more difficulties in establishing a close parent-child relationship; thus, following Inazu and Fox (1980), children of older mothers may be more likely to seek intimate relationships outside the parental home.

Another interesting feature of the current set of results is the relation between the family variables (SES and presence of the father) and adolescent sexual experience. Though these effects are relatively small, they are in accordance with the earlier findings reviewed in the introduction to this paper. However, our findings also present a difficulty in interpreting this finding. For example, earlier studies have often interpreted the relation between SES variables and adolescent sexual behavior in terms of differing sexual standards across different status groupings (e.g., Reiss, 1967). As we included a measure of these sexual standards in our study (namely, sexual permissiveness), it is difficult to argue that the effects of SES must be understood as the result of a higher permissiveness in low SES groups. In a similar vein, the effects of the presence of the father on adolescent sexual behavior cannot be interpreted as the result of having lower sexual standards (as Stern *et al.*, 1984, seem to argue) or as due to the role model that sexually active, dating mothers present to the child (Newcomer and Udry, 1987). It may, however, be the case that in single-parent families the parent simply has less opportunity to supervise his/her child's behavior than in families where both parents are present. Again, one should note that we did not measure the degree to which parents actually *controlled* their child's

behavior; we merely measured whether they *felt* it was important that parents control and discipline their children.

Finally, the results reported here tend to disconfirm the presumed relation between adolescent sexual behavior and the degree to which parents and adolescents try to understand each other. It is *not* the case that an increase in mutual understanding (and, thus, better intrafamily relations) leads to a later sexual initiation of the adolescent. We found no direct effects of either parents' or adolescents' efforts to understand each other on adolescent sexual experience. What we *did* find, however, were important negative effects of the "closeness" variables on the amount of intrafamily conflict (as discussed above). As the "fold theory" regarding the effects of intrafamily conflict on adolescent sexual behavior was supported by a (small) negative effect of the former on the latter variable, it appears that parents who genuinely try to understand their teenager indirectly *promote* an early sexual initiation of their child. It may be the case that parents who put much emphasis on having a good relation with their teenager fail to make it clear what type of conduct they expect from their children: telling adolescents what standards they should meet may lead to irritation on both sides, and thus to a mild deterioration of the parent-child relationship. Thus, parents may sacrifice clarity as to what they expect from their children for the sake of having good parent-child relationships.

In short, the current study sought to study the relations between distal and proximate variables on the one hand, and the amount of intrafamily conflict and adolescent sexual behavior on the other. Our results tend to disconfirm the notion that close parent-child relationships lead to a later sexual initiation. We have also demonstrated that the effects of distal variables on adolescent sexual behavior cannot fully be accounted for by proximate (attitudinal) variables. Finally, our results supported the folk theory that sometimes a good fight over matters one really cares about is effective in bringing about the desired results.

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