

DOCUMENT RESUME

ED 286 639

PS 016 847

AUTHOR Wintre, Maxine Gallander; And Others
TITLE Age and Sex Differences in Choice of Consultant for Various Types of Problems.
SPONS AGENCY Social Sciences and Humanities Research Council of Canada, Ottawa (Ontario).
PUB DATE Apr 87
GRANT FSC-G-498-84-1002
NOTE 40p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (Baltimore, MD, April 23-26, 1987).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Adolescents; Adults; *Age Differences; Children; *Consultants; Peer Groups; Performance Factors; *Selection; Sex Differences
IDENTIFIERS *Expertise; *Familiarity

ABSTRACT

To investigate age, sex, and situational differences in choice of consultant, a total of 192 students--24 male and 24 female students at 8, 11, 14, and 17 years of age were interviewed to obtain responses to three hypothetical problems: impersonal, interpersonal with a peer, and interpersonal with a parent. For each hypothetical problem, subjects were asked to indicate whom they would select for advice: a familiar adult, an expert adult, a familiar peer, or an expert peer. Analyses were conducted for three sets of dependent measures, including first choice of consultant, dimensions revealed by combination of first and second choices, and justifications for choices. Findings indicated that preferences for a consultant were a function of both an age by situation interaction and an age by sex interaction. The dimension of familiarity increased developmentally, indicating that although seeking help from peers increases with age, adults remain important sources of support throughout adolescence. In choosing consultants, females valued familiarity whereas males valued expertise. (Author/RH)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

ED286639

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

Choice of Consultant

X This document has been reproduced as
received from the person or organization
originating it

☐ Minor changes have been made to improve
reproduction quality

• Points of view or opinions stated in this docu-
ment do not necessarily represent official
OERI position or policy

Age and sex differences in choice of consultant
for various types of problems

Maxine Gallander Wintre, Ruthann Hicks, Gail McVey
& John Fox
York University

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

M. Gallander
Wintre

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

Running head: Choice of Consultant

PS 016847

Abstract

To investigate age, sex and situational differences in choice of consultant, 192 students were interviewed - 24 males and 24 females at ages 8, 11, 14, and 17. All subjects were presented with three hypothetical problems - an impersonal problem, an interpersonal problem with a peer, and an interpersonal problem with a parent. Subjects were asked to indicate whom they would select for advice: a familiar adult, an adult expert, a familiar peer, or a peer expert. Analyses were conducted for three sets of dependent measures - first choice of consultant, dimensions revealed by combining first and second choices, and subjects' justifications for their choices. The results reveal that consultant preferences are a function of both an age by situation and an age by sex interaction. Interestingly, the dimension of familiarity increases developmentally, indicating that, although seeking help from peers increases with age, adults remain important sources of support throughout adolescence. Furthermore, in choosing consultants females value familiarity whereas males value expertise.

Age and sex differences in choice of consultant
for various types of problems

Because the emphasis in the interpersonal cognitive problem solving literature has been on independent solutions, consulting others has been largely ignored as a problem solving strategy. We believe that consultation is a viable problem solving strategy as well as an essential function of social support networks which assist in the definition of self (Youniss & Smollar, 1985) and the mediation of stress (Chiribaga, Coho, Stein & Roberts, 1979). An understanding of developmental patterns in choices of consultants has practical implications for the provision of sources of help, the design of interventions, and the appreciation of children's competence to provide informed consent (Weithorn & Campbell, 1982). Information regarding preferred sources of help may also provide empirical evidence of the changing structure of social relations in childhood and adolescence. It is within this theoretical perspective of relational analysis, and with these implications in mind, that the present study was designed.

Although the social development of the infant has received considerable attention (see Damon, 1983; Mahler, Pine & Bregman, 1975), the social development and social relations of the older child have been neglected. Recent efforts in the area have focused on fragmented aspects of the child's social relations;

there have been, for example, studies on person perception (Flapan, 1968; Livesley and Bromley, 1973); conceptions of authority (Damon, 1980) and friendship (Berndt, 1981; Bigelow & LaGaipa, 1980; Selman, 1980); and crosspressures between parents and peers (Brittain, 1963). The majority of this research has been influenced by the theoretical work of Piaget ([1932] 1965) and Sullivan (1953).

Youniss (1980) has presented an integration of Piaget's relational and Sullivan's interpersonal theories. Youniss suggests that initially child-adult relations are basically asymmetrical and characterized by "unilateral authority or constraint." With age, these are supplemented by symmetrical child-peer relations involving reciprocal procedures such as discussion, negotiation, and compromise. In turn, new insights about equality and mutuality acquired in interactions with peers aid adolescents in transforming their relations with parents from unilateral constraint toward reciprocity.

Females appear to report greater intimacy in friendships than males do (Berndt, 1981; Bigelow & LaGaipa, 1980; Youniss and Smollar, 1985). Levinson (1978) notes that, although adult men may have a wide social network, in general they do not have intimate male friends. This literature implies that males and females may emphasize different characteristics when making a choice among possible consultants. More specifically, if females value intimacy in relations this should be reflected in a

preference for familiarity in consultant choices. Similarly, if males value competence this should be reflected in a preference for expertise in consultant choices.

Age, sex, and familiarity are features clearly used by children to characterize their social world (Lewis & Fiering, 1979; Edwards & Lewis, 1979). The question remains whether these features have an impact on children's choice of consultant in problem situations. Another feature, independent expertise, is also of interest because it is juxtaposed to familiarity; expertise is an increasing consideration through adolescence in simulated peer counselling situations as well (Lewis, 1981).

Children's help-seeking and confiding behavior has been under-researched, and the small body of existing research is contradictory (see the reviews by Nelson-LeGall, 1981, and Nelson-LeGall, Gumerman & Scott-Janes, 1983). Northman (1978), for example, suggests that parents may not be appreciated as resources until late adolescence. More recent findings, however, suggest that parents, especially mothers, play important roles as confidants even when reliance on peers is increasing (Harvey & Schaufele, 1983; Belle & Longfellow, 1984; Youniss & Smollar, 1985). As stated elsewhere (Barnett & Yarrow, 1977; Nelson Le Gall et al., 1983) research is needed to establish the criteria used by children of different ages and sex in selecting consultants.

The present study, investigates age, sex, and situational

factors as determinants of children's choices of consultants for solving problems. Incorporating both the aforementioned features that characterize the emerging adolescents' social world and the potential importance of expertise the method calls for choices on crossed dimensions: adult vs. peer, familiar vs. experts. The children's justifications or reasons for their choices are also explored to provide further information on the changing social relations and social cognition of children, preadolescents, and adolescents. The ensuing hypotheses reflect the literature which suggests that age, sex, and situation influence consultant choices.

Considering that young children seek parents for assistance, and that preadolescents rely more on peers, and that adolescents transform their relations to adults, we hypothesized that young children would prefer familiar adults, that preadolescents and adolescents would prefer familiar peers, and that older adolescents would prefer adults (both familiar and expert). In addition, sex differences previously observed suggested that females would value familiarity in choosing consultants while males would value expertise. Furthermore, based on evidence that the problem domain influences choices of consultants, we expected that familiarity would be important in impersonal situations of little personal threat, peers would be important in peer-related interpersonal problems, and expertise would be important in interpersonal parent problems where potential personal threat

could be high. Finally, we also predicted that there would be interactions between age and sex, and age and situation. Specifically, with age: females were expected to choose familiar peers whereas males would choose peer experts; and the interpersonal parent problem would elicit more adult expert choices than the impersonal and interpersonal peer problems.

Method

Subjects

One hundred and ninety-two children and adolescents participated in the study. There were 48 individuals (24 males and 24 females) in each of four age groups: 8-year-olds ($M = 101.6$ months), 11-year-olds ($M = 133$ months), 14-year-olds ($M = 173.4$ months) and 17-year-olds ($M = 212.3$ months). The subjects were selected from three elementary schools, one junior high school and one high school in a metropolitan Canadian city. The elementary schools were feeder schools for the junior high, which was a feeder school for the high school. The students came from middle- and upper-middle-class backgrounds.

Interview Procedure

Each student was individually interviewed by a same-sex undergraduate student who was trained in the interview format. There were ten interviewers, each of whom interviewed no more than half the subjects of his or her sex at any age. Interviewers employed a prepared format in which questions were posed in a fixed order for each of three randomly presented

and orally described "generic" situations:

1. An Impersonal Problem - I want you to imagine that you have been given some money to buy a present for yourself. There are two games that you would like to have. You would really like to have them both but you can only choose one.
2. An Interpersonal Problem with a Peer - It often happens that people who are friends have a disagreement. In this situation I want you to imagine that you are having a problem getting along with one of your friends. This is a person that you like. Lately you don't like the way that s/he has been treating you. You think that s/he is being mean. You still want to be friends but you don't know what to do.
3. An Interpersonal Problem with a Parent - In this situation I want to pretend that you are having a problem getting along with one of your parents. Everyone has disagreements with their mother or father once in a while and that is normal. But in this case I want you to pretend that you are arguing and unhappy often. You can't understand why this is so. You think that things should be different.

To ensure the relevance of the impersonal problem for the 17 year old subjects, the phrase "two games" was slightly modified to "two computer games". Later examination of the data revealed that, in fact, several of the younger Ss had assumed that they were choosing between two computer games. Consequently we do not believe that this modification represented a major change in the nature of the problem.

Following the presentation of the first situation, subjects were asked, in open-ended format, what they would do if they had the problem. The interviewer then introduced four categories of people who can be asked for help, describing them as follows:

- Familiar Adult - a grownup you know very well
Adult Expert - a grownup you do not know well but whose job it is to help children with this kind of problem
Familiar Peer - someone your age who you know very well
Peer Expert - someone your age who you don't know well but has had the same problem

Four white index cards with key words indicating each consultant category were provided to the subject as concrete memory cues.

The subjects were asked to imagine that all the people were equally accessible and to indicate a first choice and the reasons for the choice. Then the respective card was turned over and the child was asked for his or her next choice if the first category were not available. A justification was also solicited for the second choice, the respective card turned over, and a third choice requested.

Classification Coding Scheme for Choice Justifications

A classification scheme was devised for coding the subjects' choice justifications based on existing relevant schemes (Gottlieb, 1978; Pearson, 1982). The resulting scheme consists of seven categories of responses: guidance (instrumental help, suggestions, or solutions); knowledge (experiential or trained expertise); familiarity (the subject knows the consultant, the consultant knows the subject or the problem, shares common interests, or reflects understanding); assurance (trust, confidentiality, or objectivity); communication (good listener or easy to talk to); emotional support (loving or intimate relationship); and peer similarities (social comparison or information gathering). Inter-rater agreement during coding

ranged between 80% and 100% for the seven categories.

Results

Plan of Analyses

The analyses were conducted for three separate data sets: a) the first choice data; b) a combination of the first and second choice data; and c) the justification data. The design for each analysis therefore includes two between-subjects factors (age and sex) and one within-subjects or repeated-measures factor (situation). Because the dependent variables in the study are qualitative/categorical rather than quantitative, traditional analysis-of-variance methods are inappropriate. We instead employed the general modeling and testing approach developed by Koch and his colleagues (see, e.g., Koch, Landis, Freeman, Freeman & Lehnen, 1977), which fits linear models by weighted least squares (WLS) to the category response probabilities.

To our knowledge, Koch et al.'s approach to repeated measures for qualitative data is the only method in the statistical literature for testing effects of within-subjects factors (and their interactions) on categorical response variables. The method is closely analogous to the familiar analysis of variance of repeated measures for quantitative dependent variables, and is conveniently implemented in the SAS CATMOD procedure (SAS, 1985). The analysis proceeds in the following manner: A contingency table is formed by cross-classifying the between-subject factors by the response

variables for the several occasions. For example, for the analysis reported below in Table 1, the contingency table is for Age, by Sex, by Response to Situation 1, by Response to Situation 2, by Response to Situation 3. There are therefore $4 \times 2 \times 4 \times 4 \times 4 = 512$ cells in the table, among which are distributed the 192 subjects in the study.

The direct analysis of a sparse table of this type is generally infeasible, but it is also irrelevant: the central concern in a repeated-measures design is how the response distribution changes over occasions and as a function of the between-subjects factors, not the manner in which responses are associated across the several occasions. This is also the case, incidentally, in repeated-measures ANOVA, where response correlations across occasions are only of concern because (as here) they preclude treating the responses as independent observations.

Koch et al.'s approach to repeated measures thus focuses on marginal response probabilities for occasions. Because the associations among the responses are not the focus of the analysis, the sparseness of the table is not so problematic.¹ Though a repeated-measures study typically produces sparse tables, our tables are especially sparse, and we encountered some difficulty in analyzing the data as a consequence. We adopted the common strategy of adding a small constant (here, 0.001) to each observed frequency in the table. Because the chi-square

tests produced by the WLS approach are derived asymptotically, marginally significant results in small samples require cautious interpretation, especially when the data are modified to eliminate zero response frequencies.

We employed the probability scale in our analysis, fitting linear probability models. An alternative would be to use the logit (log-odds) scale and to employ linear logit models. Koch et al.'s approach in fact accommodates this latter specification. We selected linear probability models for three reasons: (1) psychologists are more familiar with probabilities than with logits; (2) all of the literature (of which we are aware) that has appeared on repeated-measures analysis for qualitative data uses linear probability models; and (3) we experimented with logit models for repeated measures, both for our data and for published data, and found that they do not appear to behave well in sparse tables. While it is true that results can depend on the response scale that is selected, since interactions on the probability scale can disappear on the logit scale (and vice-versa), this is not the case for disordinal interactions (such as those reported below), since the logit transformation is monotone.

First Choice Data

The results for the first choice of consultant are presented in the top half of Table 1. The chi-square test was, in each instance, produced by contrasting two models: one model

including the effect in question and the other deleting it. We formulated tests in conformity with the principle of marginality (Nelder, 1977): lower-order terms (such as main effects) were tested employing models that omitted their higher-order relatives (e.g., interactions to which a main effect is marginal); lower-order terms marginal to a higher-order term were always included in the models used to test the higher-order term. The degrees of freedom shown for each test represent the number of independent parameters for the corresponding effect. As expected there are significant age by sex and age by situation interactions.

Insert Table 1 about here

The age by sex interaction is presented graphically in Figure 1. This and other similar figures presented below were constructed in the following manner (employing a method developed in Fox, 1987): First, we fit a final model that included effects found to be important (here, the age by sex and age by situation interactions), along with the lower-order relatives of these effects (here, the age, sex, and situation main effects and the model constant). Then, using the parameter estimates for the effect in question and its lower-order relatives, we constructed fitted response probabilities. These estimated response probabilities, which appear on the graphs as percentages, consequently represent averages over the categories of the other factors in the design. For example, the graphed response percentages for the age by sex interaction are averaged over the

three situations. The fitted response probabilities are analogous to adjusted means for quantitative dependent variables (see, e.g., Searle, Speed & Milliken, 1980). The figures displaying effects should be interpreted cautiously: although the interactions that are illustrated are statistically significant, they typically involve several degrees of freedom; sharper hypotheses concerning particular comparisons between response probabilities were not formally tested.

Insert Figure 1 about here

Interestingly, with age the females demonstrate less of a preference for a familiar adult whereas the males reach their greatest preference for a familiar adult at age 11, decrease their preference substantially at age 14, and then rebound at age 17. Notice that although a familiar peer is consistently more preferred by females, the pattern of the male responses is similar to the female response pattern. Note the dramatic male preference for peer expert choices at age 8. This male preference for a peer expert is less frequent with age, whereas the female preference is more frequent, resulting in no sex difference at age 17.

The age by situation interaction is presented in Figure 2. Preference for a familiar adult is greatest for 8 year olds in the interpersonal peer situation and then diminishes until age 14. A familiar peer is more preferred with age in the

interpersonal peer situation, whereas it is at peak preference for the other two situations at age 14. Although an adult expert remains low in preference for the peer situation, this category is surprisingly high for the first three age groups in the impersonal situation. Of particular interest is the greater preference for an adult expert at age 17 in the interpersonal parent situation.

Insert Figure 2 about here

First and Second Choice Data

A supplementary and similar analysis was conducted for common features in the subjects' first and second choices: for example, a first choice of a familiar adult and a second choice of a familiar peer reveal a preference for familiarity; similarly, choice of a familiar adult and an adult expert reveals a preference for adult consultants; and so on. Two combinations, however, imply that no single selection criterion dominates (familiar adult and peer expert, and adult expert and familiar peer) and are omitted from further discussion.

The results of the analysis, also presented in Table 1, indicate an age by sex interaction, an age by situation interaction, and a marginally significant sex by situation interaction. Figures 3 and 4 depict the age by sex interaction and the age by situation² interaction respectively. Of particular importance is the fact that the dimension of familiarity increases with age - for females until age 14 and for

males until age 17. Furthermore, females prefer familiar individuals more than males until age 14. Finally, the adult dimension remains relatively constant across ages for the interpersonal parent problem but decreases with age for the impersonal and interpersonal peer problem.

Insert Figures 3 and 4 about here

Justification Data

The justification data reveal substantial variability in the number of subjects employing each of the seven categories. Most subjects invoke justifications implying knowledge (73.4%), guidance (67.2%), and familiarity (60.4%). Justifications of assurance (23%) and communication (21.4%) are used by fewer subjects, and those of emotional support (8.3%) and peer similarities (4.7%) are the least frequently employed.

Because subjects justify their consultant choice in three different situations and provide between one and three justifications for each choice, any subject can employ a category more than once. The distribution of individual choices, however, provides the same ranking of the choice categories as that based on the percent of subjects employing the categories. In descending order, these individual choice percentages are knowledge (31.5%), guidance (27.9%), familiarity (23.8%), assurance (6.9%), communication (6.1%), emotional support (2.6%), and peer similarities (1.2%).

Due to infrequent use, the emotional support and peer similarities categories were not analyzed further. It is noteworthy, however, that the use of peer similarities as a justification increases with age - not used by 8-year olds, used twice by 11-year olds, six times by 14-year olds, and eight times by 17-year olds. This category was invoked most in the interpersonal peer situation.

The analysis of the five frequent categories of justifications reveals a significant main effect for sex, $\chi^2(4) = 21.57$; $p < .005$ and a significant age by situation interaction $\chi^2(24) = 37.5$; $p < .05$. With regard to the main effect, males cite knowledge more than females do (fitted percentage of responses for males (M) is 42%; for females (F) 27%) whereas females cite familiarity more than males (M = 15%; F = 26%). There appears to be no sex difference in reference to the categories of guidance (M = 38%; F = 42%), assurance (M = 3%; F = 3%) and communication (M = 2%; F = 2%).

With regard to the age by situation interaction, while reference to guidance decreases, reference to familiarity increases with age for all situations until age 14: This is followed by a resurgence in citing guidance in the impersonal situation and a continuing increase in citing familiarity for the interpersonal peer situation at age 17. Knowledge references remain relatively constant for the impersonal parent situation, decrease for the impersonal situation and demonstrate an inverted

U for the interpersonal peer problem. Assurance is used only in the impersonal situation by the 14-year olds and in the two interpersonal situations by the 17-year olds. Finally, communication is cited by the 11-year olds only in the impersonal situation, by the 14-year olds in the two interpersonal situations, and by the 17-year olds only in the interpersonal parent situation.

Discussion

These results provide a multifaceted picture of the advice seeking preferences of children, preadolescents, and adolescents. Furthermore, the findings reveal age and sex differences in the social relations of children between 8 and 17 years of age.

Even the youngest children responded differentially to the hypothetical problems with which they were presented. Previous research on adolescents showed that advice seeking is influenced by the domain to which a problem belongs (Brittain, 1963; Burke & Weir, 1979; Emmerich, 1978; Kandel & Lesser, 1972; Young & Ferguson, 1979). The present research extends these findings to children as young as 8 years old. With age, problems with peers elicit less frequent preference for adult consultants - both familiar and expert. Although, with age, familiar peers generally are more frequently preferred as consultants, this is especially true for peer-related problems. The increased reliance on peers with a corresponding decreased reliance on

adults in the domain of peer problems supports the findings of Brittain (1963), Sebald and White (1980), and Youniss and Smollar (1985). The finding that, with increasing age, children turn less frequently to adults and more toward peers is limited by the domain of the problem, however.

A further qualification is suggested by the age by situation interaction on the combined first and second choice data. First, this analysis reveals that choice of adults remains relatively constant for the parental problem. Second, although adult choices decrease with age for the other two problems, a corresponding increase occurs for familiarity, not just for peers. We can conclude therefore that, although familiar peers increase as first choice of consultant with age in some domains, familiar adults (the other component of the familiarity dimension), remain valued as consultants in all domains.

Taken together, these findings do not support the popular image of adolescence as a time of weakening family ties and increasing peer influence. Instead our findings support the conceptualization of Youniss and Smollar (1985) that adult-child relations are not abandoned in adolescence but rather are transformed from unilateral dependence toward increasing mutuality. Note that students' overall preference for familiar peers is at its peak at age 14 when preference for familiar adults is at its lowest. A possible interpretation is that young adolescents' search for self-identity (Erikson, 1950) leads to an

exaggerated differentiation of self from dissimilar others (i.e. children and adults). In later adolescence, however, some moderation and further discrimination appear as the students apply more sophisticated decision making rules in matching consultant to context.

A developmental point of interest to clinicians concerns the use of adult experts. It was expected that with increasing age adolescents would come to value the expertise associated with professional consultants - especially in the interpersonal problem with a parent, which we considered to represent the highest personal threat. This hypothesis is supported by the age by situation interactions - for adult expert in the first choice data, and for the adult dimension in the combined first and second choice data.

What was not expected was the high frequency of preference for adult experts by 8-year olds. This early preference for adult expertise, however, fits the Piagetian notion of moral realism and absolute acceptance of the highest authority typical of primary grade children (Piaget[1932] 1965). Piaget believed that moral realism decreases with age as a function of group experience at arriving at decisions by consensus. This theory is a cornerstone of Youniss's (1980) notion of the importance of peers in the transformation of adult-child relations.

A final comment with regard to the age by situation interactions concerns the justification data. Although guidance,

familiarity, and knowledge are the most frequent justifications, additional justifications such as assurance, communication, and peer similarities appear in adolescence, especially for the interpersonal problems. This finding suggests that the rationale for choosing consultants becomes increasingly complex with age.

The study also provides evidence of sex differences with regard to consultant preferences. There is a constant female preference for familiar peers as consultants when compared to males. Interestingly, although males are similar to females in preference for adult experts, there is a pronounced male preference for peer experts at the three early ages. Also, females prefer the familiar dimension at ages 8, 11 and 14, whereas males prefer expertise at age 8 and peers at ages 8 and 14. These results are congruent with findings that males appear to have more extensive social interaction with a larger group of peers, whereas females are likely to have a more intense personal relationship with one or two close friends (Levinson, 1978; Waldrop & Halverston, 1973 as cited by Williams, 1977). Finally, the main effect of gender on the justification data once again reveals the male preference for knowledge as opposed to the female preference for familiarity.

It is important to mention the limitations of this study. To begin, although it would have been desirable to employ multiple situations in each domain, this would have required many more subjects since it would exacerbate the sparseness of the

data. Instead we attempted to devise "generic" situations that reflect clusters of problems with peers and with parents. Second, the study only sampled children from a middle socio-economic status background and therefore caution is necessary in generalizing the findings to other populations. Finally, the data reflect hypothetical choices to hypothetical problems, not actual behavior in response to real problems. Although preliminary findings from data collected with a clinical sample (Wintre & Hicks, 1987) are congruent with the findings presented here, further research is needed to compare responses to hypothetical problems with actual behavior. Nevertheless, the present findings both strengthen and broaden our knowledge about the social relations and the consultant preferences of children, preadolescents, and adolescents.

References

- Barnett, D., & Yarrow, M.R. (1977). Prosocial behavior, social inferential ability and assertiveness in children. Child Development, 48, 475-481.
- Belle, D., & Longfellow, C. (1984, August). Turning to others: children's use of confidants. Paper presented at the 92nd convention of A.P.A. Toronto, Ont.
- Berndt, T.J. (1981). Relations and social cognition, nonsocial cognition and social behavior: the case of friendship. In J.H. Flavell and L. Ross (Eds.) Social cognitive development: frontiers and possible futures (pp. 176-199). New York: Cambridge University Press.
- Bigelow, B.J. & L. Gaipa, J.J. (1980). The development of friendship values and choice. In H.C. Foot, A.J. Chapman & R.J. Smith (Eds.) Friendship and social relations in children (pp. 15-44). New York: John Wiley.
- Brittain, C.V. (1963). Adolescent choices and parent peer cross pressures. American Sociological Review, 28, 385-91.
- Burke, R.J., & Weir, T. (1979). Helping responses of parents and peers and adolescent well-being. Journal of Psychology, 102, 49-62.
- Chiriboga, D.A., Coho, A., Stein, J.A., & Roberts, J. (1979). Divorce, stress and social supports: a study of help-seeking behavior. Journal of Divorce, 2, 121-135.

- Damon, W. (1980). Patterns of change in children's social reasoning: A two-year longitudinal study. Child Development, 51, 1010-17.
- Damon, W. (1983). Social and Personality Development: Infancy through Adolescence. New York: Norton.
- Edwards, C.P., & Lewis, M. (1979). Young children's concepts of social relations: Social functions and social objects. In M. Lewis & L.A. Rosenblum (Eds.) The child and its family (pp. 245-266). New York: Plenum.
- Emmerich, H.J. (1978). The influence of parents and peers on choices made by adolescents. Journal of Youth and Adolescence, 7, 175-180.
- Erikson, E.H. (1950). Childhood and society. New York: Norton.
- Flapan, D. (1968). Children's understanding of social interaction. New York: Teachers College Press.
- Fox, J. (1987). Effect displays for generalized linear models. In C. Clogg (Ed.), Sociological Methodology 1987 (pp. 347-361). Washington DC: American Sociological Association.
- Gottlieb, B.H. (1978). The development and application of a classification scheme of informal helping behaviors. Canadian Journal of Behavioral Science Review, 10, 105-115.
- Harvey, C.B., & Schaufele, D. (1983). Concerns and help-seeking in early adolescents. The School Guidance Worker, 39, 10-13.

- Kandel, D.B., & Lesser, G.S. (1972). Youth in two worlds: US and Denmark. San Francisco: Jossey Bass.
- Koch, G.G., Landis, J.R., Freeman, J.L., Freeman, D.H., & Lehnen, R.G. (1977). A general methodology for the analysis of experiments with repeated measurement of categorical data. Biometrics, 33, 133-158.
- Levinson, D.J. (1978). The seasons of a man's life. New York: A.A. Knopf.
- Lewis, C. (1981). How adolescents approach decisions: Changes over grades seven to twelve and policy implications. Child Development, 52, 538-544.
- Lewis, M., & Feiring, C. (1979). The child's social network: Social object, social functions and their relationship. In M. Lewis & L.A. Rosenblum (Eds.), The child and its family (pp. 9-27). New York: Plenum.
- Livesley, W.J., & Bromley, D.B. (1973). Person perception in childhood and adolescence. New York: Wiley.
- Mahler, M.S., Pine, F., & Bergman, A. (1975). The psychological birth of the human infant: Symbiosis and individuation. New York: Basic Books.
- Nelder, J.A. (1977). A reformulation of linear models [with commentary]. Journal of the Royal Statistical Society, Series A, 140, 48-76.
- Nelson-Le Gall, S. (1981). Help-seeking: An understudied problem-solving skill in children. Developmental Review, 1, 224-246.

Nelson-Le Gall, S., Gumerman, R., & Scott-Jones, D. (1983).

Instrumental help-seeking and everyday problem-solving: a developmental perspective. In B.M. DePaulo, A. Nadler and J.D. Fisher (Eds.), New Directions in Helping Volume 2 (pp. 265-283). New York: Academic Press.

Pearson, R.E. (1982). Support: Exploration of a basic dimension of informal help and counseling. The Personnel and Guidance Journal, 61, 83-87.

Northman, J.E. (1978). Developmental changes in preferences for help. Journal of Clinical Child Psychology, 7, 129-132.

Piaget, J. ([1932]1965). The moral judgement of the child. New York: Free Press.

SAS (1985). SAS User's Guide: Statistics, Version 5 Edition. Cary, N.C.: SAS Institute.

Searle, S.R., Speed, F.M., & Milliken, G.A. (1980). Population marginal means in the linear model: An alternative to least squares means. The American Statistician, 34, 216-221.

Sebald, H., & White, B. (1980). Teenagers' divided reference groups: Uneven alignment with parents and peers. Adolescence, 15, 979-984.

Selman, R.L. (1980). The growth of interpersonal understanding: Developmental and clinical analyses. New York: Academic Press.

Sullivan, H.S. (1953). The interpersonal theory of psychiatry. New York: W.W. Norton.

- Waldrop, M.F., and Halverson, C.F. Jr. (1973). Intensive and extensive peer behavior: Longitudinal and cross-sectional analyses. Unpublished manuscript, Child Research Branch, National Institute of Mental Health, Washington, D.C. (as cited in J.H. Williams, Psychology of Women: Behavior in a Biosocial Context. New York: W.W. Norton, 1977).
- Weithorn, L.A., & Campbell, S.B. (1982). The competency of children and adolescents to make informed treatment decisions. Child Development, 53, 1589-1598.
- Wintre, M.G., & Hicks, R.P. (1987). Characteristics of adolescents and young adults attending an alternative treatment clinic. Canadian Journal of Public Health, 78, 124-128.
- Young, J.W., & Ferguson, L.C. (1979). Developmental changes through adolescence in spontaneous nomination of reference groups as a function of decision content. Journal of Youth and Adolescents, 8, 239-252.
- Youniss, J. (1980). Parents and peers in social development. Chicago. University of Chicago Press.
- Youniss, J., & Smollar, J. (1985). Adolescent relations with mothers, fathers and friends. Chicago: University of Chicago Press.

Author Notes

This study was partially funded by Family and Socialization of Children Grant No. 498-84-1002 by the Strategic Grants Programme of the Social Sciences and Humanities Research Council of Canada awarded to the first author. We gratefully acknowledge the assistance of our interviewers - Bonita Brierton, Neil Gill, Richard Goldman, Rivka Isenberg, Anity Mahy, Sharon Malyczewsky, Tom Schafer, Harold Seidel, and David Smith. We are indebted to Dr. Albert Virgin and Dr. Patricia Crawford at the North York Board of Education for their cooperation and wish to thank the principals and teachers for facilitating subject recruitment. We especially thank all the parents and children who agreed to participate in this study. Reprint requests should be sent to Dr. Maxine Wintre, Department of Psychology, York University, 4700 Keele St., North York, Ontario, Canada, M3J 1P3.

Footnotes

1. Koch et al.'s approach differs from the more common method of analyzing contingency tables by linear models. The most central difference is that loglinear models are formulated to examine the pattern of associations among qualitative variables in a contingency table. These models consequently are not relevant to the fundamental issue in a repeated-measures design, which is the impact on the response distribution of the between-subjects and repeated-measures factors.
2. The small negative fitted response probability that appears in Figure 4 is nonsensical and therefore requires some explanation: Linear probability models, such as those employed in this study, can produce fitted response probabilities below zero or in excess of one -- the response is not constrained to the unit interval. When these situations occur, the model is of course not strictly reasonable for the data. In general, linear probability models behave best when the response probability does not get too close to zero or one. In the present instance, however, the negative 'probability' is not far below zero, and thus as a practical matter it may be interpreted simply as a small probability of response.

Table 1

Chi Square Tests for Terms in the Linear Model:First Choice of Consultant

Source	d.f.	χ^2	p
AGE	9	299.32	<.0001
SEX	3	41.58	<.0001
SITUATION	6	70.02	<.0001
Age X Sex	9	24.12	.0041
Age X Sit	18	74.49	<.0001
Sex X Sit	6	6.22	.3988
Age X Sex X Sit	18	20.22	.3207

Table 2

Combined First and Second Choice of Consultant

Source	d.f.	χ^2	p
AGE	15	202.48	<.0001
SEX	5	52.27	<.0001
SITUATION	10	106.10	<.0001
Age X Sex	15	45.13	<.0001
Age X Sit	30	67.74	<.0001
Sex X Sit	10	20.10	.0300
Age X Sex X Sit	30	36.40	.2000

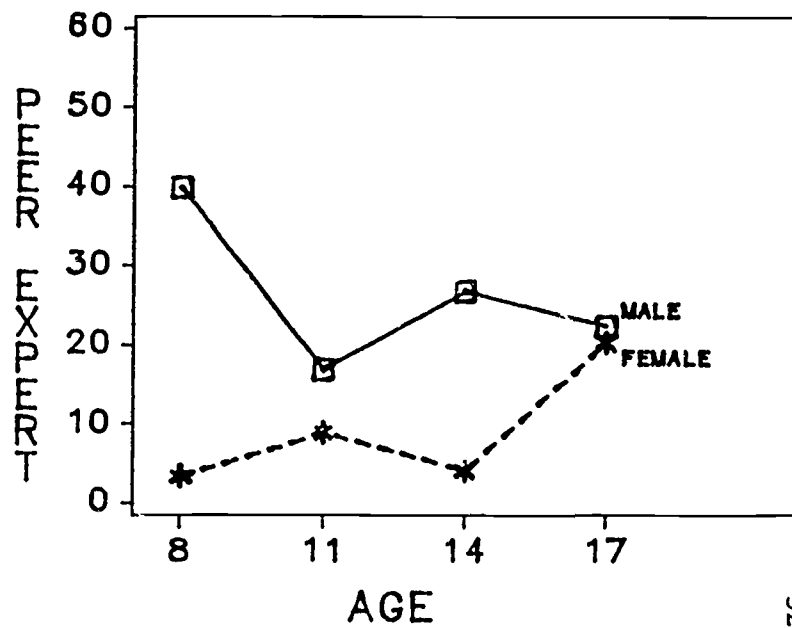
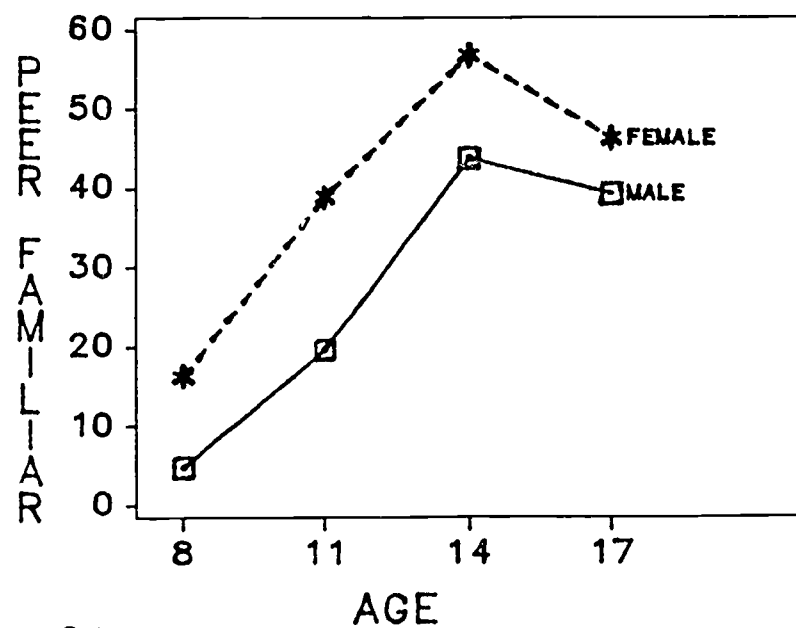
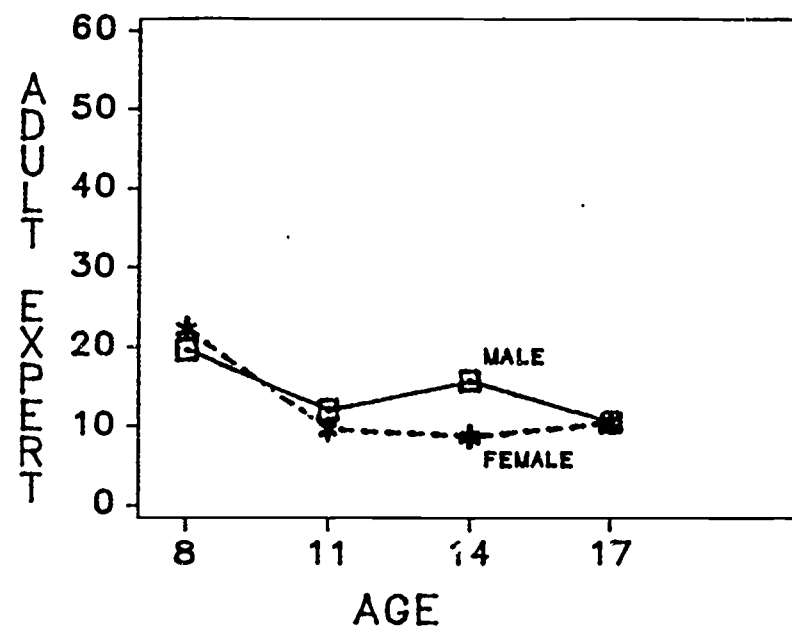
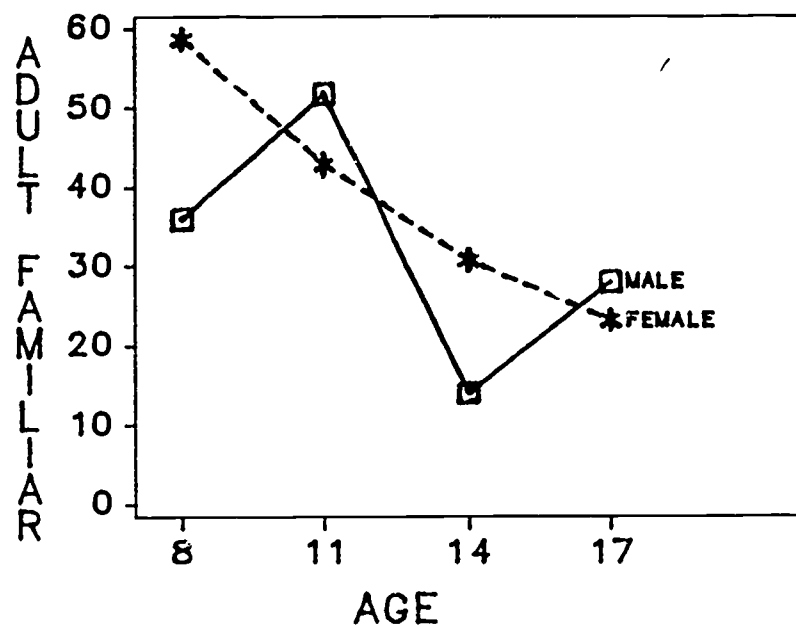
Figure Captions

Figure 1. First choice of consultant by age and sex. Each graph shows the fitted percentage of responses of the indicated type (familiar adult, adult expert, familiar peer, and peer expert) averaged over situations. The percentages are constructed from the estimated parameters of the linear model fit to the data (see text).

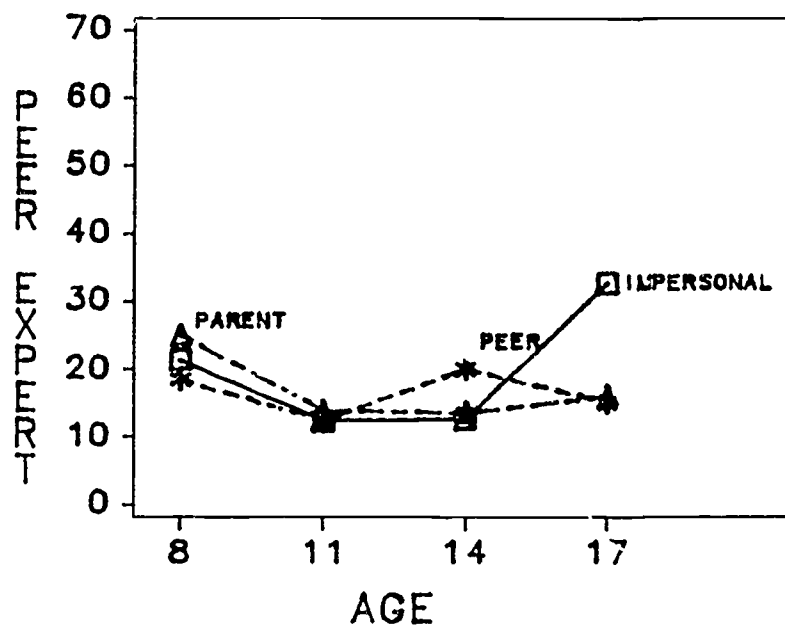
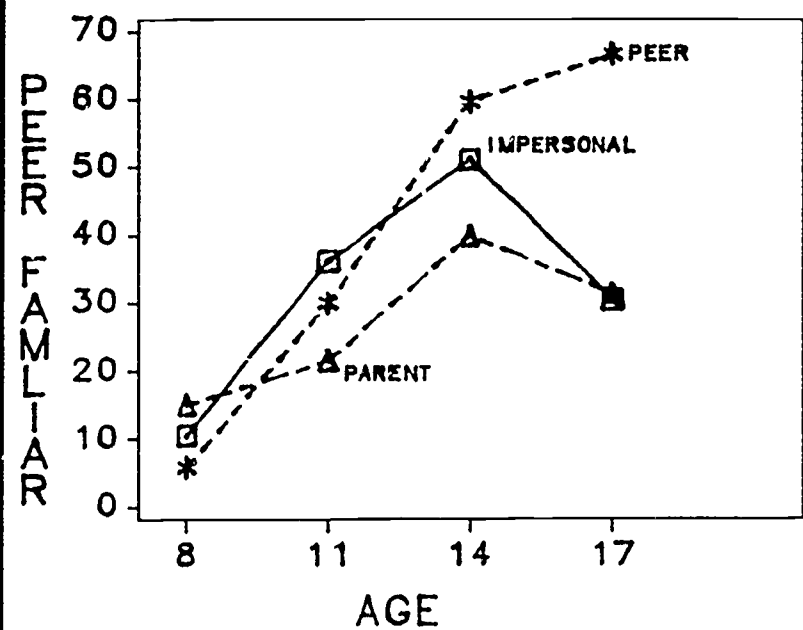
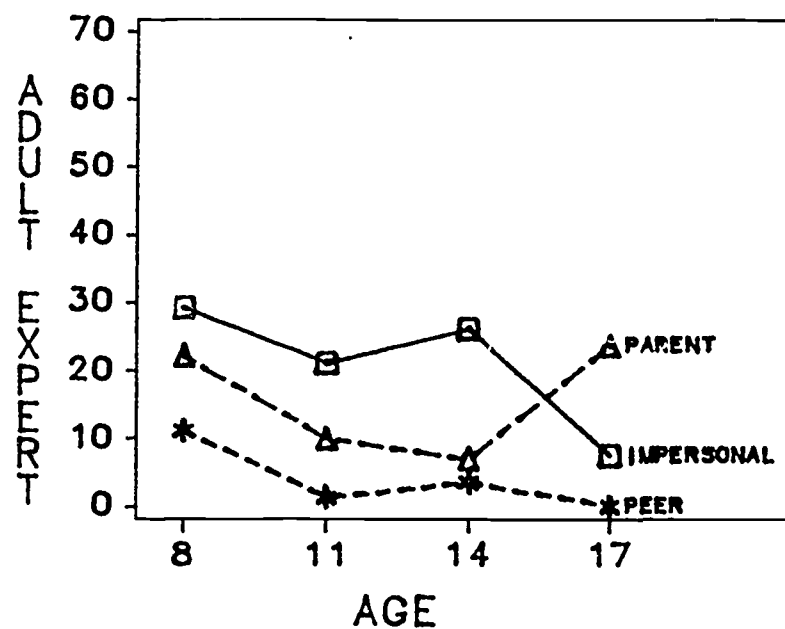
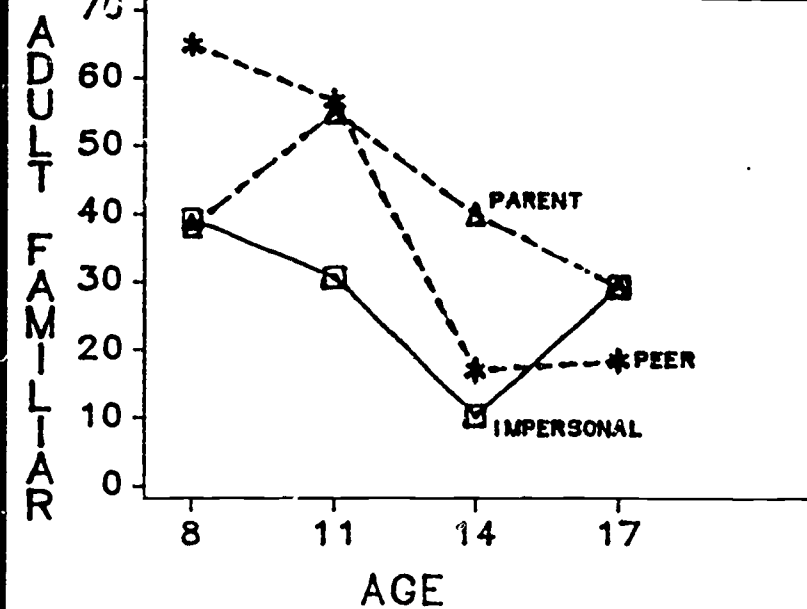
Figure 2. First choice of consultant by age and type of situation. Each graph shows the fitted percentage of responses of the indicated type averaged over male and female subjects.

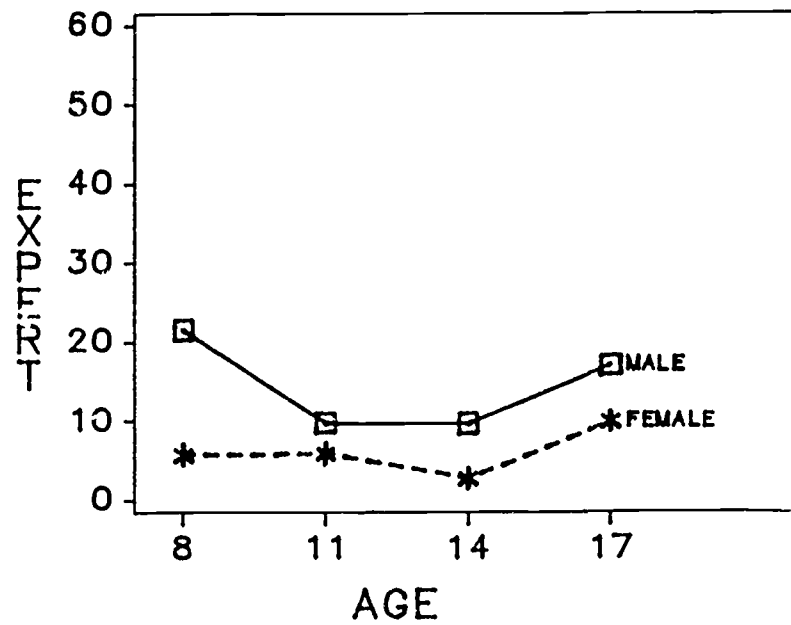
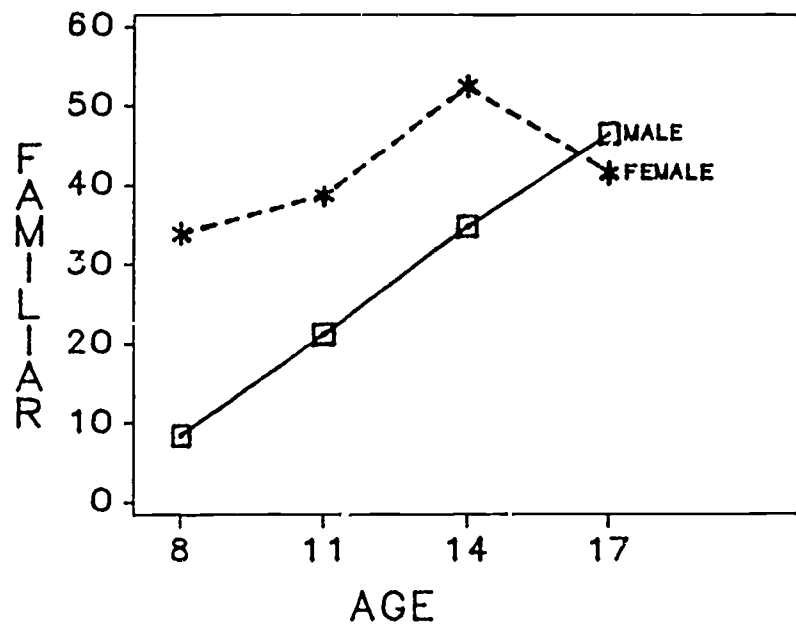
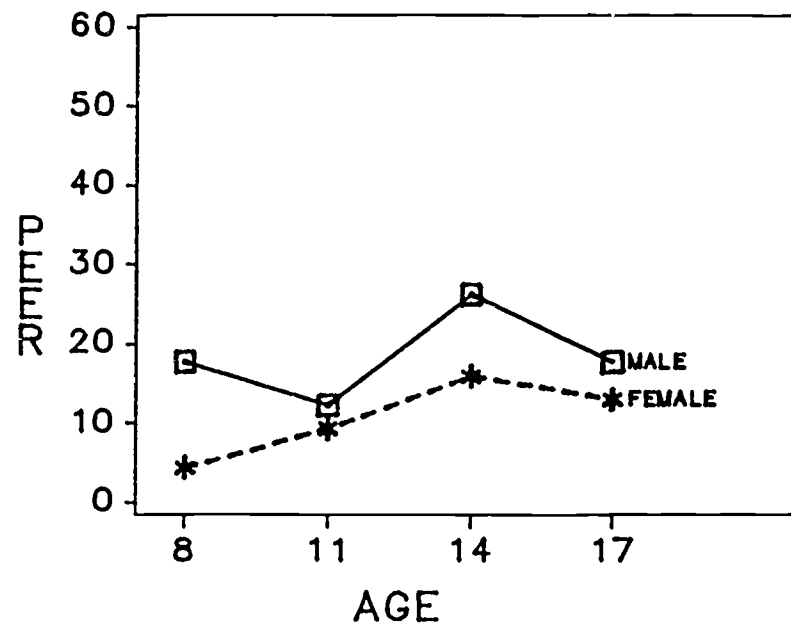
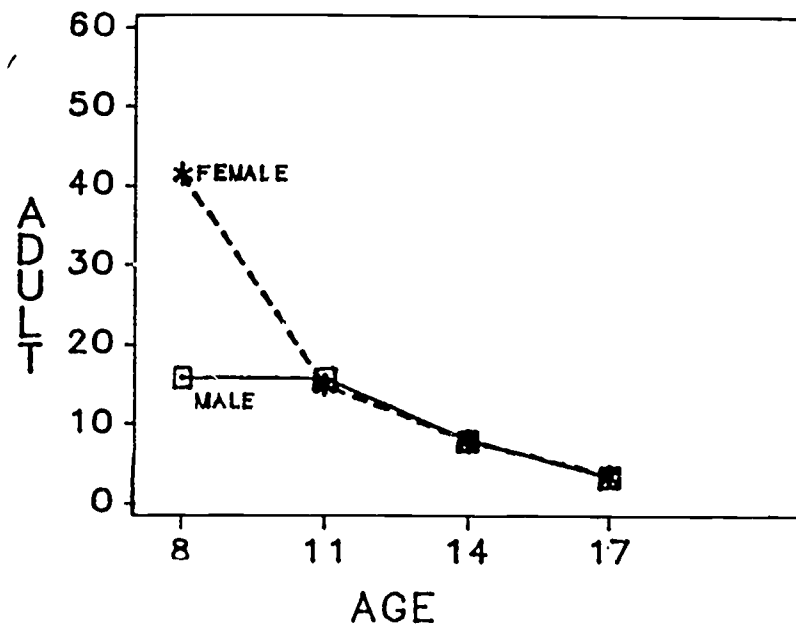
Figure 3. Consistent patterns in first and second choices of consultant by age and sex. Each graph shows the fitted percentage of responses of the indicated type (consistent choice of adult consultants, of peer consultants, of familiar consultants, and of expert consultants) averaged over situations. Inconsistent choice patterns (adult expert and familiar peer, or peer expert and familiar adult) are not shown.

Figure 4. Consistent patterns in first and second choices of consultant by age and type of situation. Each graph shows the fitted percentage of responses of the indicated type averaged over male and female subjects. Inconsistent choice patterns are not shown.



Choice of Consultant





Choice of Consultant

34

