

**SPECIAL REPORT:**

**National Survey of Children's Health**

**Finds**

**Intact Family and Religious Participation**

**Are Associated with**

**Fewer Developmental Problems in School-Age  
Children**

By

Nicholas Zill, Ph.D. and Philip Fletcher, Ph.D.

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# **National Survey of Children’s Health Finds Intact Family and Religious Participation Are Associated with Fewer Developmental Problems in School-Age Children**

By

Nicholas Zill, Ph.D. and Philip Fletcher, Ph.D.<sup>1</sup>

New analyses of data from a large-scale federal survey of child health and development show that children and adolescents are less likely to exhibit problems in school or at home if they live with both their biological parents and attend religious services regularly. For example, young people *not* living with both parents and *not* attending services regularly are five times more likely to have repeated a grade in school than those living with both parents and attending religious services weekly or monthly. Thirty-four percent of the former group had repeated a grade, compared with six percent of the latter. And 53 percent of the former group – versus 21 percent of the latter – had their parents contacted by the school because of conduct or achievement problems the youth was having at school. These differences hold up after controlling for family income and poverty, low parent education levels, and race and ethnicity.

An intact two-parent family and regular church attendance are each associated with fewer problem behaviors, more positive social development, and fewer parental concerns about the child’s learning and achievement. Taken together, the two home-environment factors have an additive relationship with child well-being. That is, children who live in an intact family and attend religious services regularly generally come out best on child development measures, while children who do neither come out worst. Children with one factor in their favor, but not the other, fall in between, scoring less well than those who have both factors going for them, but better than those who have neither factor in their favor.

Grade repetition, school contacts, and parental concern about child achievement are more strongly linked to a lack of an intact two-parent family than to a lack of religious participation. For problem behavior and social development,

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<sup>1</sup> Biographies: see pp. 35-36.

the strength of the association with religious attendance is about equal to that with family integrity. An intact two-parent family and regular religious participation are also associated with the parent reporting less parenting stress and a better parent-child relationship. These family functioning differences may help to explain the parallel differences in children's well-being.

Much social science research on child development has focused on the role played by social class and socioeconomic factors like childhood poverty and family income, low parent education, and the more limited opportunities and negative influences faced by minority children. And indeed, the survey data show that the developmental problems listed above are more common among children from low-income families, families where parents have less than a high school education, and Black and Hispanic families. Some social scientists even contend that family structure and religious participation are only linked to developmental outcomes because of their association with socioeconomic disparities. (See reviews by Glenn & Sylvester, 2008; Bridges & Moore, 2002). However, when these socioeconomic factors are taken into account through multiple regression analysis of the survey data, the lack of an intact two-parent family and of regular religious training continue to be linked with developmental problems among children and adolescents. The strength of the statistically-adjusted regression coefficients is somewhat reduced compared to that of the uncontrolled correlation coefficients, but family structure and religious participation remain statistically significant explanatory factors. And their associations with children's developmental difficulties are comparable in magnitude to the associations with family income and poverty, low parent education, and minority-group membership.

**How many U.S. children live with both parents and get regular religious training?** Despite the developmental advantages associated with an intact two-parent family and religious training, the survey shows that nowadays less than half of all American children between 6 and 17 years of age – 45 percent – live with both biological parents and attend religious services weekly or monthly. Another 30 percent attend religious services regularly but live with one parent only, with one parent and a stepparent, or with foster parents or other relatives. Still another 13 percent live with both parents but attend religious services infrequently or not at all. And 12 percent are not living with both parents AND not attending church, synagogue, or mosque regularly.

The overall proportion of young people aged 6-17 living with both biological parents is 58 percent.<sup>2</sup> The overall proportion reported to attend religious services weekly or monthly is 75 percent.<sup>3</sup>

Across the 50 states of the U.S., there is considerable state-to-state variation in the proportion of children living with both biological parents. In Southern states with large black populations, such as Mississippi, Arkansas, Alabama, and Louisiana, less than half of all children live with both parents. (Nowadays, 70 percent of black children nationwide are born outside of marriage, as are 25 percent of white children and 48 percent of Hispanic children.) On the other hand, in Midwestern and Western states like North Dakota, Utah, Iowa, and Minnesota, upwards of two-thirds of all children reside with both parents. The proportion of young people in intact families is also relatively high in the predominantly suburban state of New Jersey and in the New England states.

The proportion of children reported to attend religious services weekly or monthly shows a different pattern of variation across states. The proportion is highest – upwards of 85 percent – in Southern states like Mississippi, Louisiana, Alabama, and South Carolina. The proportion is lowest in the New England states of Vermont, New Hampshire and Maine, with less than or just over half of young people attending services regularly. North Central states like the Dakotas and Nebraska, Iowa and Minnesota, come out relatively high in both family stability and religious observance. So does Utah, with its predominantly Mormon population.

**Source of the Data.** Data analyzed in the study came from public-use microdata files of the National Survey of Children's Health (NSCH), conducted by the National Center for Health Statistics (NCHS) in 2003. The data were collected through telephone interviews with parents of 102,353 children and teens in all 50 states and the District of Columbia. 68,996 of the young people were in the age

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<sup>2</sup> This proportion is lower than that put out by the U.S. Census Bureau (2005) because Census counts children living with a biological parent and a stepparent as residing with "both parents."

<sup>3</sup> This proportion may be overstated, as survey methodological research has found a social desirability bias in people's reports of their church attendance. When respondents answer questions about frequency of attendance at religious services via a computer-assisted self-administered interview (CASI) they report less frequent attendance than when questioned by a human interviewer.

range 6 through 17 years, the age group that was the focus of the study. The survey sample in this age range represented a population of nearly 49 million young people nationwide. Further information about the NSCH is available in NCHS publications (Blumberg et al, 2005; Bramlett & Blumberg, 2007).

**Analysis Methods.** We constructed the two major independent variables from recoded background variables available in the NSCH public use file.

The Parents In Household variable was based on parent responses to questions regarding the exact relationship of adults in the household to the subject child.

Families were classified as having in the household: 1) both biological parents of the child, or two adopted parents; 2) a biological parent and a stepparent; 3) the biological mother only; or 4) other parent figures, including the biological father only, grandparent(s) or other relatives, or foster parent(s), who could be biologically related or unrelated to the child.<sup>4</sup> (The NSCH questionnaire did not inquire as to the current marital status of the parent figures in the household.)

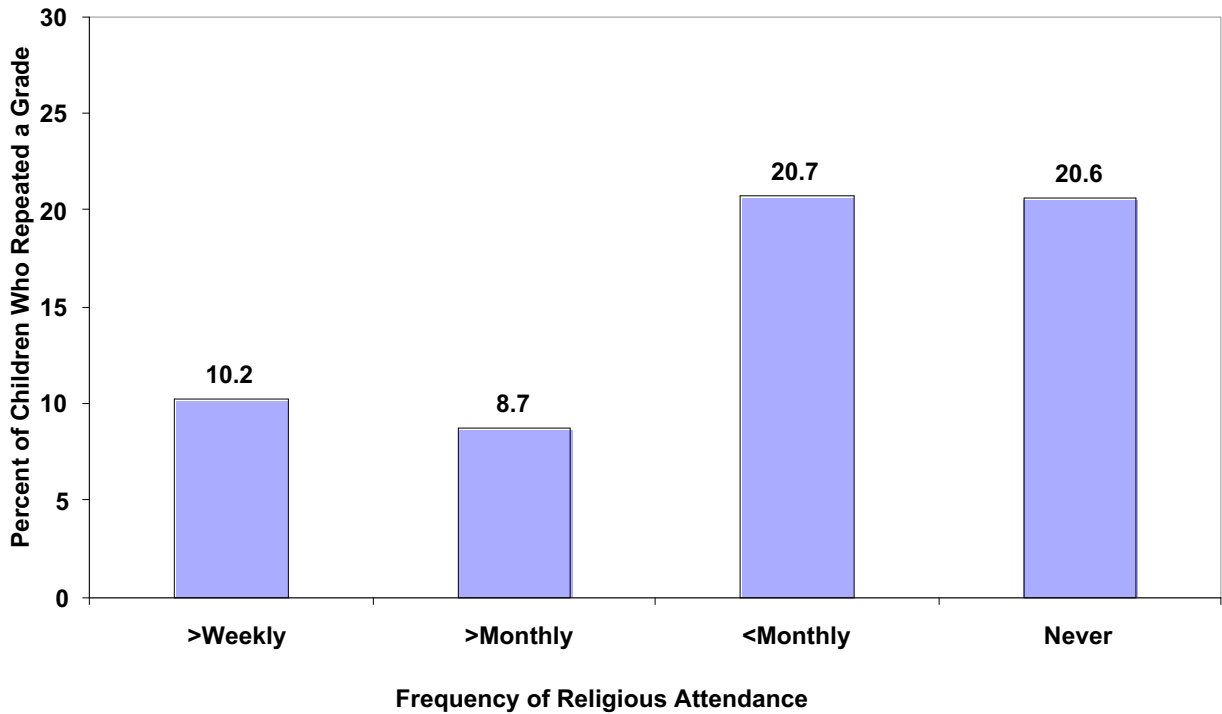
The Religious Participation variable was based on parent responses to the question, "About how often does [CHILD] attend a religious service?" Responses to this question were classified into the following categories: 1) Once a week or more often (>Weekly); 2) Less than once a week, but at least once a month (>Monthly); 3) Less than once a month but at least once or twice a year (<Monthly); or 4) Less than once or twice a year or not at all (Never).

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<sup>4</sup> In the combined religious attendance and family structure charts, "INTACT FAMILY" is the first class, and "NON-INTACT FAMILY" is the last three classes.

### Percent of Children Repeating a Grade by Frequency of Religious Attendance: U.S. Children Aged 6 -17, 2003

Source: National Survey of Children's Health (NSCH)

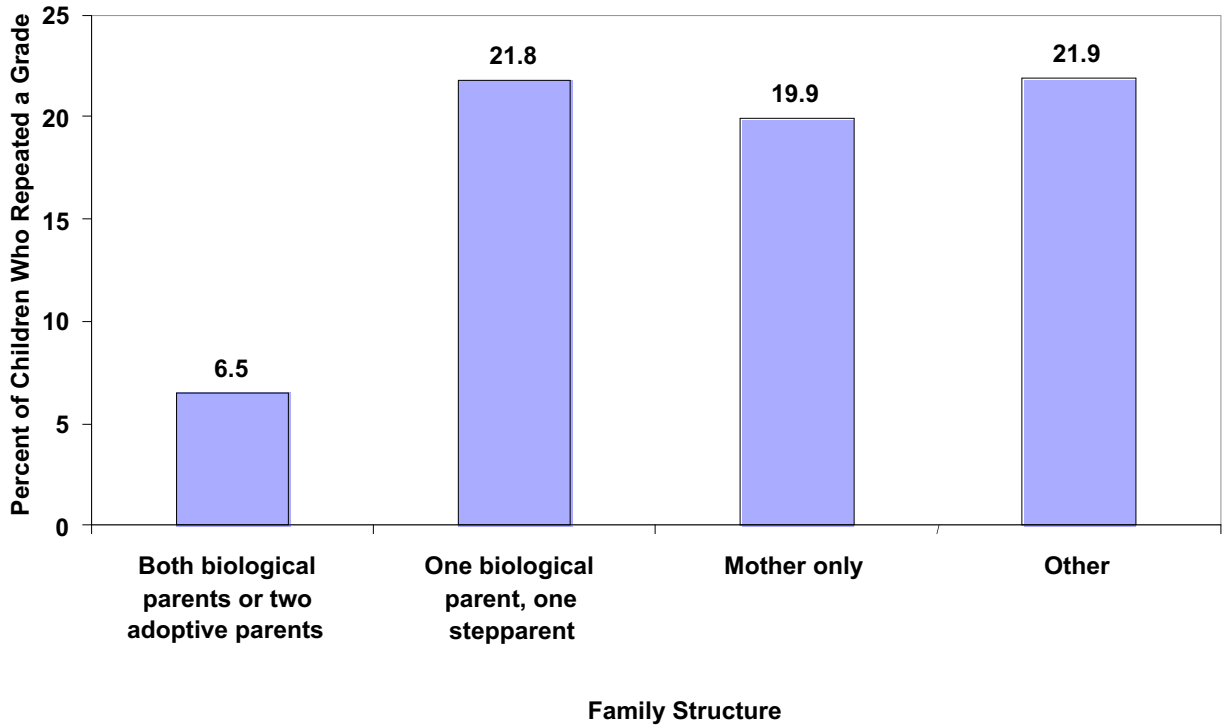


*This chart illustrates the correlation between frequency of religious attendance and grade repetition.*

*Children who attended religious services at least monthly have a much lesser chance of repeating a grade than those who attended religious services weekly or not at all.*

**Percent of Children Repeating a Grade by Family Structure:  
U.S. Children Aged 6 -17, 2003**

Source: National Survey of Children's Health (NSCH)

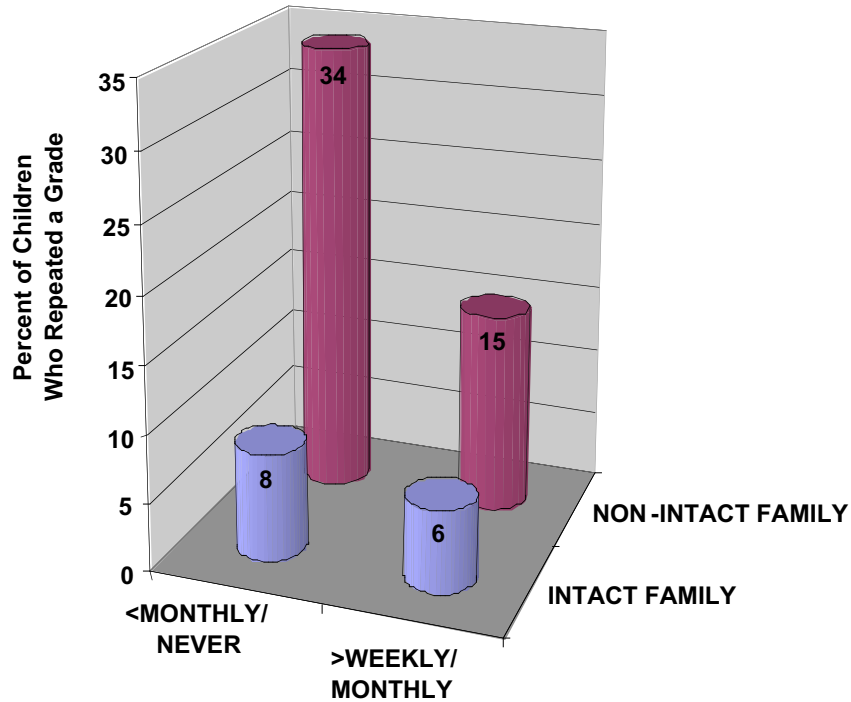


*This chart shows the relationship between family structure and grade repetition.*

*Children living with both biological parents or two adoptive parents have a much lesser chance of repeating a grade than those in any other family structure.*

## Percent of Children Repeating a Grade by Religious Attendance and Family Structure: U.S. Children Aged 6 -17, 2003

Source: National Survey of Children's Health (NSCH)



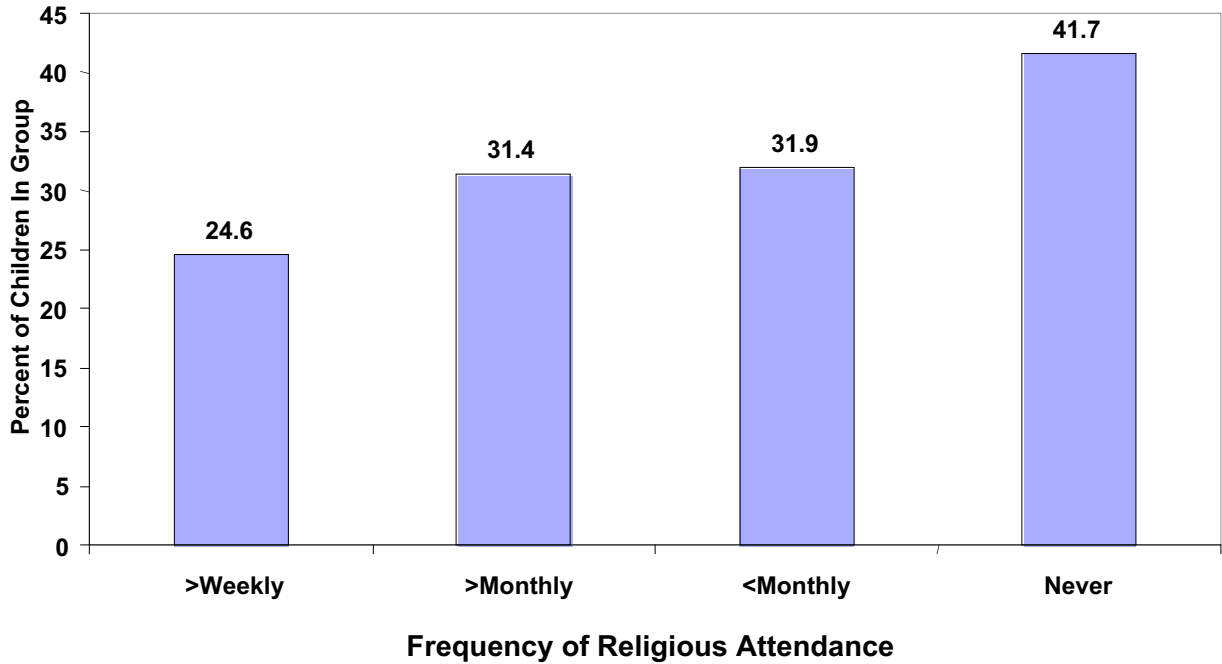
Religious Attendance and Family Structure Combined

*This chart illustrates the correlation between religious attendance, family structure and grade repetition.*

*Children from intact families who worship frequently are least likely to repeat a grade. Note the dramatic difference between intact and non-intact families.*

**Percent of Children Whose Parents Were Contacted by School about Children's Problems by Frequency of Religious Attendance:  
U.S. Children Aged 6 -17, 2003**

Source: National Survey of Children's Health (NSCH)

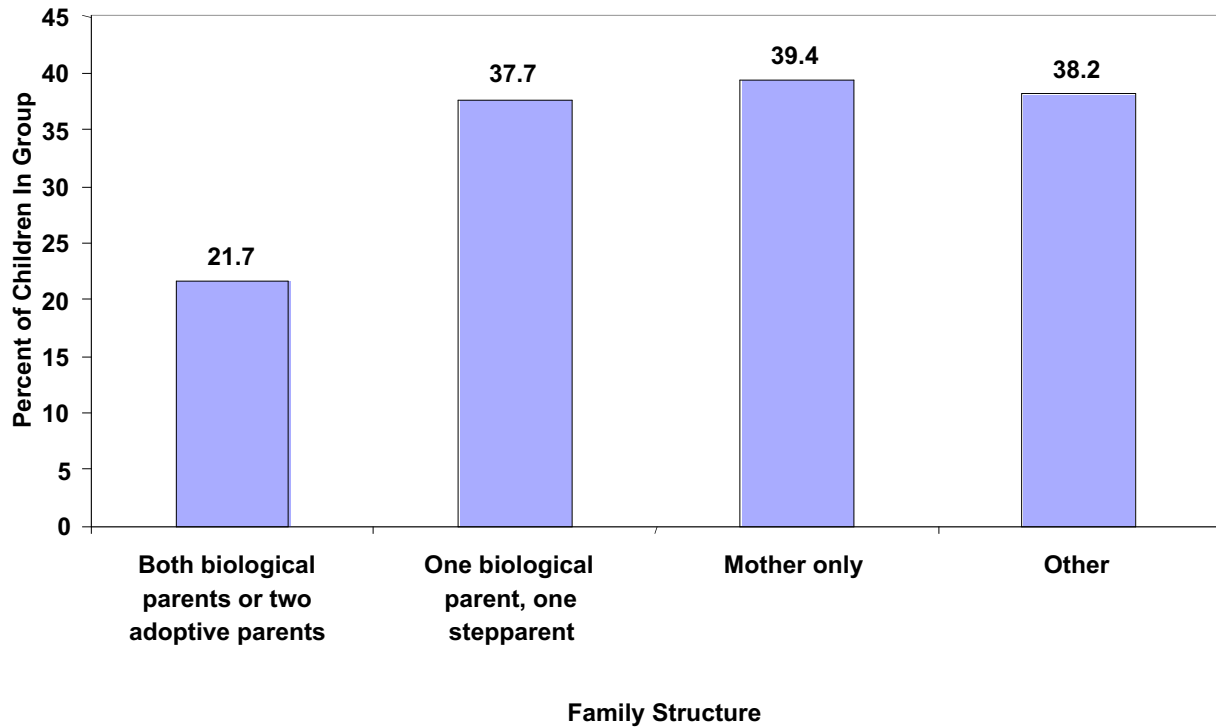


*This chart shows the relationship between frequency of religious attendance and parents contacted about children's problems in school.*

*Children who worship at least weekly are least likely to have their parents contacted by school teachers or administrators about school-related problems.*

**Percent of Children Whose Parents Were Contacted by School about Children's Problems by Family Structure: U.S. Children Aged 6 -17, 2003**

Source: National Survey of Children's Health (NSCH)

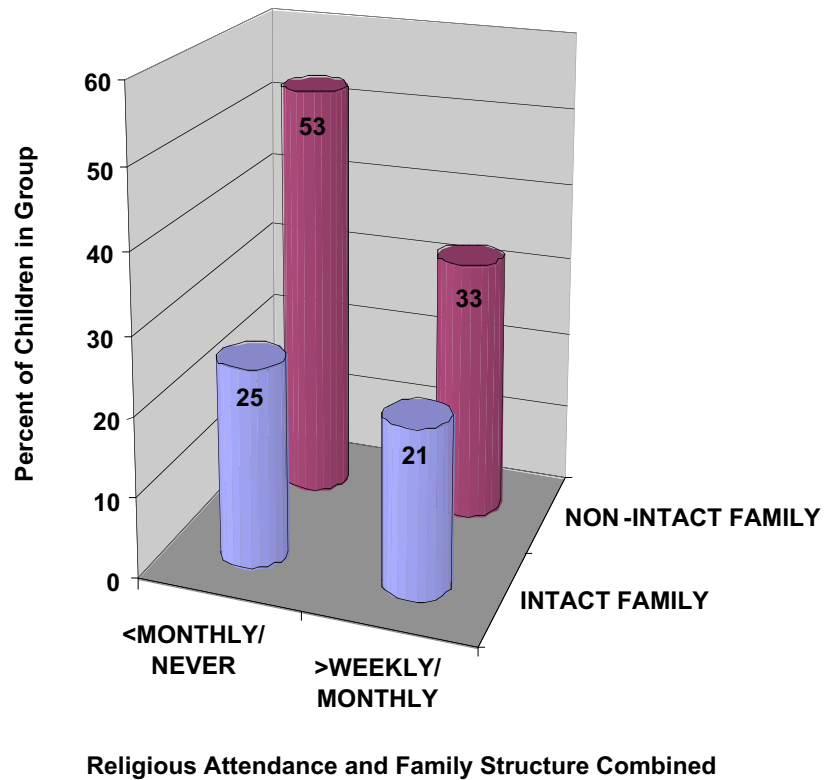


*This chart illustrates the correlation between family structure and parents contacted about children's problems in school.*

*Children who live with both biological parents or two adoptive parents are least likely to have their parents contacted by school teachers or administrators about school-related problems.*

**Percent of Children Whose Parents Were Contacted by School about Children's Problems by Religious Attendance and Family Structure: U.S. Children Aged 6-17, 2003**

Source: National Survey of Children's Health (NSCH)

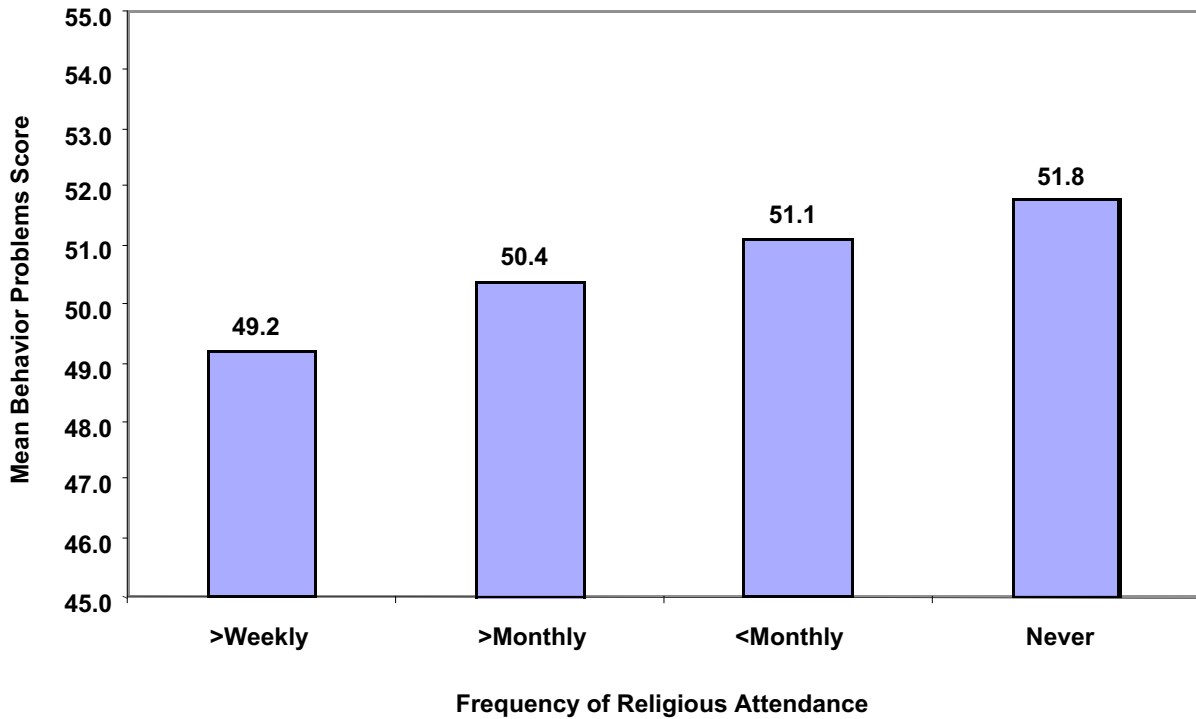


*This chart shows the relationship between religious attendance, family structure, and parents contacted about children's problems in school.*

*Children from intact families who worship frequently are least likely to have their parents contacted by school teachers or administrators about school-related problems.*

**Child Behavior Problems by Frequency of Religious Attendance:  
U.S. Children Aged 6 -17, 2003**

*Source: National Survey of Children's Health (NSCH)*

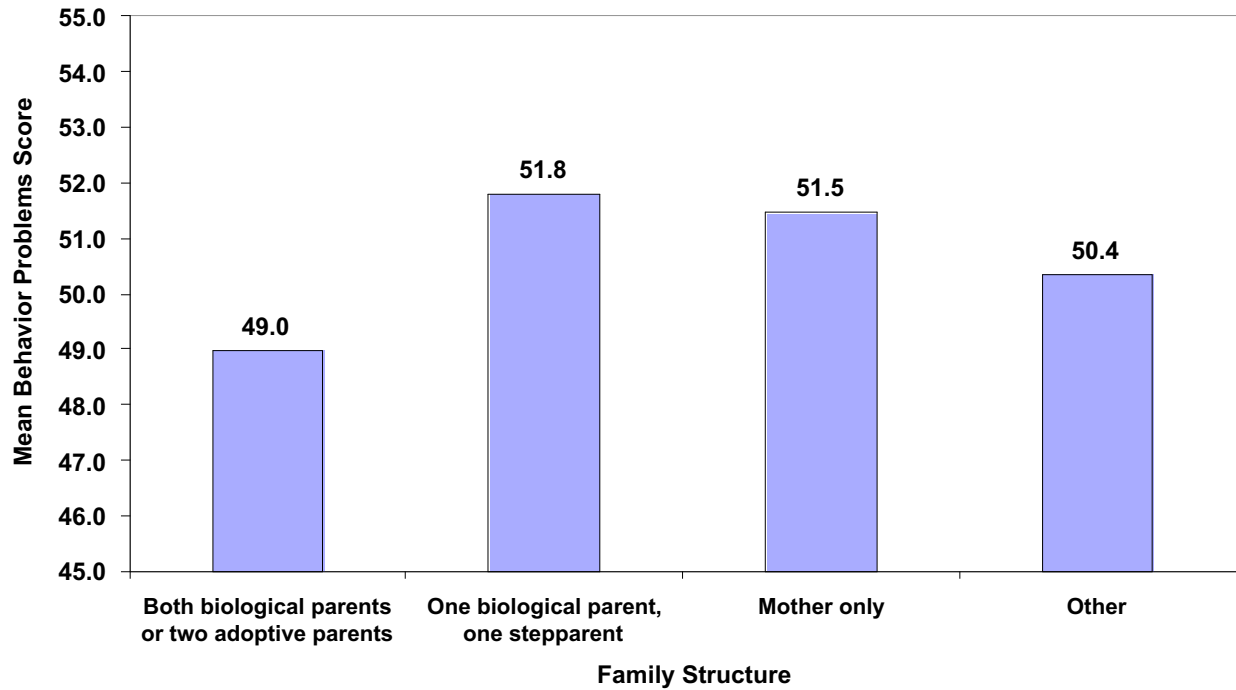


*This chart illustrates the correlation between frequency of religious attendance and child behavior problems.*

*Children who worship at least weekly exhibit the fewest behavior problems.*

### Child Behavior Problems by Family Structure: U.S. Children Aged 6 -17 years, 2003

Source: National Survey of Children's Health (NSCH)

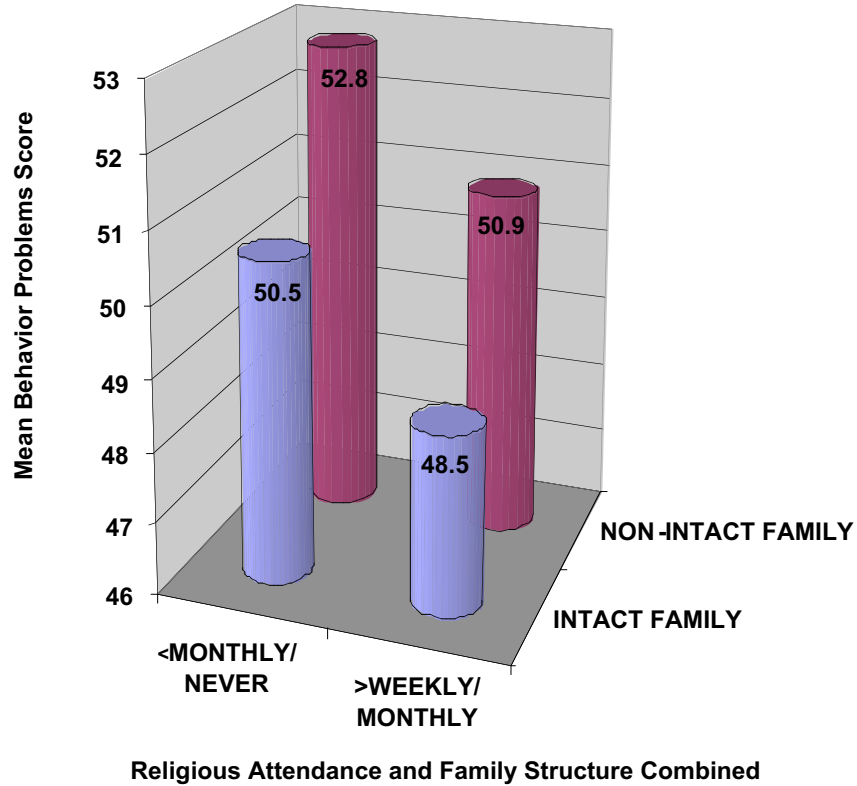


*This chart shows the relationship between family structure and child behavior problems.*

*Children who live with both biological parents or two adoptive parents exhibit the fewest behavior problems.*

## Child Behavior Problems by Religious Attendance and Family Structure: U.S. Children Aged 6 -17, 2003

Source: National Survey of Children's Health (NSCH)

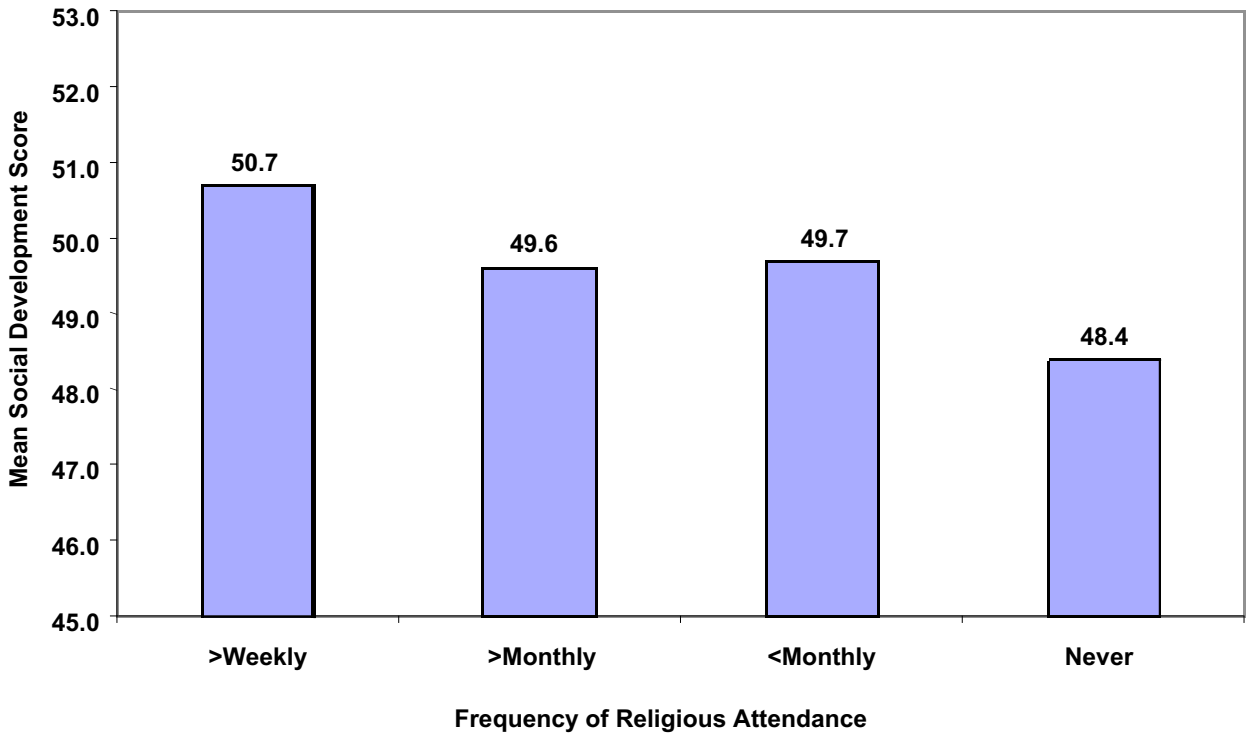


*This chart illustrates the correlation between religious attendance, family structure, and child behavior problems.*

*Children from intact families who worship frequently exhibit the fewest behavior problems.*

## Children's Positive Social Development by Frequency of Religious Attendance: U.S. Children Aged 6 -17, 2003

Source: National Survey of Children's Health (NSCH)

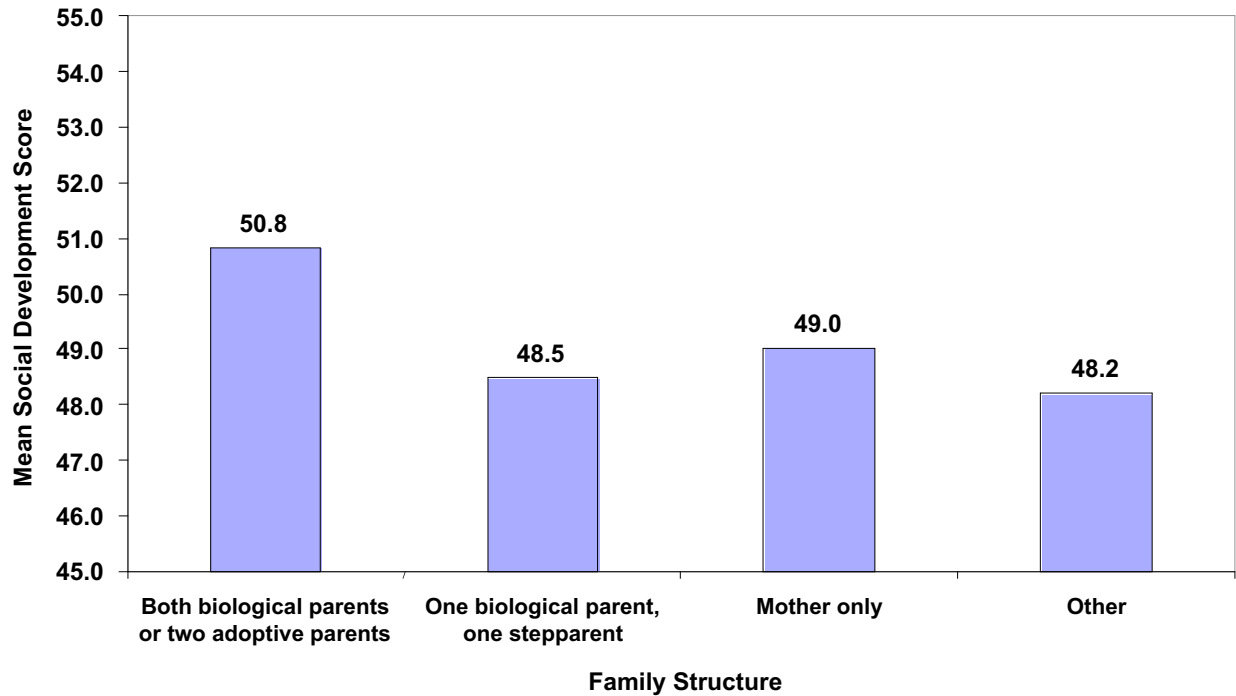


*This chart shows the relationship between frequency of religious attendance and children's positive social development.*

*According to parent reports, children who worship at least weekly are more likely to exhibit positive social behavior, including showing respect for teachers and neighbors, getting along with other children, understanding other people's feelings, and trying to resolve conflicts with classmates, family, or friends.*

## Children's Positive Social Development by Family Structure: U.S. Children Aged 6 -17, 2003

Source: National Survey of Children's Health (NSCH)

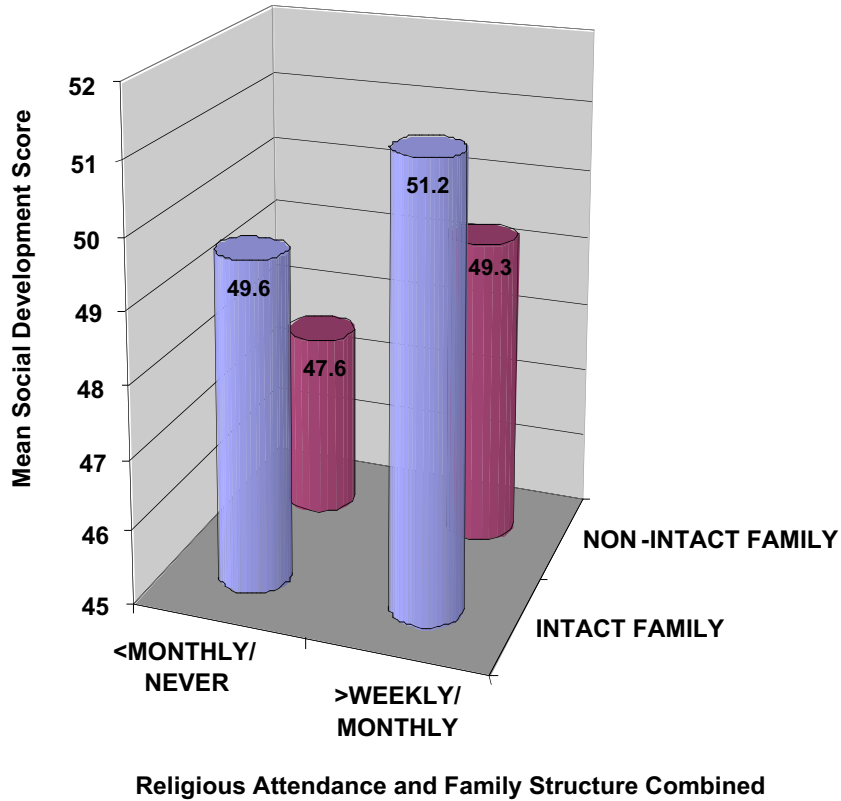


*This chart illustrates the correlation between family structure and children's positive social development.*

*According to parent reports, children who live with both biological parents or two adoptive parents are more likely to exhibit positive social behavior, including showing respect for teachers and neighbors, getting along with other children, understanding other people's feelings, and trying to resolve conflicts with classmates, family, or friends.*

## Children's Positive Social Development by Religious Attendance and Family Structure: U.S. Children Aged 6 -17, 2003

Source: National Survey of Children's Health (NSCH)

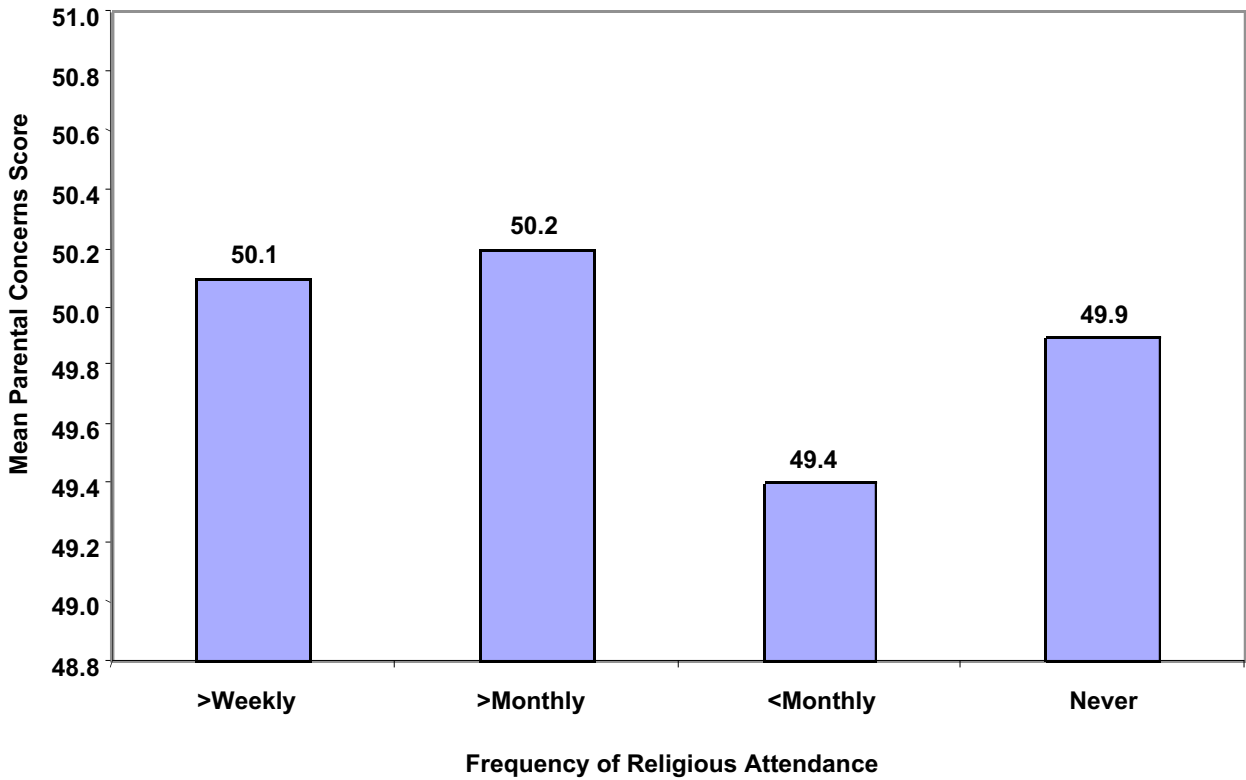


*This chart shows the relationship between religious attendance, family structure, and children's positive social development.*

*According to parent reports, children from intact families who worship frequently are more likely to exhibit positive social behavior, including showing respect for teachers and neighbors, getting along with other children, understanding other people's feelings, and trying to resolve conflicts with classmates, family, or friends.*

**Parental Concerns about Children's Achievement by  
Frequency of Religious Attendance: U.S. Children Aged 6 -17, 2003**

Source: National Survey of Children's Health (NSCH)

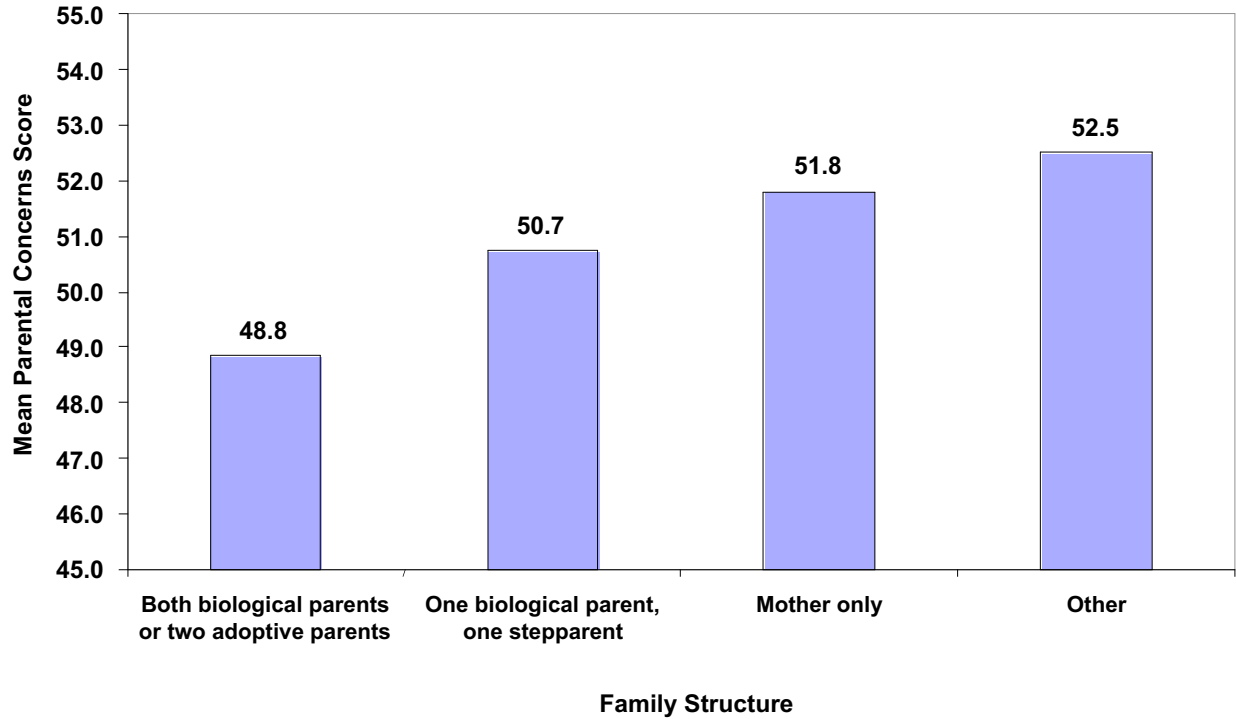


*This chart illustrates the correlation between frequency of children's religious attendance and parental concerns about children's achievement.*

*Children who worship at least monthly are less likely to have parents concerned about their children's achievement than children who worship less frequently.*

**Parental Concerns about Children's Achievement by Family Structure:  
U.S. Children Aged 6 -17, 2003**

Source: National Survey of Children's Health (NSCH)

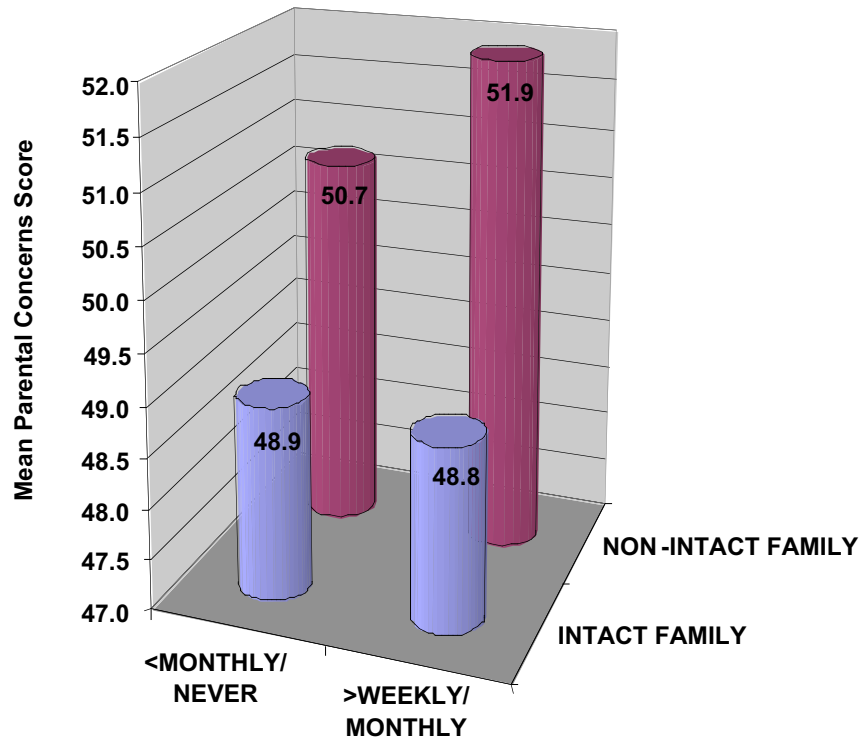


*This chart shows the relationship between family structure and parental concerns about children's achievement.*

*Children who live with both biological parents or two adoptive parents are least likely to have parents who are concerned about their children's achievement.*

## Parental Concerns about Children's Achievement by Religious Attendance and Family Structure: U.S. Children Aged 6 -17, 2003

Source: National Survey of Children's Health (NSCH)



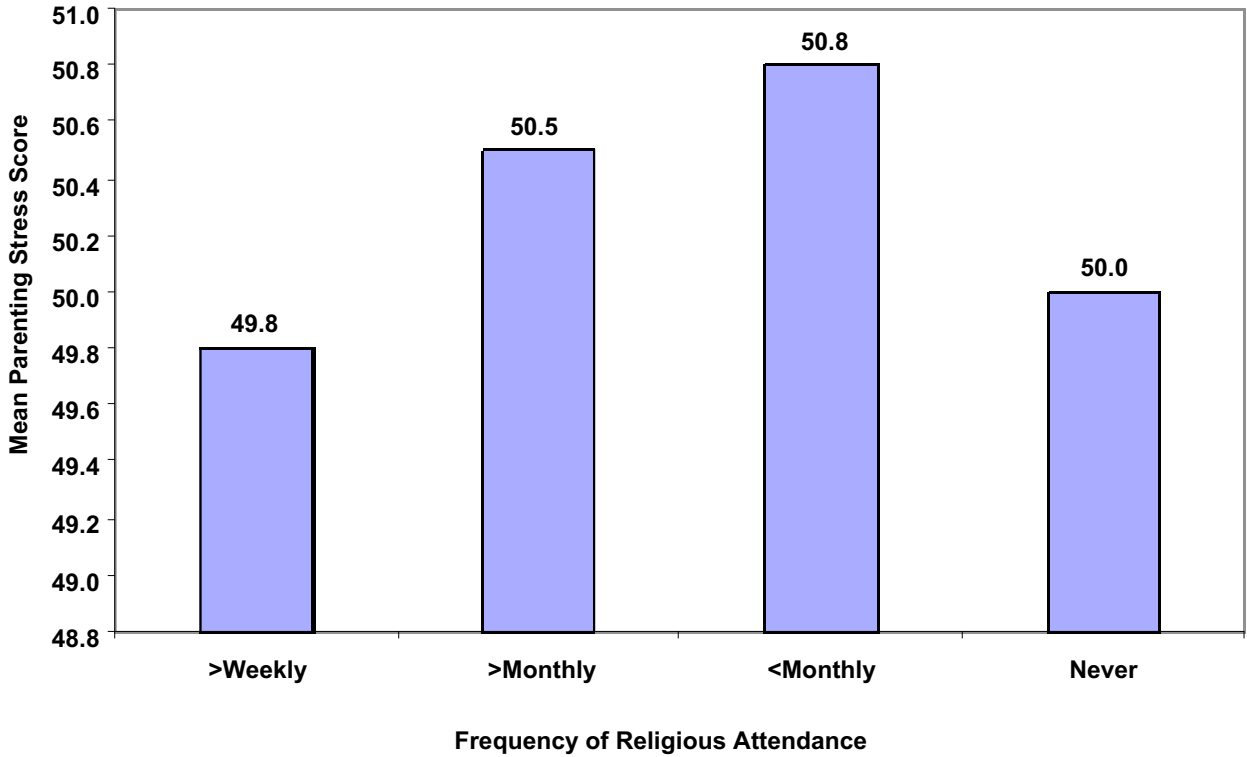
Religious Attendance and Family Structure Combined

*This chart examines the correlation between religious attendance, family structure, and parental concerns about children's achievement.*

*Children from intact families who worship frequently are least likely to have parents concerned about their children's achievement.*

### Parenting Stress by Frequency of Religious Attendance: U.S. Children Aged 6 -17, 2003

Source: National Survey of Children's Health (NSCH)

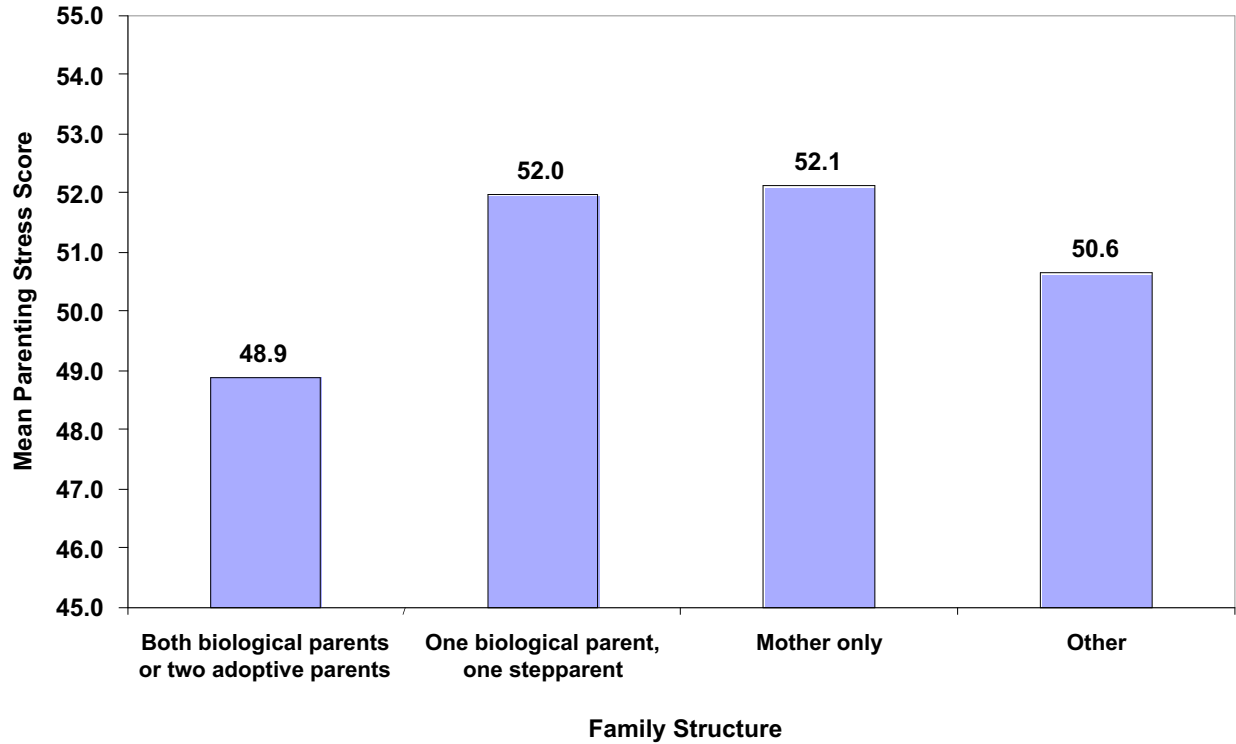


*This chart shows the relationship between frequency of children's religious attendance and parenting stress.*

*Parents of children who worship at least weekly have the lowest parenting stress levels.*

**Parenting Stress by Family Structure:  
U.S. Children Aged 6 -17, 2003**

Source: National Survey of Children's Health (NSCH)

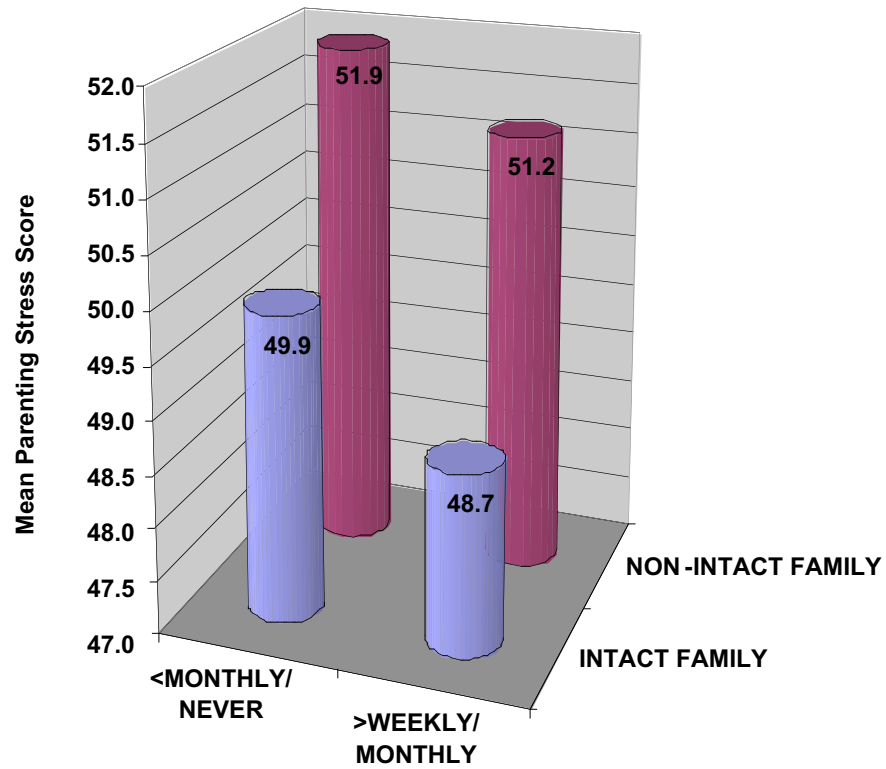


*This chart examines the correlation between children's family structure and parenting stress.*

*Children living with both biological parents or two adoptive parents have parents with the lowest parenting stress levels.*

## Parenting Stress by Children 's Religious Attendance and Family Structure: U.S. Children Aged 6 -17, 2003

Source: National Survey of Children's Health (NSCH)



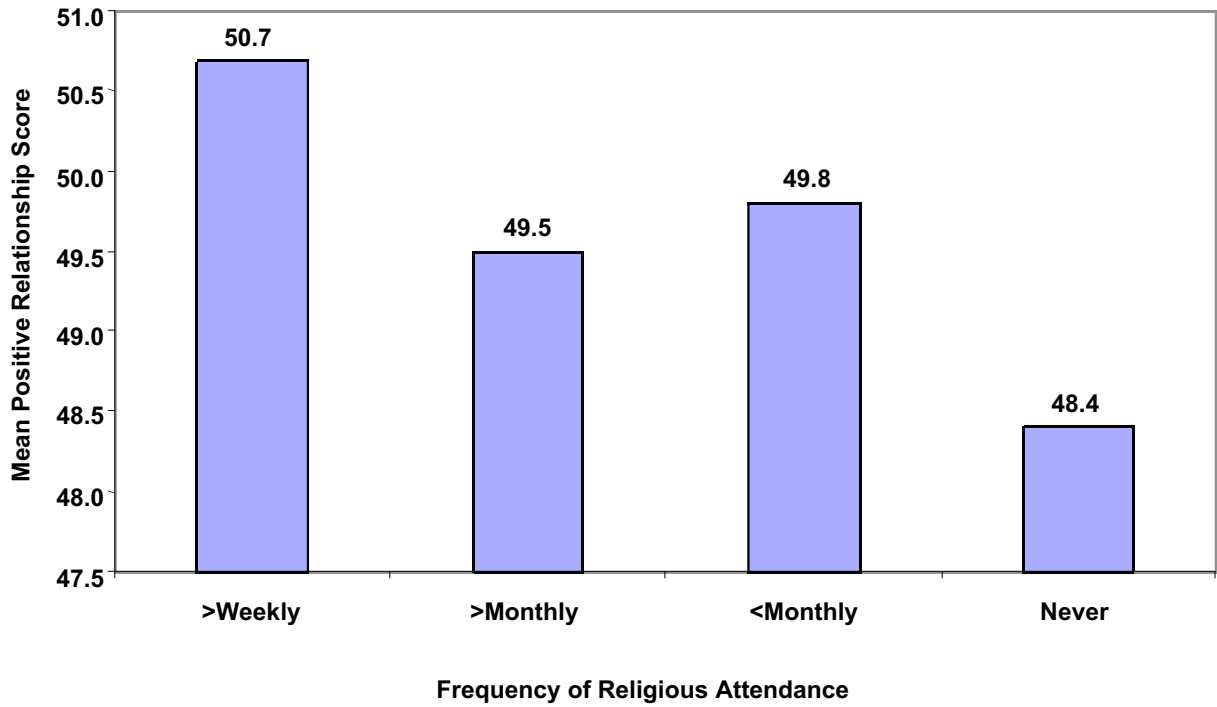
Children 's Religious Attendance and Family Structure Combined

*This chart shows the relationship between religious attendance, family structure, and parenting stress.*

*Children from intact families who worship frequently have parents with the lowest parenting stress levels.*

### Quality of Parent -Child Relationship by Frequency of Religious Attendance: U.S. Children Aged 6 -17, 2003

Source: National Survey of Children's Health (NSCH)

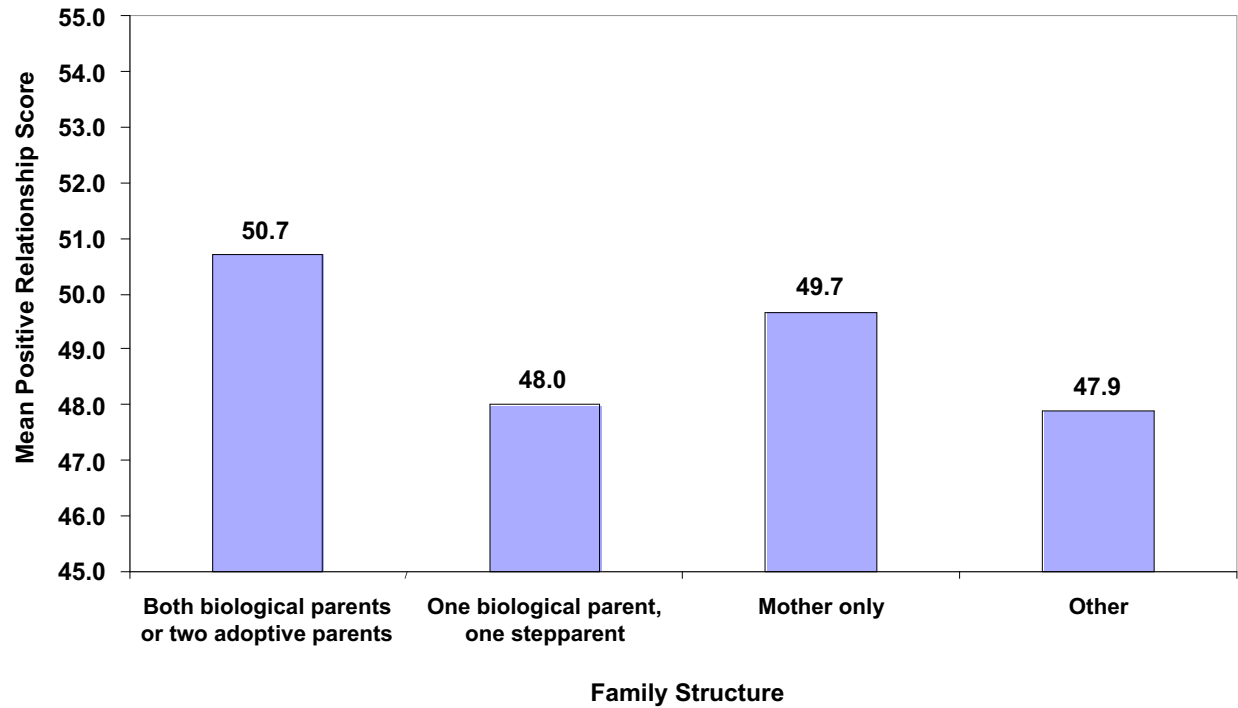


*This chart examines the correlation between children's frequency of religious attendance and the quality of the relationship with their parents.*

*Children who worship at least weekly are more likely to have a high-quality relationship with their parents.*

## Quality of Parent -Child Relationship by Family Structure: U.S. Children Aged 6 -17, 2003

Source: National Survey of Children's Health (NSCH)

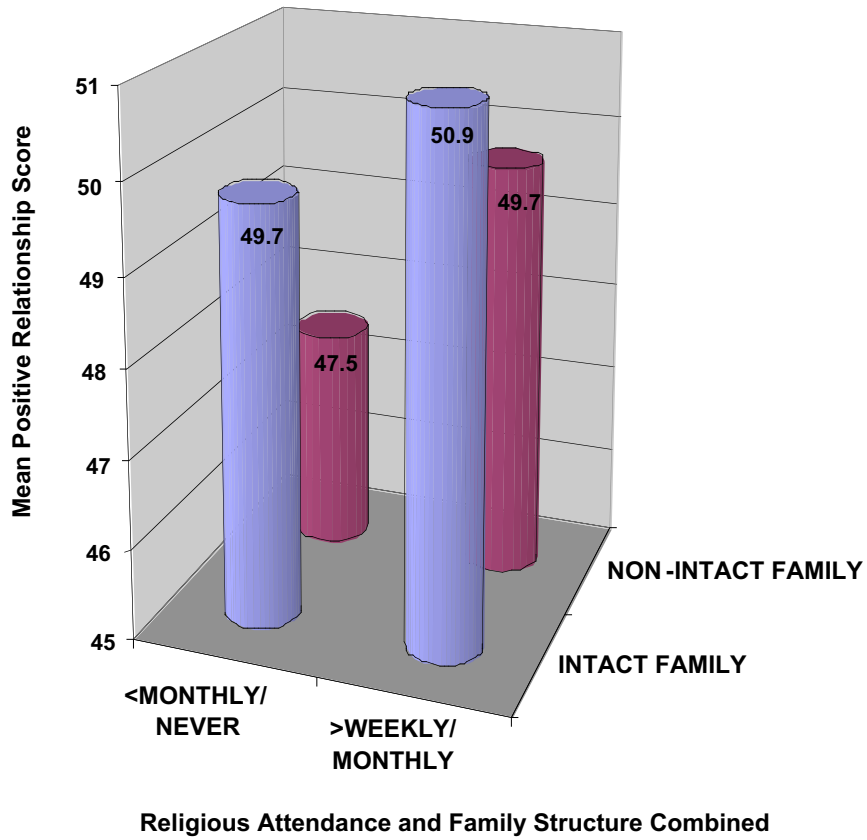


*This chart shows the relationship between children's family structure and the quality of the relationship with their parents.*

*Children who live with both biological parents or two adoptive parents are most likely to have a high-quality relationship with their parents.*

## Quality of Parent -Child Relationship by Religious Attendance and Family Structure: U.S. Children Aged 6 -17, 2003

Source: National Survey of Children's Health (NSCH)



*This chart examines the correlation between children's religious attendance, family structure, and the quality of the relationship with their parents.*

*Children from intact families who worship frequently are most likely to have a high-quality relationship with their parents.*

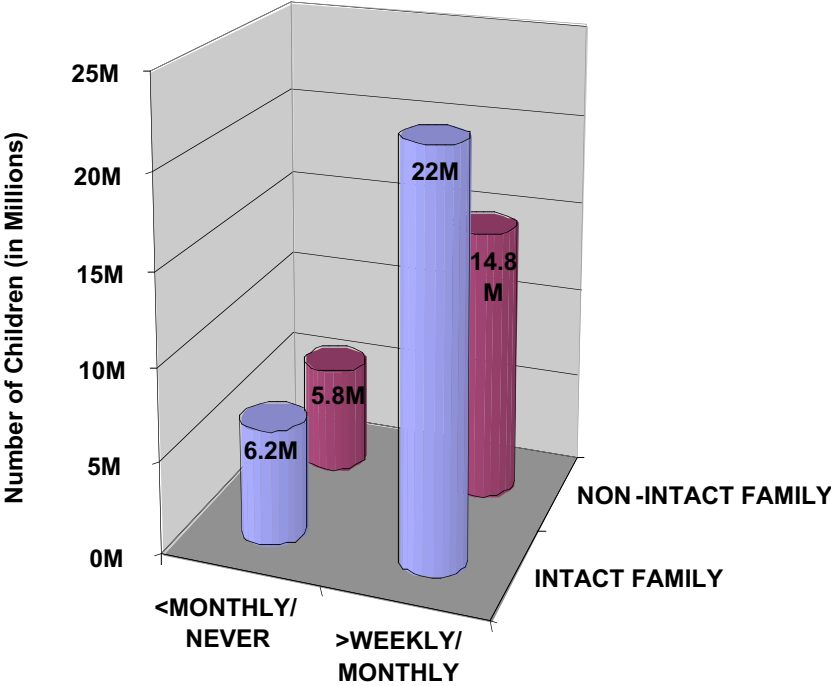
**Table A: National Demographics of Family Structure and Religious Attendance for Families of Children Aged 6-17, 2003**

*Source: National Survey of Children's Health (NSCH)*

<b>Religious Attendance</b>	<b>Numbers of Children</b>				
	<b>Family Structure</b>				
<u>Child attends:</u>	<u>2 bio/adoptive parents</u>	<u>2 parent stepfamily</u>	<u>Single mother</u>	<u>Other</u>	<u>All family</u>
>Weekly	17,727,649	2,842,177	6,714,406	1,349,616	28,633,848
>Monthly	4,317,854	1,117,312	2,302,452	483,206	8,220,824
<Monthly	1,888,771	419,737	762,249	185,644	3,256,401
Never	4,343,396	1,262,642	2,626,940	538,695	8,771,573
All attendance	28,277,570	5,641,868	12,406,940	2,557,161	48,882,646
<b>Religious Attendance</b>	<b>Total Percents</b>				
	<b>Family Structure</b>				
<u>Child attends:</u>	<u>2 bio/adoptive parents</u>	<u>2 parent stepfamily</u>	<u>Single mother</u>	<u>Other</u>	<u>All family</u>
>Weekly	36.3	5.8	13.7	2.8	58.6
>Monthly	8.8	2.3	4.7	1	16.8
<Monthly	3.9	0.9	1.6	0.4	6.7
Never	8.9	2.6	5.4	1.1	17.9
All attendance	57.8	11.5	25.4	5.2	100
<b>Religious Attendance</b>	<b>Row Percents</b>				
	<b>Family Structure</b>				
<u>Child attends:</u>	<u>2 bio/adoptive parents</u>	<u>2 parent stepfamily</u>	<u>Single mother</u>	<u>Other</u>	<u>All family</u>
>Weekly	61.9	9.9	23.4	4.7	100
>Monthly	52.5	13.6	28	5.9	100
<Monthly	58	12.9	23.4	5.7	100
Never	49.5	14.4	29.9	6.1	100
All attendance	57.8	11.5	25.4	5.2	100
<b>Religious Attendance</b>	<b>Column Percents</b>				
	<b>Family Structure</b>				
<u>Child attends:</u>	<u>2 bio/adoptive parents</u>	<u>2 parent stepfamily</u>	<u>Single mother</u>	<u>Other</u>	<u>All family</u>
>Weekly	62.7	50.4	54.1	52.8	58.6
>Monthly	15.3	19.8	18.6	18.9	16.8
<Monthly	6.7	7.4	6.1	7.3	6.7
Never	15.4	22.4	21.2	21.1	17.9
All attendance	100	100	100	100	100

**Chart A.1: Numbers of Children by Religious Attendance and Family Structure**

Source: National Survey of Children's Health (NSCH)

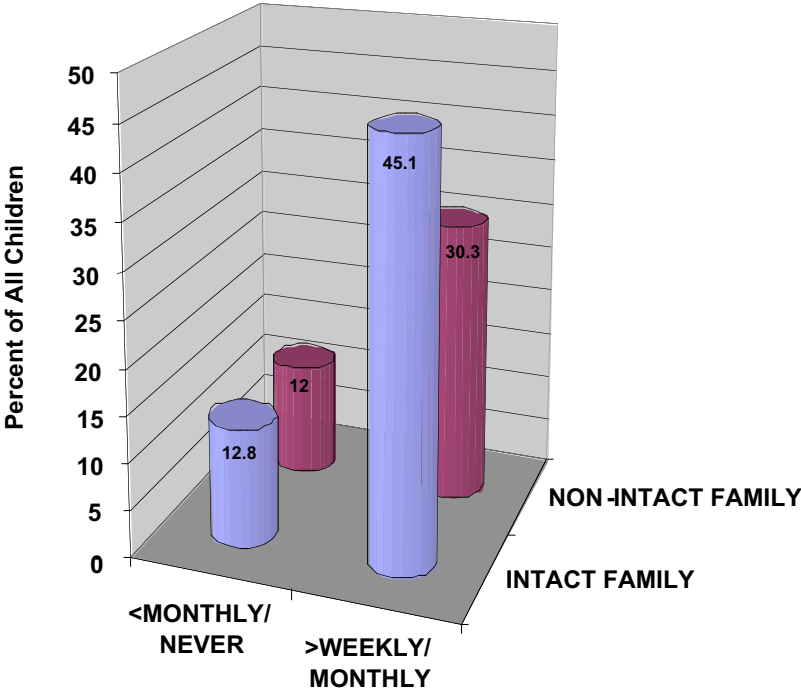


**Religious Attendance and Family Structure Combined**

*This chart illustrates the numbers of children in the National Survey of Children's Health by religious attendance and family structure combined.*

**Chart A.2: Percent of Children by Religious Attendance and Family Structure**

Source: National Survey of Children's Health (NSCH)

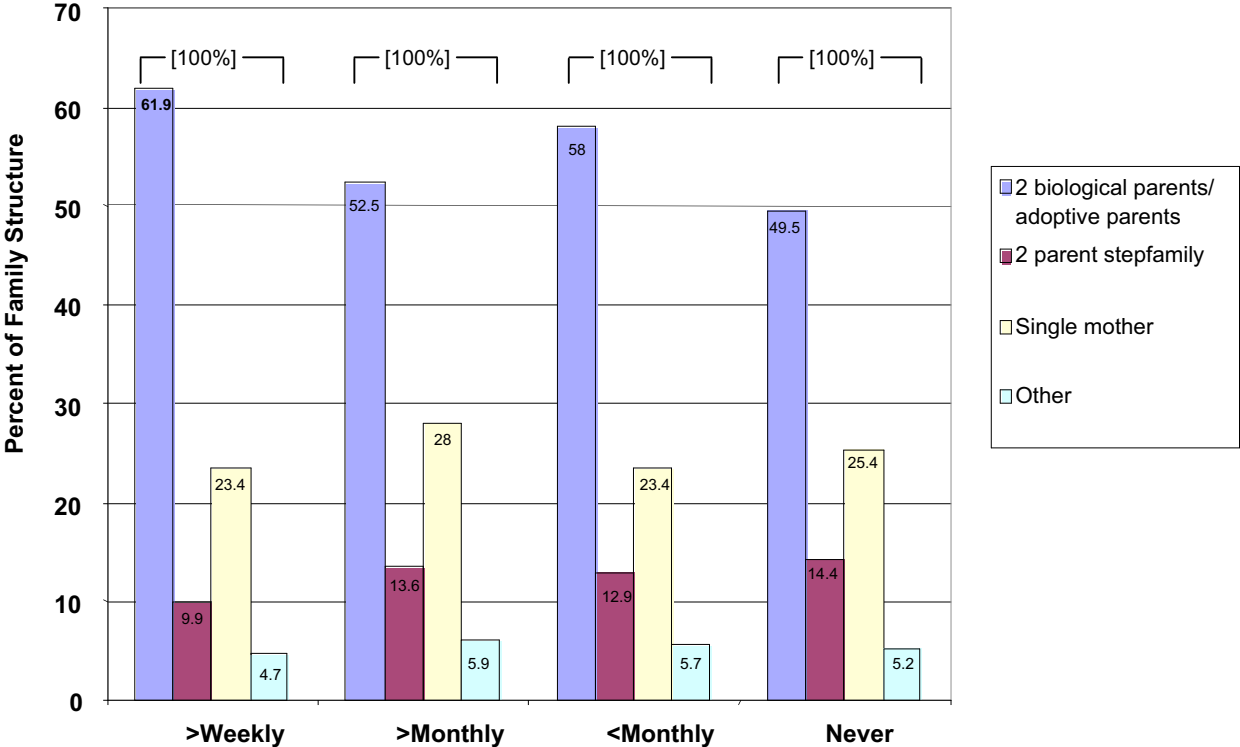


**Religious Attendance and Family Structure Combined**

*This chart illustrates the percent of children in the National Survey of Children's Health by religious attendance and family structure combined.*

**Chart A.3: Family Structure within Frequency of Religious Attendance**

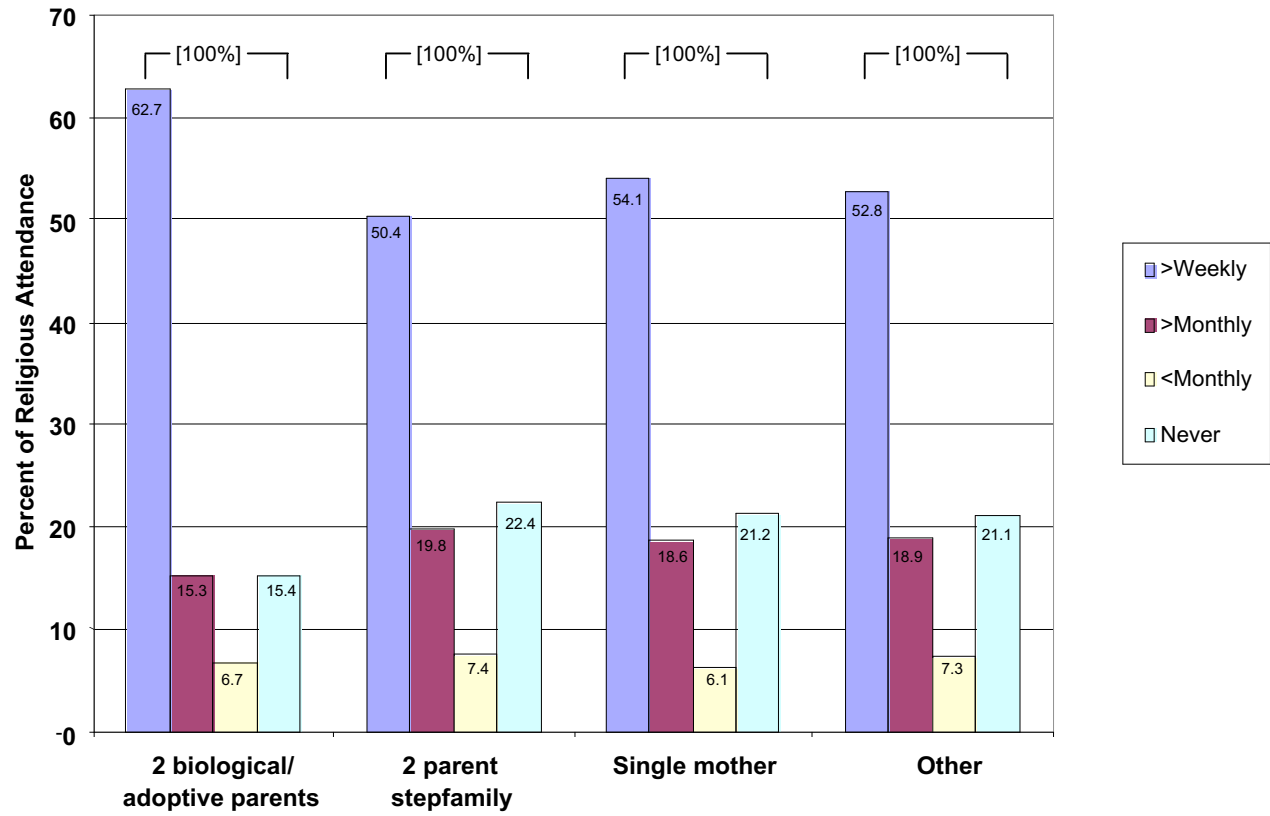
Source: National Survey of Children's Health (NSCH)



*This chart illustrates the family structure of children within each frequency of religious attendance in the National Survey of Children's Health.*

**Chart A.4: Frequency of Religious Attendance within Family Structure**

Source: National Survey of Children's Health (NSCH)



*This chart illustrates the frequency of religious attendance of children within each family structure in the National Survey of Children's Health.*

**Table B: States Ranked According to Percent of Children Living with Both Biological Parents or Two Adoptive Parents, 2003**

*Source: National Survey of Children's Health (NSCH)*

<b>Rank Order</b>	<b>State</b>	<b>% of 6-17 year olds</b>
1	ND	69
2	UT	68.6
3	IA	67.6
4	NJ	67.5
5	NH	66
6	MN	65.8
7	SD	65
8	ID	64.3
9	CT	64.1
10	MA	63.6
11	NE	63.5
12	WI	62.8
13	VT	62.5
14	WY	62.2
15	CO	62
16	KS	61.9
17	HI	60.9
18	IL	60.8
19	CA	60.5
20	OR	60.3
21	WA	60.2
22	PA	59.8
23	MT	59.5
24	ME	59.4
25	MD	58.6
26	OH	58.2
27	VA	58.2
28	NY	57.6
29	RI	57.6
30	AK	57.5
31	MI	57.2
32	NM	57
33	WV	57
34	IN	56.8
35	DE	56.2
36	KY	56
37	TX	55.8
38	MO	55.7
39	AZ	54.8
40	NC	54.4
41	NV	53.9
42	GA	53.2
43	TN	52
44	SC	51.7
45	FL	51.3
46	OK	51.2
47	LA	47.7
48	AL	47.6
49	AR	47
50	MS	46.9

National % =57.8

**Table C: States Ranked According to Percent of Children Attending Religious Services Weekly to Monthly, 2003**

*Source: National Survey of Children's Health (NSCH)*

<b>Rank Order</b>	<b>State</b>	<b>% of 6-17 year olds</b>
1	MS	91.7
2	LA	90.2
3	AL	89.6
4	SC	88
5	AR	86.5
6	TN	86.4
7	NC	85.5
8	OK	85.1
9	ND	84.9
10	GA	84
11	UT	82.2
12	SD	82
13	TX	81.3
14	KY	81.2
15	NE	81.2
16	IA	79.6
17	KS	78.7
18	IL	77.9
19	MN	77.2
20	WV	77.2
21	IN	77
22	VA	76.6
23	MO	76.5
24	MD	76
25	WI	75
26	OH	74.6
27	PA	74.6
28	FL	74.3
29	NM	74.3
30	MI	73.7
31	ID	72.6
32	NJ	72.4
33	DE	72.3
34	WY	70.5
35	CA	70.4
36	NY	70.2
37	CT	69.9
38	MT	69.9
39	HI	68.1
40	AZ	67.7
41	CO	67.3
42	RI	67.3
43	OR	65.5
44	WA	64.2
45	AK	63.9
46	NV	60.1
47	MA	58.5
48	ME	50.8
49	NH	50.8
50	VT	45

National % = 75.4

## Alphabetical Listing by State of Religious Attendance and Family Intactness, 2003

*Source: National Survey of Children's Health (NSCH)*

<b>State</b>	<b>Religious Attendance [Weekly to Monthly: % of 6-17 year olds]</b>	<b>Intact Family [% of 6-17 year olds]</b>
AL	89.5	47.6
AK	63.9	57.5
AZ	67.7	54.8
AR	83.8	47
CA	70.4	60.5
CO	67.3	62
CT	69.9	64.1
DE	72.3	56.2
FL	74.3	51.3
GA	84	53.2
HI	68.1	60.9
ID	72.6	64.3
IL	77.9	60.8
IN	77	56.8
IA	79.6	67.6
KS	78.7	61.9
KY	81.2	56
LA	90.2	47.7
ME	58.5	59.4
MD	76	58.6
MA	58.5	63.6
MI	73.7	57.2
MN	77.2	65.8
MS	91.7	46.9
MO	76.5	55.7
MT	69.9	59.5
NE	81.2	63.5
NV	60.1	53.9
NH	50.8	66
NJ	72.4	67.5
NM	74.3	57
NY	70.2	57.6
NC	85.5	54.4
ND	84.9	69
OH	74.6	58.2
OK	85.1	51.2
OR	65.5	60.3
PA	74.6	59.8
RI	67.3	57.6
SC	88	51.7
SD	82	65
TN	86.4	52
TX	81.3	55.8
UT	82.2	68.6
VT	45	62.5
VA	76.6	58.2
WA	64.2	57
WV	77.2	57
WI	75	62.8
WY	70.5	62.2

## NICHOLAS ZILL, Ph.D.

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Dr. Nicholas Zill is a Washington-based psychologist and expert on trends in child development and family functioning. Until his recent retirement, he was a Vice President and Study Area Director at the social science research corporation, Westat. He has helped to design, analyze, and report on large-scale studies of children and families for more than thirty years. Among these was the Head Start National Reporting System (NRS), designed for the Administration of Children and Families (ACF) of the U.S. Department of Health and Human Services. This involved designing and field testing one-on-one child assessments and developing a computer-based reporting system, and supporting the nationwide implementation of the system, which included large-scale training of local program staff, compiling data from local assessments of more than 400,000 4- and 5-year-old children, data analysis, and preparation of program-level reports for more than 1,800 Head Start grantees. Dr. Zill has also been project director of three rounds of the Head Start Family and Child Experiences Survey (FACES), a series of longitudinal studies conducted for the ACF involving parent interviews, child assessments, teacher interviews, and classroom observations of national probability samples of programs, families, and children. Dr. Zill has been a senior technical adviser and lead analyst for the National Head Start Impact Study, a random-assignment evaluation study of Head Start.

Other large-scale studies of children which Dr. Zill helped to design and analyze are the Early Childhood Longitudinal Study of a Birth Cohort (ECLS-B), the Early Childhood Longitudinal Study of a Kindergarten Cohort (ECLS-K), and the school readiness component of the National Household Education Survey for the National Center for Education Statistics; the Child Health Supplement to the 1981 and 1988 National Health Interview Surveys for the National Center for Health Statistics; the Mother and Child Supplements to the National Longitudinal Survey of Youth (NLSY) for the National Institute of Child Health and Human Development; and the National Survey of Children for the Foundation for Child Development and the National Institute of Mental Health.

Dr. Zill is the author or co-author of a number of widely cited journal articles and book chapters on the health status and school readiness of American children, adolescent time use, and the development and well-being of children from divorced families, stepfamilies, adoptive families, and welfare families. He has given invited expert testimony on these topics before several committees of the U.S. House of Representatives and the U.S. Senate. He was a participant in the 2001 White House Summit on Early Childhood Cognitive Development. He helped the Select Committee on Children, Youth, and Families of the U.S. House of Representatives to design and produce three editions of the Committee's report, *U.S. children and their families: Current conditions and recent trends*. He was a member of the National Committee on Vital and Health Statistics, an advisory committee to the National Center for Health Statistics, and is a past president of the Council of Professional Associations on Federal Statistics (COPAFS). He was a member of the Technical Planning Group on School Readiness for the National Education Goals Panel, and developed a child health index that the Goals Panel reported annually for each state and the nation as a whole.

Before coming to Westat, Dr. Zill was the founder and for 13 years the Executive Director of Child Trends, a non-profit research organization that is known for its work on childhood social indicators and teen childbearing.

Dr. Zill received his Ph.D. in psychology from Johns Hopkins University and his B.A. (magna cum laude) from Columbia University.

**PHILIP R. FLETCHER, Ph.D.**

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Dr. Fletcher is a Senior Statistician at Westat, a social science research firm in the Washington, DC area. He received a Master's Degree in Latin American Studies and a Ph.D. in Comparative and International Development Education from Stanford University. As a United Nations expert and consultant to the Ministry of Education in Brazil, he developed mathematical models of the Brazilian education system and helped design the national educational assessment. He also taught courses in testing and measurement methods at several Brazilian universities. At Westat, he has conducted psychometric analyses and helped to design adaptive assessments of early language, literacy and math skills for young children that were used in national longitudinal studies for the U.S. Department of Education and the Head Start program, as well as in smaller-scale evaluation studies.