

Tours July 095

We will prepare a Power Point Presentation limited to the allocated minutes

Born Unwanted: 35 Years Later

Observations from the Prague Study*

Henry P. David

Transnational Family Research Institute, Bethesda, MD, USA

and

Zdenek Matejcek

The Prague Psychiatric Center, Prague, Czech Republic

*Prepared for presentation at the IUSSP International Population Conference, Tours, France, 18-23 July 2005. This paper builds on previous reports of the Prague Study.

9/05/04

One of the long-held beliefs among mental health professionals is that being born unwanted carries the risk of negative psychosocial development. Although there has been much discussion of the dynamics of intended and unintended conceptions, and of wanted and unwanted pregnancies and subsequent voluntary or involuntary child rearing, it has seldom been possible to conduct follow-up studies from childhood to adulthood of children unwanted at conception or during early pregnancy. Most often, prevailing legislation and/or the absence of national population registers have made very unlikely even the prospect of organizing follow-up or pair-matched control studies.

The Setting

Following decriminalization of abortion in the Soviet Union, the Government of Czechoslovakia liberalized its abortion statute in December 1957, providing termination of pregnancy on medical and “other” grounds during the first three months of gestation. Approval of a woman's request for pregnancy termination was the responsibility of the District Abortion Commission. If that Commission denied the request, the woman had the right to appeal to a Regional Appellate Abortion Commission, whose decision was final. Requests were denied mostly because the woman had presented false or insufficient reasons for abortion, or because she was more than 12 weeks pregnant, or because another pregnancy had been terminated during the immediately preceding six months. Appealing a denial and making a second request to terminate the same pregnancy constituted empirical confirmation that the pregnancy was strongly unwanted, at least in its early stages. The unique circumstances that made the Prague

Study possible, the sample selection process, and findings from earlier follow-up waves have been more fully described in previous publications. (e.g., Matejcek, Dytrych, and Schüller, 1978, 1988; David, Dytrych, Matejcek, and Schüller, 1988; and David, Dytrych, and Matejcek, 2003).

During the initial period of our research the sociopolitical situation in the former Czechoslovakia was rigid and unchanging. Under the pressure of public opinion and partially in reaction to our findings, the abortion law was revised in 1986. Abortion commissions were abolished. Termination of pregnancy became available on written request of the woman, provided the length of pregnancy did not exceed 12 weeks and there were no contradictory health indications.

One consequence of the fall of the Communist regime in 1989 was a far reaching transition in the lifestyles and values of young people. New opportunities arose for advancing to a higher career status, establishing an independent business enterprise, or traveling abroad. Marriage and childbirth were postponed to later ages. Contraceptive practice improved. Abortions declined from 107,000 in 1990 to 43,000 in 1997 (David, 1999).

The Sample

Fortuitous circumstances made it possible to gain access in 1970 to the 1961-1963 records of the Prague Appellate Abortion Commission. Of the 24,889 applications for abortion, 638 (2 percent) were rejected on initial request and again on subsequent appeal. After excluding 83 women who were not Prague residents or were citizens of another country, there remained 555 women whose request for termination of an

unwanted pregnancy had been twice denied. Of these, 31 women had moved out of Prague; 9 had given false addresses on their abortion applications; 6 were found not to have been pregnant; and 8 were untraceable for other reasons. Of the 501 women for whom information was available, 316 (63 percent) had carried their pregnancies to term while resident in Prague. Of the remaining 185 women (37 percent), 43 had obtained legal abortions after requesting termination from another district abortion commission; 80 were alleged to have aborted spontaneously (a percentage twice that normally expected); and 62 had no record of having given birth.

The 316 traceable Prague women gave birth to 317 live children. Of these, 6 died (5 during the first year) and 19 were adopted, a proportion exceeding the national average by more than 30 times. An additional 39 children had moved with their parents from Prague and 2 were placed in institutional care. Four mothers denied ever having had a child, although hospital records showed that they had delivered one. Three women had died, and the children of 3 others were living with relatives in rural areas. Only 7 mothers refused to cooperate with the research project.

The remaining 233 women and their children were located in Prague when the research study was initiated. However, 13 of the children could not be successfully pair-matched, thus reducing the sample to 220 children, 110 boys and 110 girls. The 185 Prague women who had managed to avoid giving birth, were not included in the study. They represent perhaps an even greater degree of pregnancy unwantedness than those women who carried to term after two requests for abortion had been denied.

The Controls

Each unwanted pregnancy (UP) child was pair-matched at age 9 with an accepted pregnancy (AP) control child whose mother's name was not found on the abortion request registers. Pair matching of children was for age, gender, birth order, number of siblings, and school. Mothers were matched for age, socioeconomic status (as determined by their and their partners' educational level), and by the partner's presence in the home (that is, completeness of the family). All the children were reared in two-parent homes, although sometimes with a father substitute in lieu of the biological father. To include as many of the UP children in the study as possible, it was necessary to match some of the three-child UP families (where one or two additional children were born after the UP child) with two-child AP families. There were 50 onlychildren (no siblings) in the UP sample and among the AP controls.

Hypotheses

The theoretical assumption underlying the study evolved from the concept of *psychological deprivation* (Langmeier and Matejcek, 1975). It was believed that if there is a continuum of depriving conditions (ranging from a child's isolation in an institutional setting to relatively mild emotional neglect in a dysfunctional family), there is also likely to be a continuum of consequences (from severe to relatively mild). This assumption underlies the concept of *psychological subdeprivation* (Matejcek, 1987).

The basic hypothesis to be tested at the first three follow-up waves was that the differences between children born from explicitly unwanted pregnancies and children born from accepted pregnancies would be to the disadvantage of children born from unwanted pregnancies. Disparities were expected to be apparent in their medical

history, social integration, educational achievement, psychological condition, and family relations. This expectation, together with the widely accepted concept that boys are more vulnerable than girls to adverse social-environmental conditions, led to the prediction that UP boys would suffer relatively more than UP girls (e.g., Bowlby, 1969).

It was understood from the beginning that although the UP group was selected on the basis of unwantedness during early pregnancy, many of the UP children were likely to become accepted, or indeed loved, after they were born. This expectation was fostered by the observation that those women most determined not to give birth had avoided doing so, while others had given up their children for adoption or permanent placement in institutions and foster families.

As the study progressed through its first three follow-up waves (ages 9 - 23), it was gradually realized that previously unmeasured potential confounding factors created some difficulties in interpreting the findings. However, confounding factors could be controlled more rigorously and efficiently by including the siblings of both the UP and AP study participants. This was done in follow-up waves 4 and 5, conducted at ages 30 and 35, respectively.

First Follow-Up Wave: Age 9

Procedures, available records, and findings are described in Matejcek et al. (1978, 1988). Review of early childhood records showed that the UP and AP children had started life under similar conditions. There were no statistically significant differences in birth weight or length, in the incidence of congenital malformation, or in signs of minimal brain dysfunction. However, the UP children were breastfed for a

significantly shorter time or not at all. They also tended to be slightly but consistently overweight. At age 9, both groups obtained similar mean scores on the WISC - 102 for the UP children and 103 for the AP controls. However, the UP children received lower school grades in the Czech language and were rated less favorably on school performance, diligence, and behavior by their teachers and mothers. On sociometric scales, the UP children were significantly more often "rejected as a friend" by their school mates than were the AP controls. Compared to the AP mothers, the UP mothers perceived their sons less favorably than their daughters.

To develop an aggregate indicator of maladaptation, 60 factual items were selected from the case history material, questionnaires, and other psychological assessment methods, which together yielded a Maladaptation Score (MS), reflecting negative qualities, lack of maturity, or demonstrated problem proneness in the socialization process. The child's MS was formed by summing his/her "negative points." The group identity of individuals remained unknown when the MS data were scored and tabulated,

The UP children had significantly higher maladaptation scores than the AP controls. The boys' mean scores were considerably higher than the girls. The highest scores were obtained by the 50 UP only children, while the 50 AP only children had the lowest. Among the UP boys, the only children had the highest maladaptation scores.

The mothers' maladaptation scores were created analogously, based on negative indicators selected from the case histories, structured interviews, questionnaires, and medical records. The UP mothers' maladaptation scores were significantly higher than the AP mothers' scores and were significant predictors of the

child's maladaptation in both the UP and AP samples. A regression analysis conducted with the combined UP and AP samples showed that, in order of statistical significance, the significant predictors of the child's maladaptation score were gender, mother's maladaptation score, and minimal brain dysfunction, plus unwantedness *per se*. This finding suggests that unwantedness is a significant predictor even if its predictive contribution is adjusted for the effect of the mother's personality. Otherwise healthy and intelligent UP children seemed, in the aggregate, to become less adaptive, less socially mature, and less prepared to cope with the demands of social life than their AP counterparts.

Follow-Up Wave Two: Age 14-16_

The second follow-up wave was conducted in 1977 when the children were 14 - 16 years old (Dytrych et al.,1988). A 98% follow-up rate was attained. Previously nonsignificant differences in school performance reached statistical significance. This difference was not so much in UP children failing more often, but rather in their being substantially underrepresented among students graded above average or higher. They rarely appeared on any roster of excellence. Similar findings were noted in teachers' ratings. As compared to the AP controls, a significantly larger number of UP children did not continue their education to secondary school. Instead, they became apprentices or started jobs without prior vocational training. In all the areas sampled, earlier differences had not only persisted but widened. There was also more discordance between the mothers' and the fathers' parental warmth with UP parents perceived discordantly, one as warm and the other as cold.

Follow-Up Wave Three: Age 21-23

Findings from the third follow-up wave in 1983-1984 reflected a significantly greater problem proneness among UP than AP study participants, now 21-23 years old, tending to confirm the predictions of the maladaptation scores obtained at age 9 (Dytrych et al, 1988). Of those interviewed, less than one-third as many UP as AP respondents said their lives had developed as expected, and more than twice as many stated that they had encountered more problems than anticipated. Similarly, a significantly smaller proportion of UP mothers than AP mothers expressed satisfaction with their child's development, and a significantly larger proportion expressed dissatisfaction with their child's present educational and social status.

Compared to the AP controls, the UP young adults reported significantly less job satisfaction, more conflict with co-workers and supervisors, fewer and less satisfying relations with friends, and more disappointments in love. More were dissatisfied with their mental well-being and actively sought or were in treatment. Twice as many UP participants than AP controls had been sentenced to prison terms.

A Psychosocial Instability Score was constructed on the basis of structured interview responses to 37 items considered indicative of unsatisfactory or problematic relationships. An aggregate measure, it was constructed on a similar basis as the Maladaptation Score. The means for all examined UP study participants and AP study participants showed highly significant differences ($p < .001$). The differences in what the study participants said about themselves at ages 21-23 tended to be even greater than the differences in what parents, teachers, and schoolmates had said about them more than a decade earlier. However, the previously noted gap between UP boys and UP

girls at age 9 had almost disappeared (David, 1992; Dytrych et al., 1988; Matejcek et al., 1992a, 1992b).

Follow-Up Wave Four: Age 30.

The fourth follow-up wave was conducted in 1992-1993 when the study participants were about thirty years old (Kubicka et al., 1995). This time, all siblings of the original UP and AP participants were asked to cooperate. The same data-collection methods were used with the siblings as with the original UP and AP participants. The reason for including the siblings was to put the hypothesis of the negative effect of unwanted pregnancy on the psychological development of UP participants to a harder test than in the first three follow-up waves. The differences observed between the UP and AP participants on the first three follow-up waves could be attributed not only to unwantedness of pregnancy but also to other conditions correlated with unwanted pregnancy which characterize the family into which an unwanted child is born, e.g., higher tension between parents, more frequent divorces, more frequent parental psychopathology — compared to families into which an accepted child is born. Using the terminology of behavioral genetics (Plomin and Daniels, 1987), the distinction was made between shared (by siblings) and nonshared (specific for a particular child) family environment. The hypothesis that the effect of unwanted pregnancy is a nonshared (by siblings) effect was tested .

About 90 percent of the original UP and AP participants as well as their siblings cooperated in the fourth follow-up data-collection wave. Although the UP participants still manifested less favorable psychosocial adaptation at age 30 than the pair-matched

AP controls, the differences had narrowed. Moreover, the differences were now larger between UP and AP women than between the men. More UP than AP women registered as unmarried or frequently divorced, or having difficulties in parenting, or unemployed. No similar differences in these areas were observed between UP and AP males at age 30. Psychiatric care (any time in life) was reported significantly more often among the UP participants than among their siblings or AP controls.

Of the siblings included in the data analysis, 73 percent were older than the original participants. Comparing the original UP and AP participants, the UP participants were found to have lower average scores on Gough's Socialization Scale, higher scores on a Czech Depression Scale, and lower scores on a Social Integration Scale (based on objective items such as absence of criminality, nonregistration for alcohol abuse, educational level, etc.). However, some of the less favorable characteristics of the UP participants were shared by their siblings. In an analysis excluding the 'onlies' it was found that the siblings of the UP participants also had lower scores on Gough's Socialization Scale than the AP participants and their siblings. The same was found for educational level. A nonshared-by-siblings effect of unwanted pregnancy was found with regard to the anxiety and depression scales. This nonshared effect was, however, limited to women. Women from unwanted pregnancies had higher average anxiety and depression scores than their female siblings and the original AP women (Kubicka et al., 1995).

Follow-Up Wave Five: Age 35

In the 1996-1997 follow-up wave data were collected on both the original UP and

AP participants (now about 35 years old) and their siblings (Kubicka et al., 2002) . Face-to-face structured interviews of about one hour duration were conducted in the interviewees' homes. A 75 percent response rate was achieved. Being born from an unwanted pregnancy was significantly related to psychiatric treatment in adulthood. The UP participants became psychiatric patients (especially inpatients) more frequently than the AP controls and also more often than their siblings. The use of siblings as controls demonstrated that not only the UP participants but also their siblings included higher percentages of poorly socialized individuals than the AP controls and their siblings. Both genetic and environmental explanations may be considered for the finding that in UP families a larger percentage of all children were undersocialized than in the AP families. Alcohol abuse, heavy smoking, and criminality were not found to be related to unwanted pregnancy (Kubicka et al., 2002).

Commentary

The first three follow-up waves of the Prague Study showed that although differences between UP study participants and AP controls matched on sociodemographic variables were not dramatic and changed over time, the differences in psychosocial development were consistently in disfavor of the UP participants, especially for those who were only children. The UP participants were not so much over represented on extremely negative indicators as they were under represented on any indicator of excellence.

Further support for the hypothesis, positing negative effects of unwanted

pregnancy, was found in the fourth and fifth follow-up waves which included siblings and controlled more rigorously for confounding effects. In both data sets UP participants reported that they had been or were psychiatric patients (especially inpatients) more frequently than their siblings or the AP controls. The use of siblings as controls was a very conservative test of the risk- factor hypothesis because the occurrence of an unwanted pregnancy and the birth of a child from such a pregnancy most likely had a significant influence on the mental health of the parents and the family environment, making the siblings less than ideal controls (Kubicka et al., 2002).

To the best of our knowledge, the Prague Study is the only one that used as controls individuals born of accepted pregnancies to other parents as well as siblings of both UP and AP participants and found negative effects of being born from an unwanted pregnancy on adults' mental health. Our findings may underestimate the effects of unwantedness when it is considered that those Czech women who were truly determined not to give birth managed not to do so.

Ours is a single study conducted under specific sociopolitical circumstances and unlikely to be easily replicable. Although different cultural conditions and contexts might lead to different findings in other countries, the Prague Study lends support to the hypothesis that being born from an unwanted pregnancy entails an increased risk for negative psychosocial development and mental well-being. Although our observations are open to discussion, the implications of the Prague Study for social and developmental psychology in general, and for mental health and public health policy and responsible parenthood, in particular, deserve attention (Russo and Zierk, 1992; David

and Lee, 2001).

References

- Bowlby, J. (1969). Attachment and loss. London: Hogarth.
- David, H.P. (1992). Born unwanted: Long-term developmental effects of denied abortion. Journal of Social Issues, 48, 163-181.
- David, H.P. (Ed.). (1999). From abortion to contraception: A resource to public policies and reproductive behavior n Central and Eastern Europe from 1917 to the present. Westport, CT: Greenwood Press.
- David, H.P., Dytrych, Z., Matejcek, Z., and Schüller, V. (Eds.)(1988). Born unwanted: Developmental effects of denied abortion. New York: Springer; Prague: Avicenum, 1988; Mexico City: EDAMEX, 1991.
- David, H.P., Dytrych, Z., and Matejcek, Z. (2003). Born unwanted: Observations from the Prague Study. American Psychologist, 58, 224-229.
- David, H.P. and Lee, E. (2001). Abortion and its health effects. In Worell, J.(Ed.). Encyclopedia of women and gender. San Diego, CA: Academic Press, 1-14.
- Dytrych, Z., Matejcek, Z., and Schüler, V. (1988). The Prague cohort: Adolescence and early adulthood. In H.P. David, ,Z.Dytrych, Z. Matejcek, and V. Schüller (Eds.) Born unwanted: Developmental effects of denied abortion. New York: Springer, 87-102..
- Kubicka, L., Matejcek, Z., David, H.P., Dytrych, Z., Miller, W.B., and Roth, Z. (1995). Children from unwanted pregnancies in Prague, Czech Republic revisited at age Thirty. Acta Psychiatrica Scandinavica, 91, 361-369.

- Kubicka, L., Roth, Z., Dytrych, Z., Matejcek, Z., and David, H.P. (2002). The mental health of adults born from unwanted pregnancies, their siblings, and matched controls; A 35-year follow-up study from Prague, Czech Republic. Journal of Nervous and Mental Disease, 190, 653-552.
- Langmeier, J. and Matejcek, Z. (1975). Psychological deprivation in childhood. New York: Halstead; Brisbane: Brisbane University Press, 1975.
- Matejcek, Z. (1987). Concept of psychological subdeprivation. (In Czech). Psychologia a patopsychologia dietata, 22, 419-428.
- Matejcek, Z., Dytrych, Z., and Schüller, V. (1978a). Children from unwanted pregnancies. Acta Psychiatrica Scandinavica, 57, 67-90.
- Matejcek, Z., Dytrych, Z., and Schüller, V. (1978b). The Prague cohort through age 9. In H. David, Z. Dytrych, Z. Matejcek, and V. Schüller (Eds.) Born unwanted: Developmental effects of denied abortion. New York: Springer, 53-86.
- Matejcek, Z., Dytrych, Z., and Schüller, V., (1992a). On the prognosis of children from unwanted pregnancies (In German). Der Kinderarzt, 23, 1838-1842.
- Matejcek, Z., Dytrych, Z., and Schüller, V. (1992b). On the prevention of psychological subdeprivation (In German). Der Kinderarzt, 23, 1843-1845.
- Ploughman, R. and Daniels, D. (1987). Why are children in the same family so different from one another? Behavioral and Brain Sciences, 10, 1-60
- Russo, N.F. and Zierk, K.L. (1992). Abortion, childbearing, and women's well-being. Professional Psychology: Research and Practice, 23, 269-280.

Authors' Notes

The Prague Study was funded at various times by the (U.S.) National Institute of Child Health and Human Development (Grants HD 05569 and HD 25574 to the Transnational Family Research Institute) , the Ford Foundation, the World Health Organization (Geneva and Copenhagen offices), the World Federation for Mental Health Committee on Responsible Parenthood, the Czechoslovak State Research Plan, Grants 289-4 and NF/5536-03 of the Internal Grant Agency of the Ministry of Health of the Czech Republic to the Prague Psychiatric Center, and the Research Support Scheme of the Open Society Foundation (Grant 85/1999)

We wish to express our gratitude and appreciation to the many colleagues who have encouraged the Prague Study with their helpful suggestions over the years, especially Cyril Höschl, Ludek Kubicka, Karla Topicova, Zdenek Roth, Warren B. Miller and the late Herbert Friedman and Vratislav Schüller. A special debt is owed to our colleague Zdenek Dytrych who worked with us for over 30 years until his death in 2002.

Correspondence concerning this article may be addressed to Henry P. David, Transnational Family Research Institute, 8307 Whitman Drive, Bethesda, MD 20817. Electronic mail may be sent to henrydavid@comcast.net