No-Fault Divorce Law and Fertility

Running head: NO-FAULT DIVORCE LAW AND FERTILITY

Did Births Decline After the Enactment of No-Fault Divorce Law?

by

Paul A. Nakonezny
Department of Health Promotion
University of North Texas
P.O. Box 311337
Denton, TX 76203-1337
940-565-2651 (w)
940-565-4904 (fax)
e-mail: nakonezny@coe.unt.edu

Joseph Lee Rodgers
Department of Psychology
University of Oklahoma
Norman, OK 73019
405-325-4591 (w)
e-mail: jrodgers@ou.edu

Kristen Shaw
Department of Health Promotion
University of North Texas
P.O. Box 311337
Denton, TX 76203-1337

Correspondence concerning this paper should be addressed to Paul A. Nakonezny, Department of Health Promotion, University of North Texas, P.O. Box 311337, Denton, Texas, 76203-1337. Electronic mail may be sent to nakonezny@coe.unt.edu.

No-Fault Divorce Law and Fertility

Abstract

Previous research has demonstrated that U.S. no-fault divorce laws implemented between 1953 and 1987 resulted in more divorces in some states than would have occurred otherwise. In other states, divorce patterns appeared to follow prevailing trends even after implementation of no-fault divorce legislation. A more distal question is whether implementation of no-fault divorce laws had an effect on birth rates. We analyzed state-level birth data from all 50 states to assess the birth response to the enactment of no-fault divorce law in each state. Results suggested that birth rates decreased significantly two-to-four years following the enactment of no-fault divorce law for the group of 34 states whose divorce rates responded to no-fault divorce legislation. As predicted, among the 16 states whose divorce rates did not respond to no-fault divorce legislation, the enactment of no-fault divorce law had a small and nonsignificant positive influence on birth rates. Generally, the group of 34 states had lower post no-fault birth rates than the group of 16 states.

Did Births Decline After the Enactment of No-Fault Divorce Law?

Childbearing is central to the institution of marriage and family. In the U.S., about two in every three births occur inside of marriage (Ventura, Martin, Curtin, Menacker, & Hamilton, 2001). However, the stability of a marriage may affect a couple's decision to have children. Because children represent perhaps the most salient commitment to a marriage, couples who are in unstable marriages may delay childbearing until a sense of marital stability can be restored, or may forgo childbearing with the intent to divorce (Lillard & Waite, 1993).

As the United State's attitude toward divorce has become more permissive (reflected in the implementation of no-fault divorce law in every state), resolving marital instability with divorce has become more common (Glick, 1975; Thornton & Young-DeMarco, 2001). This increased acceptance of divorce has also had an impact on fertility. Previous research suggests that the hazard of divorce has a negative effect on the hazard of marital childbearing, and that divorce results in decreased marital fertility (Cohen & Sweet, 1974; Fu, 1998; Lauriat, 1969; Lillard & Waite, 1993; Thornton, 1978). A plausible explanation for the relationship between divorce and marital fertility is that martial dissolution reduces exposure to the risk of pregnancy, especially if divorce occurs during a woman's fecund years. Cohen and Sweet (1974) and Thornton (1978), who used data from the National Fertility Study, both found that women in disrupted marriages had about .60 fewer children per woman than women in intact first marriages, but that marital dissolution did not truncate fertility for a given fecund woman if remarriage occurred. Remarriage transfers fecund women back into a higher fertility status. Nonetheless, since childbearing of remarrying women is reduced between the time of dissolution and remarriage,

the fertility of women who experience dissolution and remarriage is still less than the fertility of women in stable first marriages (Cohen & Sweet, 1974; Lauriat, 1969; Thornton, 1978).

Findings from previous studies showing that marital instability and divorce result in reduced fertility are primarily based on cross-sectional designs and individual-level data (i.e., individual subjects were the units of analysis). The question addressed in the current study is whether these individual-level effects are translated into aggregate level behavior. Specifically, there has not been much research attention given to the relationship between state-level divorce and fertility in the United States. We use longitudinal, state-level data to examine the birth response that may be attributable to the increase in divorce rates in the United States due to no-fault divorce law. Our study emerges from previous research that addressed whether divorce rates responded to the implementation of no-fault divorce legislation (e.g., Nakonezny, Shull, & Rodgers, 1995; Rodgers, Nakonezny, & Shull, 1997, 1999). In the current research, we extend this previous link one step further, and ask whether births responded to the implementation of no-fault divorce law.

In the United States, the period of increased divorce rates is due to the transition from fault-based divorce law to no-fault divorce law, but only in certain states. Previous research (Rodgers et al., 1997) has shown that no-fault divorce law had a significant positive effect on the divorce rate in 34 of the 50 states, resulting in more divorces in these states than would have occurred if the law had not changed. However, in some states, no-fault divorce legislation had little effect, and the divorces that occurred after the implementation of no-fault laws were “largely redundant” (Glenn, 1997). Specifically, in the remaining 16 states, the actual divorce rate following the enactment of no-fault divorce law was lower than what the prevailing 10-year linear divorce trend would have predicted (Rodgers et al., 1997). The average change across all

50 states attributable to no-fault legislation was 0.23 divorces per 1,000 population per year (Rodgers et al., 1997).

This no-fault divorce period provides an excellent context in which to test the relationship between state-level divorce and fertility in the United States. We analyzed state-level birth data from all 50 states to assess the birth response to the enactment of no-fault divorce law. Our primary prediction was that the group of 34 states whose divorce rates increased due to no-fault divorce law would have lower post no-fault birth rates than the group of 16 states whose divorce rates did not respond to no-fault divorce law. The findings of previous research, which suggests that divorce has a negative effect on fertility, led us to predict lower birth rates for the group of 34 states.

Method

Data

Crude birth rates were collected for all 50 states to examine the birth response to the enactment of no-fault divorce law. The years of enactment across the 50 states ranged from 1953 to 1987, with the majority of the no-fault divorce laws enacted in the 1970s (see Table 1). The state-level crude birth rates were measured as number of births per 1,000 population per year for the 10 consecutive years before and after the effective date of the no-fault divorce law for each state. A 10 year period before and after no-fault divorce law was used to account for the trend in birth rates and to estimate a stable regression line in our model fitting. The birth statistics were obtained from the *Vital Statistics of the United States* (National Center for Health Statistics, 1940 - 1997).

Model Fitting and Data Analysis

The effect of no-fault divorce law on the postlaw birth rates was examined using Autoregressive Integrated Moving Average (ARIMA) time-series modeling (Box & Jenkins, 1976). The parameter estimates were produced using the maximum likelihood method and each estimate was adjusted for the trend in birth rates vis-a-vis year of enactment. We assessed the birth response to the enactment of no-fault divorce law across all 50 states, across the 34 states that experienced increased divorce rates due to no-fault divorce law (i.e., these 34 states had higher observed divorce rates following no-fault divorce law than the prevailing 10-year linear divorce trend would have predicted), and across the 16 states that did not respond to no-fault divorce law (i.e., these 16 states had lower observed divorce rates following no-fault divorce law than the prevailing 10-year linear divorce trend would have predicted). The group of 16 states essentially served as a nonequivalent control group, a comparison group, to show that the change in the birth rate was different from what it would have been if the divorce law had not changed. See Table 1 for the delineation of the group of 34 states and group of 16 states (which was taken from Rodgers et al., 1997).

A separate ARIMA model was used for each outcome series (i.e., an ARIMA model for the 50 states, the 34 states, and the 16 states). A particular ARIMA (p,d,q) model is characterized by three structural terms: Autoregressive (p), differencing (d), and moving average (q). The autoregressive term relates outcomes at Time *t* to those one lag back at *t* - 1, two lags back at *t* - 2, or more lags back; the moving average term relates residuals at Time *t* to those one or more lags back; and the differencing term, which accounts for the secular trend in

the data series, is obtained by taking the difference between each observation and the one preceding it. The specific ARIMA model selected for each outcome series in the current study was the one that was most parsimonious (i.e., fewest autoregressive, differencing, and moving average terms) and that fit the data the best (i.e., no significant autocorrelation remaining in the residual series). The ARIMA (p,d,q) model with the best fit to the data for the group of 50 states, the group of 16 states, and the group of 34 states, respectively, was (2,0,0), which used two autoregressive terms (related outcomes at Time *t* to those one lag back at *t* - 1 and two lags back at *t* - 2) and no differencing and moving average terms.

A visual examination of the general pattern of the birth data (see Figure 1) suggests a temporary downturn in birth rates during the immediate four-year period following the enactment of no-fault divorce law. Thus, dummy variable coding was used with the ARIMA modeling to assess the effect of no-fault divorce law on birth rates for each of the first four consecutive postlaw years. For example, a dummy variable taking the value of 0 for each of the 10 years prior to the year of enactment of no-fault divorce law for each state, the value of 1 during the first postlaw year, and the value of 0 for each of the 9 years thereafter assessed the change in each outcome's incidence (birth rate) during the first year following enactment of no-fault divorce law; a dummy variable taking the value of 0 for each of the 10 years prior to the year of enactment of no-fault divorce law for each state, the value of 1 during the second postlaw year, and the value of 0 for each of the 8 years thereafter assessed the change in each outcome's incidence (birth rate) during the second year following enactment of no-fault divorce law. This same basic coding scheme was used to assess the birth response during post no-fault divorce

years 3 and 4, respectively. The methodology used in the current study provides a statistical test of the temporary effect of a treatment (enactment of no-fault divorce law) within the context of an interrupted time series design, with a set of nonequivalent control groups (Cook & Campbell, 1979). The design and analytical approach is similar to the methodology used in Cohan and Cole (2002), which assessed the temporary effect of a natural disaster, Hurricane Hugo, on birth rates for all counties in South Carolina.

The specific ARIMA (2,0,0) model used in the current study is specified as follows:

$$Y_t = \mu + \omega_{1,0}X_{1,t} + \omega_{2,0}D_{2,t} + \frac{1}{(1 - \phi_1 B + \phi_2 B^2)}(a_t)$$

where Y_t is the response series of crude birth rates over the 21 year period; μ is the mean term; $X_{1,t}$ is the trend in birth rates vis-a-vis year of enactment (which is the mean integrated series); $D_{2,t}$ is the dummy variable at time *t*; $\omega_{1,0}$ and $\omega_{2,0}$ are parameters to be estimated; $\phi(B)$ is the autoregressive operator for $p = 2$; and a_t is the random error term.

One-way Analysis of Covariance (ANCOVA) also was used to examine the birth response to the enactment of no-fault divorce law. The goal of using ANCOVA was to test for differences between the group of 34 states and the group of 16 states on the post no-fault birth rate during each of the first four consecutive postlaw years, while controlling for the effect of the prevailing trend in births (i.e., the average birth rate for the 10 years prior to the enactment of no-fault divorce law). This type of pre-post nonequivalent control group design uses a change score that is called a “residualized gain score” in the testing literature (Cronbach & Furby, 1970).

Results

ARIMA Interrupted Time-Series

Table 1 presents results from the ARIMA time-series analysis, which examined the birth response to the enactment of no-fault divorce law across the 50 states. The parameter estimates, which are adjusted for the general birth trend, reflect the change in birth rates during each of the first four consecutive years following enactment of no-fault divorce law.

The ARIMA results revealed that the enactment of no-fault divorce law had a nonsignificant negative effect on birth rates across the entire group of 50 states during the immediate four postlaw years (see Table 1, columns 3 - 6, which show the slopes associated with each dummy variable). For example, across the entire 50 states, there was an average decrease of 0.07 births per 1,000 population in the year immediately following implementation of no-fault divorce law, in postlaw year two an average decrease of 0.16 births per 1,000 population, the same decrease in postlaw year three, and an average decrease of 0.15 births per 1,000 population in postlaw year four. The average change in births per 1,000 population across all 50 states averaged over the four-year period following no-fault divorce law was -0.13 (SE = .15, $p < .39$).

As predicted, the group of 34 states that experienced increased divorce rates due to no-fault divorce law (i.e., these states had higher observed divorce rates following the law than the prevailing 10 year linear divorce trend would have predicted) had a significant decrease in birth rates following the enactment of no-fault divorce law (see Table 1, columns 3 - 6, and Figure 1). The ARIMA analysis indicated a net effect of the law in 17 of the 34 states (50%) during postlaw year one, in 23 of the 34 states (68%) during postlaw year two, in 24 of the 34 states (70%)

during postlaw year three, and in 21 of the 34 states (62%) during postlaw year four. The average change in births per 1,000 population for the group of 34 states following no-fault divorce law was -0.11 (*SE* = .14, $p < .42$) in postlaw year one, -0.27 (*SE* = .15, $p < .05$) in postlaw year two, -0.27 (*SE* = .16, $p < .05$) in postlaw year three, and -0.26 (*SE* = .17, $p < .08$) in postlaw year four. This translates into an average estimate of 16842, 41793, 42300, and 41172 fewer births for the entire group of 34 states during postlaw year one (with an aggregate population of 153,114,000), during postlaw year two (with an aggregate population of 154,792,000), during postlaw year three (with an aggregate population of 156,668,000), and during postlaw year four (with an aggregate population of 158,357,000), respectively, that were attributable to nontrend sources like the implementation of no-fault divorce law.

Among the group of 16 states that did not respond to no-fault divorce law (i.e., these states had lower observed divorce rates following the law than the prevailing 10-year linear divorce trend would have predicted), the ARIMA results revealed that the enactment of no-fault divorce law had a nonsignificant positive effect on birth rates during each of the four postlaw years, as expected. This effect can be interpreted via the adjusted parameter estimates presented in Table 1 (columns 3 - 6) and via the trend in birth rates shown in Figure 1. The pattern of parameter estimates was in the direction consistent with the hypothesized (positive) effect in eight of the 16 states (50%) during postlaw year one, in nine of the 16 states (56%) during postlaw year two, in eight of the 16 states (50%) during postlaw year three, and in five of the 16 states (31%) during postlaw year four. The average change in births per 1,000 population across all 16 states averaged over the four-year period following no-fault divorce law was 0.08 (*SE* = .31, $p < .80$).

ANCOVA with Nonequivalent Control Groups

The ANCOVA results further support the basic findings from the ARIMA time-series analysis. The one-way ANCOVA revealed that, after controlling for the prevailing 10-year birth trend, no-fault divorce law had a significant effect on the post no-fault birth rate during each of the first three consecutive postlaw years, Fs (1, 47) > 2.58, ps < .02, and a marginally significant effect on the post no-fault birth rate during the fourth postlaw year, $F(1, 47) = 1.81$, $p < .08$. As predicted, the pattern of the least squares means showed that the group of 34 states that experienced increased divorce rates due to no-fault divorce law had lower post no-fault birth rates than the group of 16 states that did not respond to no-fault divorce law. The ANCOVA results are reported in Table 2.

A Test for Threats to Validity

We ran additional analyses designed to evaluate potential threats to the statistical conclusion validity of this study (Cook & Campbell, 1979). We first carried out an analysis to address the concern of heteroscedasticity of the residual series underlying the population distributions of state birth rates. When the error variance is not constant (heteroscedastic), the OLS and maximum likelihood parameter estimates are inefficient and the prediction error estimates are inaccurate (Neter, Wasserman, & Kutner, 1989). We used the Portmanteau Q-Test to test for heteroscedasticity (McLeod & Li, 1983), which is distributed as an approximate χ^2. The results of the Portmanteau Q-Test revealed that heteroscedasticity was not significantly present in our time-series analyses, $\chi^2(2) = 1.36$, $p < .50$ and thus did not threaten the basic findings of this study. As additional evidence of the legitimacy of the statistical assumptions underlying the time

series results (and of the robustness of our results), we note that we obtained the same direction and approximately the same size and pattern of results using an ARIMA model and a linear ANCOVA model.

The basic findings of this study, however, may be tempered by demographic influences on birth rates other than no-fault divorce laws. In fact, prior research has found that age, educational attainment, income level, and religiosity (among others) can moderate fertility (e.g., Cohen & Sweet, 1974; Fu, 1998; Martin, 2000; Musick, 2002). To address this concern, we carried out subsequent ANCOVA and ARIMA time-series analyses with these demographic variables included in the models. State population age structure was measured continuously in years; educational attainment was measured as percentage of the state population over the age of 25 with a bachelor's degree; income level was measured as median family income for a state adjusted by the consumer price index; and religiosity was measured as Roman Catholics, Southern Baptists, and United Methodists, respectively, as a percentage of total state population (these three religions were included because they represented the principal denominations in 48 of the 50 states). Nakonezny et al. (1995) presented a complete explanation of the measurement of these demographic variables. The additional ANCOVA and ARIMA time-series analyses, which controlled for birth trend and the demographic factors, led to the same conclusions about the direction and approximate magnitude of the effect of no-fault divorce law on fertility across the groups of states as the ANCOVA and ARIMA analyses that controlled for only birth trend. We are not suggesting that these demographic factors do not impact fertility (in fact, it may be that age, educational attainment, income level, and religiosity operate at an individual level and

thus state-level measures are not sensitive enough to detect the operation of such demographic controls on fertility). Rather, what these findings suggest is that these demographic factors are not influencing the interpretation no-fault divorce law as having had an influence on these birth rates.

Discussion

This study examined one central question: "Did births decline in the United States after the enactment of no-fault divorce law?" The motivation for this question came from extending previous findings (Rodgers et al., 1997), suggesting that in some states, no-fault divorce law caused an increase in divorce rates, and in other states it did not. Assuming that marriage/divorce has substantial influence on fertility, we posed the follow-up question defined in the first sentence of this paragraph.

The findings from the ANCOVA show that the group of 34 states that experienced increased divorce rates due to no-fault divorce law had lower post no-fault birth rates than the group of 16 states that did not respond to no-fault divorce law. The results of the ARIMA analysis also indicate that birth rates decreased in the majority of these 34 states following the implementation of no-fault divorce legislation. The magnitude of this decrease during the immediate four postlaw years was an average estimate of 16842, 41793, 42300, and 41172 fewer births for the entire group of 34 states, respectively, that our ARIMA model suggested were associated with nontrend sources like the enactment of no-fault divorce law. In contrast, results of the ARIMA analysis for the group of 16 states reveal a small and nonsignificant increase in birth rates during each of the first four years following no-fault divorce legislation, as predicted.

No-Fault Divorce Law and Fertility

The greatest and significant decline in birth rates was observed two-to-four years following enactment of no-fault divorce law for the group of 34 states that experienced increased divorce rates due to no-fault divorce legislation. This effect can be interpreted via the parameter estimates from the ARIMA analysis (see Table 1, columns 3 - 6), the pattern of the least squares means from the ANCOVA (see Table 2), and the general trend in birth rates shown in Figure 1. There are a few potential interpretations of this one-year lag effect in the reduction of birth rates following no-fault divorce law. One interpretation is that some women, who wish to avoid a marital break-up, got pregnant near the year in which the law was enacted (or close to the date of disruption) and other women got pregnant immediately after divorce (in hopes of reconciliation) and thus gave birth sometime during the first postlaw year. In support of this interpretation, Rindfuss and Bumpass (1977) found that births during marital disruption seem to cluster either near the date of dissolution or within a year following separation and divorce. Another interpretation of childbearing during marital disruption might be that these births, occurring near the date of dissolution or within a year following separation and divorce, are fathered by someone other than the former spouse, and perhaps are a factor in the marital dissolution (Rindfuss & Bumpass, 1977).

The significant reduction in birth rates that occurred during the two-to-four-year period following enactment of no-fault divorce law for the group of 34 states is perhaps attributed, in part, to the intrinsic relationship between divorce and marital fertility: martial dissolution reduces exposure to the risk of pregnancy, especially if divorce occurs during a woman’s fecund years (Cohen & Sweet, 1974; Lillard & Waite, 1993). Another plausible interpretation of the

reduced birth rates due to increased divorce rates could be an increased or more effective use of contraceptives following marital dissolution (Musick, 2002), especially among those who did not remarry, and changing orientations toward marriage, family, and career. Concerning this latter aspect, as an attempt to maintain a sense of independence and identity, following divorce some women may have pursued educational advancement, labor force participation, and career opportunities as alternatives to remarriage and childbearing (Felmlee, 1993; Martin, 2000; Musick, 2002; Rindfuss, Morgan, & Offutt, 1996). The basic finding of the current study, the decrease in birth rates following the increase in divorce rates due to no-fault divorce, is consistent with previous research, which found that the hazard of divorce has a negative effect on the hazard of marital childbearing, and that divorce results in decreased fertility (Cohen & Sweet, 1974; Fu, 1998; Lauriat, 1969; Lillard & Waite, 1993; Thornton, 1978).

The results of this study may be tempered by extenuating influences on birth rates other than no-fault divorce laws, although we have ruled out a number of potential threats. An initial indication of the impact of no-fault divorce laws is whether the change in birth rates were part of demographic and socioeconomic trends. For example, factors that were not included in the current research include trends in cohabitation, abortion, fertility by race, age structure at marriage and divorce, duration of marriage before divorce, presence or absence of children within a marriage, number of subsequent marriages and divorces, degree of familial solidarity and marital stability, military conflicts, and womens' liberation and labor force participation (e.g., Cohen & Sweet, 1974; Felmlee, 1993; Fu, 1998; Heaton, 1991; Lester, 1996; Martin & Bumpass, 1989; Martin, 2000; Musick, 2002). We note, however, that the ANCOVA and

ARIMA analysis results--which relate age, income, education, and religiosity to birth rates vis-a-vis no-fault divorce laws--in part, begin to rule out some of the threat of history for evaluation of the basic treatment effect. We also note that the results of our significance tests presented earlier suggest that autocorrelation and heteroscedasticity did not threaten the basic findings of this study.

Changes in family law and its effect on family planning and fertility behavior is an underdeveloped area of research. A next step in future research is to continue to explore the understanding of the causes and consequences of no-fault divorce legislation in the United States. We pose the following questions for future research (Rodgers et al., 1999): What was the effect of increased divorce rates due to no-fault divorce legislation on other key state-level demographics (e.g., marriage rates, mortality rates, morbidity rates, suicide rates)? How might de facto implementation of no-fault divorce prior to legislation be operationalized and measured? How did divorces from out of state contribute to the change in divorce rates, birth rates, and other demographics in states that implemented no-fault legislation relatively early?

As mentioned earlier, factors that were not examined in the current research, but can affect fertility, include trends in abortion, cohabitation, fertility by race, age structure at marriage and divorce, duration of marriage before divorce, presence or absence of children within a marriage, degree of marital stability, military conflicts, and womens' liberation and labor force participation. Future research could address whether these factors moderated the likelihood of divorce and fertility in relation to no-fault divorce.

Finally, as suggested in Nakonezny et al. (1995), which addressed the effect of no-fault divorce law on divorce rates across the 50 states, we believe it is beyond the scope of this article to broadly generalize our results to societies outside the United States. The breadth of our results are limited to the effect of the enactment of no-fault divorce law within the United States and during the time frame of the enactment of no-fault divorce law. It is this context in which our results should be interpreted, although our statistical analyses may support generalizing to other settings that appear similar to those in the current study.

In conclusion, the current study examined the basic question: "Did births decline in the United States after the enactment of no-fault divorce law?" We used an ARIMA time-series model and a linear ANCOVA model to address this question and three important findings emerged. First, birth rates decreased most noticeably (and significantly) two-to-four years following the enactment of no-fault divorce law for the group of 34 states that experienced increased divorce rates due to nontrend sources like no-fault divorce legislation. Second, as expected, the enactment of no-fault divorce law had a small and nonsignificant positive influence on birth rates for the group of 16 states that did not respond to no-fault divorce law. Third, the group of 34 states had lower post no-fault birth rates than the group of 16 states. The results we found in the current study were consistent across two different types of quasiexperimental designs and two different types of model specifications, which argues for the robustness of our findings across different methodological approaches.

References

Box, G. E. P., & Jenkins, G. M. (1976). *Time series analysis: Forecasting and control*. San Francisco: Holden-Day.

Cohen, S. B., & Sweet, J. A. (1974). The impact of marital disruption and remarriage on fertility. *Journal of Marriage and the Family, 36,* 87-96.

Cook, T. D., & Campbell, D. T. (1979). *Quasi-experimentation: Design and analysis issues for field settings*. Boston, MA: Houghton Mifflin Company.

Cohan, C. L., & Cole, S. W. (2002). Life course transitions and natural disaster: Marriage, birth, and divorce following Hurricane Hugo. *Journal of Family Psychology, 16,* 14-25.

Cronbach, L. J., & Furby, L. (1970). How we should measure change--or should we? *Psychological Bulletin, 74,* 68-80.

Felmlee, D. H. (1993). The dynamic interdependence of women's employment and fertility. *Social Science Research, 22*, 333-360.

Fu, X. (1998). A longitudinal and cross-cultural analysis of fertility decline. *International Review of Sociology, 8,* 207-226.

Glenn, N. D. (1997). A reconsideration of the effect of no-fault divorce on divorce rates. *Journal of Marriage and the Family, 59,* 1023-1025.

Glick, P. C. (1975). A demographer looks at American families. *Journal of Marriage and the Family, 37,* 15-26.

Heaton, T. B. (1991). Time-related determinants of marital dissolution. *Journal of Marriage and the Family, 53*, 285-295.

Lauriat, P. (1969). The effect of marital dissolution on fertility. *Journal of Marriage and the Family, 31*, 484-493.

Lester, D. (1996). The impact of unemployment on marriage and divorce. *Journal of Divorce and Remarriage, 25*, 151-153.

Lillard, L. A. & Waite, L. J. (1993). A joint model of marital childbearing and marital disruption. *Demography, 30*, 653-681.

Martin, S. P. (2000). Diverging fertility among U.S. women who delay childbearing past age 30. *Demography, 37*, 523-533.

Martin, T. C., & Bumpass L. L. (1989). Recent trends in marital disruption. *Demography, 26*, 37-51.

McLeod, A. I., & Li, W. K. (1983). Diagnostic checking ARMA time series models using squared- residual autocorrelations. *Journal of Time Series Analysis, 4*, 269-273.

Musick, K. (2002). Planned and unplanned childbearing among unmarried women. *Journal of Marriage and the Family, 64*, 915-929.

Nakonezny, P. A., Shull, R. D., & Rodgers, J. L. (1995). The effect of no-fault divorce law on the divorce rate across the 50 states and its relation to income, education, and religiosity. *Journal of Marriage and the Family, 57*, 477-488.

National Center for Health Statistics (1940-1997). *Vital statistics of the United States*. Washington, DC: U.S. Government Printing Office.

Neter, J., Wasserman, W., & Kutner, M. H. (1989). *Applied linear regression models*. Homewood, IL: Irwin.

Rindfuss, R. R., & Bumpass, L. L. (1977). Fertility during marital disruption. *Journal of Marriage and the Family, 39,* 517-528.

Rindfuss, R. R., Morgan, S. P., & Offutt, K. (1996). Education and the changing age pattern of American fertility: 1963-1989. *Demography, 33,* 277-290.

Rodgers, J. L., Nakonezny, P. A., & , Shull, R. D. (1997). The effect of no-fault divorce legislation on divorce rates: A response to a reconsideration. *Journal of Marriage and the Family, 59,* 1026-1030.

Rodgers, J. L., Nakonezny, P. A., & Shull, R. D. (1999). Did no-fault divorce legislation matter? Definitely yes and sometimes no. *Journal of Marriage and the Family, 61*, 803-809.

Thornton, A. (1978). Marital dissolution, remarriage, and childbearing. *Demography, 15*, 361-380.

Thornton, A., & Young-DeMarco, L. (2001). Four decades of trends in attitudes toward family issues in the United States: The 1960s through the 1990s. *Journal of Marriage and the Family, 63,* 1009-1037.

Ventura, S. J., Martin, J. A., Curtin, S. C., Menacker, F., & Hamilton, B. E. (2001). Births: Final data for 1999. *National Vital Statistics Reports* (Vol. 49, No.1). Hyattsville, MD: National Center for Health Statistics.

Table 1. ARIMA Results for Birth Rates Following the Enactment of No-Fault Divorce Law in the United States

		Birth Rate			
		Unstandardized Parameter Estimate Adjusted for Birth Trend			
Group of States	Year of Enactment	Postlaw Year 1	Postlaw Year 2	Postlaw Year 3	Postlaw Year 4
50 States		-0.07 (.14)	-0.16 (.15)	-0.16 (.16)	-0.15 (.16)
16 States		0.04 (.27)	0.12 (.30)	0.12 (.32)	0.02 (.33)
Alaska	1962	1.80 (2.34)	0.43 (2.42)	-1.60 (2.49)	-3.71 (2.42)
Arizona	1973	0.27 (.38)	0.25 (.46)	-0.58 (.57)	0.21 (.63)
Arkansas	1979	0.58 (.32)	-0.12 (.34)	-0.28 (.35)	-0.08 (.38)
Illinois	1984	0.06 (.03)	-0.43 (.40)	-0.37 (.41)	-0.14 (.42)
Louisiana	1975	-0.66 (.44)	0.86 (.41)	-0.42 (.47)	-0.39 (.53)
Maryland	1957	0.54 (.58)	0.08 (.75)	0.08 (.74)	0.93 (.81)
Massachusetts	1975	-0.26 (.28)	-0.04 (.34)	-0.05 (.38)	-0.29 (.42)
Mississippi	1978	-0.92 (.60)	0.83 (.65)	0.23 (.67)	0.91 (.63)
Montana	1973	0.92 (.55)	0.09 (.66)	-0.41 (.75)	0.47 (.79)
Pennsylvania	1980	-0.33 (.25)	0.03 (.29)	0.03 (.34)	-0.54 (.35)
South Carolina	1979	-0.12 (.42)	-0.10 (.49)	-0.24 (.52)	-0.07 (.55)
South Dakota	1985	-0.34 (.32)	0.07 (.38)	0.06 (.43)	-0.54 (.43)
Tennessee	1977	-0.15 (.44)	-0.43 (.51)	0.23 (.55)	-0.35 (.53)
Utah	1987	0.37 (.44)	-0.63 (.50)	0.57 (.51)	-0.54 (.57)
West Virginia	1977	0.24 (.60)	0.68 (.63)	1.03 (.59)	0.39 (.61)
Wyoming	1977	-0.38 (.51)	-0.32 (.59)	0.79 (.67)	-0.13 (.73)
34 States		-0.11 (.14)	-0.27** (.15)	-0.27** (.16)	-0.26* (.17)
Alabama	1971	-0.40 (.64)	-0.91 (.68)	-0.47 (.71)	0.23 (.74)
California	1970	0.01 (.35)	-0.25 (.43)	-1.10 (.39)	-0.59 (.42)
Colorado	1972	-0.42 (.34)	-0.28 (.42)	-0.01 (.48)	-0.64 (.55)
Connecticut	1973	0.25 (.39)	0.35 (.44)	-0.21 (.51)	0.33 (.54)
Delaware	1968	-0.97 (.58)	-0.18 (.70)	1.23 (.68)	0.37 (.70)
Florida	1971	-0.02 (.41)	-0.76 (.44)	-0.03 (.50)	0.02 (.55)

Georgia	1973	0.17 (.64)	-0.05 (.78)	-2.07 (.64)	-0.68 (.63)
Hawaii	1972	-0.27 (.74)	-0.13 (.88)	-0.62 (.97)	-0.85 (.90)
Idaho	1971	-0.72 (.51)	-1.10 (.52)	-0.20 (.61)	-0.66 (.65)
Indiana	1973	-0.15 (.66)	0.28 (.73)	-2.02 (.63)	-0.01 (.68)
Iowa	1970	0.46 (.47)	0.23 (.55)	-1.11 (.54)	-0.71 (.57)
Kansas	1969	0.67 (.40)	0.97 (.38)	0.44 (.40)	-0.30 (.44)
Kentucky	1972	-0.58 (.55)	-0.92 (.60)	0.04 (.65)	-1.25 (.59)
Maine	1973	-0.29 (.56)	0.43 (.61)	-1.10 (.64)	0.31 (.66)
Michigan	1972	-0.30 (.51)	-0.32 (.61)	-0.12 (.67)	-1.45 (.66)
Minnesota	1974	0.62 (.43)	-0.29 (.51)	0.24 (.57)	-0.22 (.64)
Missouri	1973	0.21 (.45)	0.34 (.51)	-0.95 (.61)	0.41 (.61)
Nebraska	1972	-0.88 (.29)	-0.24 (.34)	0.28 (.37)	-0.92 (.33)
Nevada	1973	0.25 (.40)	-0.28 (.50)	0.05 (.59)	0.36 (.63)
New Hampshire	1971	0.01 (.39)	-1.11 (.41)	0.12 (.41)	-0.43 (.45)
New Jersey	1971	-0.57 (.41)	-1.16 (.35)	-0.64 (.36)	-0.28 (.39)
New Mexico	1973	0.93 (.62)	-0.14 (.75)	-0.05 (.86)	0.30 (.92)
New York	1967	0.24 (.43)	-1.12 (.38)	0.59 (.38)	0.91 (.39)
North Carolina	1965	-1.08 (.51)	-1.20 (.52)	-0.75 (.54)	-1.49 (.41)
North Dakota	1971	0.11 (.42)	-0.52 (.54)	-1.24 (.51)	0.43 (.54)
Ohio	1974	0.24 (.51)	-0.86 (.70)	-0.67 (.58)	-0.58 (.68)
Oklahoma	1953	0.96 (.99)	0.57 (.72)	0.98 (.84)	0.84 (.92)
Oregon	1971	-0.36 (.39)	-0.98 (.38)	-0.42 (.43)	-0.23 (.44)
Rhode Island	1976	0.64 (.27)	0.13 (.31)	-0.15 (.36)	0.18 (.39)
Texas	1970	0.56 (.39)	-0.27 (.47)	-0.45 (.53)	-0.98 (.51)
Vermont	1972	-1.02 (.58)	-0.20 (.67)	-0.35 (.73)	-0.98 (.76)
Virginia	1975	-0.81 (.46)	0.53 (.50)	-0.60 (.59)	-0.91 (.69)
Washington	1973	0.53 (.51)	0.29 (.60)	-0.61 (.73)	0.96 (.64)
Wisconsin	1977	-0.40 (.39)	0.03 (.47)	0.38 (.51)	-0.08 (.56)

Notes: The parameter estimates were produced using the maximum likelihood method from the ARIMA analysis and each estimate, which is adjusted for the trend in birth rates, represents the change in birth rate following enactment of no-fault divorce law. Standard error of measurement is in parenthesis next to each adjusted parameter estimate. The adjusted parameter estimates are measured as number of births per 1,000 population per year.

*$p < .08$. **$p < .05$. p values are only reported for the estimates for the aggregate group of states.

Table 2

ANCOVA Results for Birth Rates Following the Enactment of No-Fault Divorce Law in the United States

Post-No-Fault Birth Rate							
	Group of 16 States		Group of 34 States				
Post-No-Fault Year	Least Squares Means	*SE*	Least Squares Means	*SE*	t^a	R^2	*p*
Postlaw Year 1	17.61	.34	16.20	.23	3.25	.87	.02
Postlaw Year 2	17.53	.39	15.83	.26	3.42	.82	.001
Postlaw Year 3	17.19	.44	15.78	.29	2.58	.75	.01
Postlaw Year 4	16.84	.45	15.82	.30	1.81	.69	.08

Note. Least squares means are adjusted for the prevailing trend in births (i.e., the average birth rate for the 10 years prior to the enactment of no-fault divorce law), and are measured as number of births per 1,000 population per year.
[a]Difference between the group of 16 states and the group of 34 states on post-no-fault birth rate.

No-Fault Divorce Law and Fertility

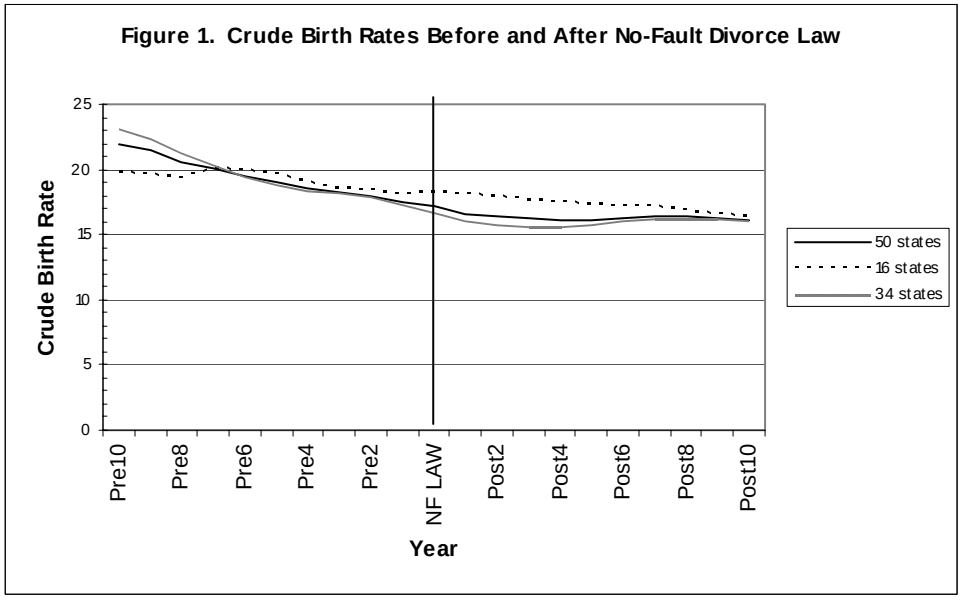

Figure 1. Crude birth rates before, during, and after the enactment of no-fault-divorce law for the entire group of 50 states, the group of 34 states, and the group of 16 states. The crude birth rates are measured as number of births per 1,000 population per year. NF LAW = the year of enactment of no-fault divorce law across the 50 states; Pre1 - Pre10 = the 10 consecutive pre-no-fault divorce years across the 50 states; and Post1 - Post10 = the 10 consecutive post-no-fault divorce years across the 50 states.