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NORWEGIAN FERTILITY SURVEY 1977

A SUMMARY OF FINDINGS

By
Lars Østby

FRUKTBARHETSUNDERSØKELSEN 1977

ET SAMMENDRAG AV RESULTATENE

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FORORD

Denne artikkelen er et opptrykk av World Fertility Survey, Summary of Findings No. 29, November 1981. Den bygger på NOS B 197 Fruktbarhetsundersøkelse 1977, Statistisk Sentralbyrå, Oslo, 1981 og Turid Noack og Lars Østby: Fruktbarhet blant norske kvinner, SØS 49, Statistisk Sentralbyrå, Oslo, 1981.

Artikkelen ble skrevet på oppfordring fra World Fertility Survey for å gjøre resultatene fra den norske fruktbarhetsundersøkelsen kjent på samme måte som resultatene fra andre land som deltar i WFS.

Statistisk Sentralbyrå, Oslo, 1. desember 1981

Arne Øien

PREFACE

This article is a reprint of World Fertility Survey, Summary of Findings No. 29, November 1981. It is based upon Fertility Survey 1977, NOS B 197, Central Bureau of Statistics, Oslo, 1981 and Turid Noack and Lars Østby: Fertility Among Norwegian Women, SES 49, Central Bureau of Statistics, Oslo, 1981.

It was written on request from the World Fertility Survey to make the results from the Norwegian Fertility Survey known by the scientific and educational communities, in the same manner as results from other countries participating in the WFS.

Central Bureau of Statistics, Oslo, 1 December 1981

Arne Øien

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THE NORWEGIAN FERTILITY SURVEY 1977

A SUMMARY OF FINDINGS

1. THE SETTING

Norway is situated between 58° N and 71° N, and has very complex natural conditions. It is habitable even on the highest latitude due to prevailing southwesterly winds. Norway is a mountainous country, with 50 per cent of the land area above the forest line, 21 per cent is productive forest and only 3 per cent is agricultural area.

The country has a very dispersed settlement. The land area of 307 500 km^2 had 4 092 539 inhabitants at the end of 1980, 13 inhabitants per square km. In Europe only Iceland is less densely populated. A large share of the population is concentrated around the capital in the south-east: Oslo and 3 counties along the Oslofjord have 30 per cent of the inhabitants on 3.6 per cent of the land area.

Norway is not as urbanized as most other countries in Western Europe. In 1980 only 29 per cent of the population lived in towns with more than 50 000 inhabitants, and 70 per cent of the population lived in densely populated areas (with more than 200 inhabitants).

The number of inhabitants passed one million in 1825, a few years after the beginning of the demographic transition. The second million was reached in 1865, the third in 1941 and the fourth in 1975. The latest population projection indicates that the number of inhabitants will drop below 4 million about the year 2000 if the low fertility level of 1977 - 1980 continues.

During the last 100 years, Norway has undergone a transition from being among the poorest countries in Western Europe to a position among the most prosperous countries in the world. In 1875, more than 50 per cent of the economically active population had their work in agriculture and fishing. In 1980 less than 10 per cent took their living in these industries, 30 per cent worked in manufacturing and construction industries and the rest belonged to the service industries. In recent years, growth of employment has particularly taken place in the public sector.

During the 70s, Norway has developed significant oil and gas fields in the North Sea. The oil activities are of great importance to the national economy.

Before 1950, labour force participation among married women was very low. Later, participation rates have been increasing, and in 1980 the average participation rate was 60 per cent. More than 50 per cent of economically active married women had part-time employment.

The educational system has been repeatedly reorganized and expanded since 1960. Compulsory school attendance has been extended from 7 to 9 years and, particularly in the last 10 years or so, school attendance at higher levels has been increasing, particularly among women. From 1978, girls are in majority in the secondary school.

Norway has had a declining trend in fertility in the 20th century, with an exception of the period 1935 - 1965. The total fertility rate for selected years was as follows:

1900	1930	1946	1965	1969	1972	1975	1977	1980
4.4	2.1	2.74	2.95	2.70	2.38	1.98	1.75	1.72

The cohort fertility rate for women born in the 20th century has fluctuated less than the period fertility rate. The highest rate, 2.6 children, is registered for women born in 1934. Women born in 1907 have the lowest rate of completed fertility on record so far, with an average of 2.0 children per woman. The 1950 cohort is expected to end up at the same level, and the younger generations of women will apparently stop at an even lower level of fertility.

The mortality in Norway is low. The expectation of life at birth was 72.3 years for males and 78.7 years for females in 1977-78.

The Norwegian government has not formulated any population policy, but after 6 years with fertility below the replacement level, there seems to be a growing concern about the low number of births.

2. THE SURVEY

The Norwegian Fertility Survey 1977 was partly designed to be a contribution to the World Fertility Survey and aimed at participation in the comparative analyses of WFS and ECE. But it also aimed at furnishing data particularly suited for descriptive and analytical purposes in a national context. For instance, data were wanted on fertility for groups that cannot be identified in the Central Register of Persons which is the basis for the current Norwegian population statistics; we wanted data on fertility intentions; and we wanted data that could be expected to elucidate the reasons for observed fluctuations in fertility.

The survey was carried out by the Central Bureau of Statistics of Norway, with financial and technical support from the Norwegian Research Council for Sciences and the Humanities and from the Ministry of Consumer Affairs and Government Administration. The interviewing took place mainly in October and November 1977, with a minor part of the follow-ups in January - March 1978. The questionnaire was based on the WFS core questionnaire for low-fertility countries and the modules from ECE. This basis was adapted to the Norwegian reality, and we also included questions of special interest for an analysis of fertility in the Norwegian society.

The interviews were undertaken by the female members (250) of the regular field staff of interviewers of the Central Bureau of Statistics. The interviewers went through a special one-day training course for this particular survey. The average time of interviewing was 61 minutes.

The sample was 5 047 women 18-44 years of age. We used the basic sampling plan of the Central Bureau of Statistics. This is a two-stage sampling procedure with equal selection probability for every woman of eligible age in the country. The first stage in the sample is the selection of one primary sampling unit within each of 102 strata, stratification criteria being population size, geographical region and type of economic activity in the unit. The sampling units are constructed on the basis of the municipalities. Municipalities with 3 000 inhabitants or more form separate sampling units, whereas those with less than 3 000 inhabitants according to the Census of 1970, are incorporated into composite units, so that each unit has at least 3 000 inhabitants.

The largest municipalities (more than 30 000 inhabitants) form their own, separate strata and are so-called self-representing. In the second stage, a sample of persons in each sampling unit is drawn from the Central Register of Persons (CPR). Persons who had changed their address after the CRP was last updated were, within certain economic limits, followed up at their new addresses. We also followed up those cases among the initial refusals which did not appear to be too firmly negative.

Interviews were successfully completed with 4 137 women of the sample. The non-response rate was 18 per cent, a comparatively low figure for interview surveys undertaken by the Central Bureau of Statistics. Just over 50 per cent of the non-response was due to denials. The non-response rate was lower among the married (14 per cent) than among the unmarried (27 per cent). Non-response was also comparatively high in the oldest age group (40-44 years), due to denials, and in the youngest (under 25 years) due to non-contact. Utilizing data from the Central Register of Persons, we are also able to calculate non-response rates separately for women with and without children. Among women without any live births, the non-response rate was 25 per cent, as compared to 14 per cent among women with at least one live birth. These differences in the non-response rates increased with increasing age. It was anticipated that the special character of the survey might cause a particularly high non-response rate in regions where strong religious attitudes p vail, but we did not encounter any such problems.

This summary is based on the first descriptive analysis of the main topics of the survey. (Noack and Østby: Fertility among Norwegian Women, SES 49, Central Bureau of Statistics, Oslo 1981.) The emphasis is on subjects which are not covered by the current population statistics. More thorough analyses are planned, first on the timing and spacing of children and the use of contraception. The statistical report with 131 tables is published by the Central Bureau of Statistics as NOS B 197 Fertility Survey 1977.

3. FINDINGS

3.1. COHABITATION AND MARRIAGE

In Sweden and Denmark the practice of cohabitation without marriage increased strongly in the 1970s. As we did not have good data about this phenomenon in Norway, we included questions about cohabitation in the questionnaire for the Fertility Survey. We tried to register every period a woman had been living together with a man, whether they were formally married or not.

Table 1. Women in different age groups, by cohabitational status at the time of the interview. Per cent

Age in 1977 (year of birth)	Total	Cohabitational status						Number of women
		In cohabitation			Not in cohabitation			
		Total	Married	Cohabiting without marriage	Total	Never married	Previously married	
All	100	76	71	5	24	20	4	4 137
18-19 (1958-59)	100	14	8	6	86	86	0	320
20-24 (1953-57)	100	57	45	12	42	40	2	846
25-29 (1948-52)	100	86	81	5	14	12	2	931
30-34 (1943-47)	100	89	87	2	11	5	6	866
35-39 (1938-42)	100	88	86	2	12	4	7	640
40-44 (1933-37)	100	88	87	1	11	3	8	534

Table 1 shows the cohabitational status of the women at the time of the interview. If we, for a moment, consider only the formal marital status, 71 per cent were married and another 5 per cent were previously married. The proportion never married decreases from 92 per cent among the youngest respondents to only 3 per cent among the oldest ones (40-44 years). Even when non-response is taken into account, less than 5 per cent of women between 40 and 44 years of age were never married. Among our respondents, 5 per cent stated that they lived in cohabitation without marriage. There was not given any definition of "cohabitation without marriage", but the context of the questions and the answers to them indicate that we have not registered more incidental partnerships. Cohabitation without marriage was most common among women in the first half of their twenties, but it occured in all age groups in the survey.

The proportion of women who had ever lived in a consensual union was far higher. The highest proportion was among women 23 years of age in 1977 (42 per cent), but even among women older than 40 years of age, more than 15 per cent had ever lived together with a man without being married to him. Most of these cohabitations served as an introduction to marriage, 2/3 of the reported cohabitations without marriage were succeeded by the formal marriage of the couple. Consequently, many consensual unions functioned as trial marriages or as an intermediate stage before marriage. Cohabitation without marriage was only to a limited extent a real alternative to a formally contracted marriage. When not ending in a legal marriage, cohabitation was clearly less stable than a formal marriage. The fertility of unmarried cohabiting women was higher than the fertility of single women, but much lower than the fertility of married women.

Throughout the survey, education is the main variable employed to describe social class. The level of education seems to be important for the cohabitational pattern, particularly for the age at which a woman starts her first cohabitation. This point may be illustrated by looking at women 20-24 years of age at the time of the interview. Among women in this age group, with only compulsory education (9 years of schooling) 54 per cent had started their first cohabitation before the year they reached 20 years of age. Among women with education at the university level (more than 12 years of schooling) only 9 per cent had started their first cohabitation by the age of 20. The difference in percentages decreases when we consider higher age levels, but it does not vanish totally.

The development in the marital pattern according to the current population statistics may be summarized as follows: A decline in the age at marriage until around 1970 and an increase since 1975. An increased proportion of married persons at all ages up to 1975, and then a decrease. Decreased frequency of marriages (number of first marriages per 1 000 unmarried persons in each age group) for all persons above the age of 25 from the mid-1950s, decrease also for the younger persons from 1970. However, if the findings of the Fertility Survey are used as a basis, and if all cohabitations are considered, not only the marriages, it emerges that cohabitation without marriage appears to have gradually substituted some of the marriages. Thus, for the most age groups, the proportion cohabiting increased up to 1977. The cohabitation rate (the number of persons per year starting their first cohabitation per 1 000 persons who had never cohabited) was increasing for all age groups before 1970. Thereafter the frequency started decreasing, beginning in the oldest groups. As late as in 1977 no decrease had been noted in the frequency of cohabiting as far as teenagers were concerned.

The survey covers a low number of women with dissolved marriages, but we will nevertheless summarize the main results. The probalility that a marriage should end with divorce was increasing with decreasing age at marriage for women less than 30 years of age at the first marriage. Divorced women with low age at marriage did also have shorter duration of marriage before the divorce, than those divorcees that had married at a later age. The relationship between divorce rates and age at first birth was not as clear as the one with age at marriage. However, the divorce rates were very high for women with their first birth at 15 - 17 years of age, whereas it did not show any relationship with age at delivery for women giving their first birth after the age of 20. Women who had never given birth, had significantly higher divorce rates than parous women. The former group had divorce rates on a par with women who had had their first birth before marriage. Women who were pregnant when entering their marriage, had the same divorce rates as women who were not pregnant when marrying. Those who had been pregnant teenage-brides had lower divorce rates than those who had been non-pregnant teenage-brides. There were no consistent differences in divorce patterns between women according to level of education.

3.2. PREGNANCIES AND BIRTHS

All pregnancies were listed in the same pregnancy history form. We did not find it possible to ask any questions on wantedness status or planning status of the pregnancies. Comparisons with current population statistics, indicate that we have obtained a reasonable registration of births and stillbirths. However, there is a distinct underregistration of induced abortions. In 1976 and 1977 the underestimation is about 40 per cent of the registered legal induced abortions. The extent of underreporting is decreasing as we go back in time towards 1970. The incidence of spontaneous abortions is in accordance with estimates based on medical evidence, but in some subgroups we suspect an overreporting of spontaneous abortions at the expence of reports on induced abortions. The underestimation of induced abortions might also to some extent be due to a high rate of refusals to take part in the survey among women who have had induced abortions. Among those who took part, there may have been som reluctance to mention induced abortions to the interviewer.

Table 2. Pregnancies among women in different age groups, by outcome. Per cent

Age in 1977 (year of birth)	Number of pregnancies, total	Live birth	Stillbirth	Abortions			Number of pregnancies	Number of women	Percentage of women with at least one pregnancy
				Total	Spontaneous	Induced			
All	100	82	1	17	10	7	7 882	4 137	75
18-24 (1953-59)	100	72	1	27	11	16	651	1 166	38
25-29 (1948-52)	100	83	1	17	10	7	1 535	931	82
30-34 (1943-47)	100	83	1	16	10	6	2 110	866	91
35-39 (1938-42)	100	83	1	16	10	6	1 887	640	94
40-44 (1933-37)	100	84	2	15	9	6	1 699	534	95

Table 2 presents the registered pregnancies according to outcome. Three quarters of the respondents had ever been pregnant. Among women 35-44 years of age almost 19 out of 20 had been pregnant. When adjusting for non-response still as many as 93 per cent of the women in these age groups have been pregnant.

3.2.1. BIRTHS

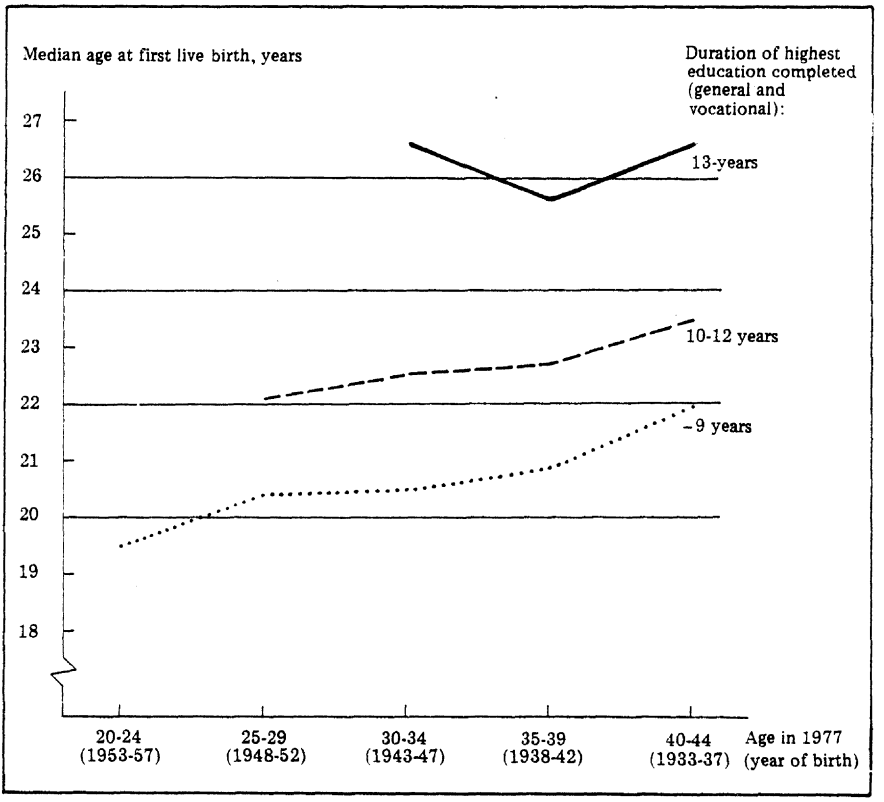
In the total sample, 68 per cent had given birth. Due to selective non-response, the rate among the respondents was 71 per cent. The rate was, of course, much higher among the older than among the younger women (see table 3). Among respondents between 35 and 44 years of age, 93 per cent had at least had one birth. This figure relates to all respondents irrespective of coital experience, cohabitational history or fecundity. Even if we take into account the underrepresentation of childless women among the respondents, it thus appears that an overwhelming majority of women have at least one birth during their fertile period. For instance, among respondents who had spent at least 20 years in cohabitation, as much as 99 per cent have had at least one birth.

Table 3. Women in different age groups, by number of births. Per cent

Age in 1977 (year of birth)	Total	Number of births					Average number of births	Number of women
		0	1	2	3	4-		
All	100	29	18	29	15	9	1,59	4 137
18-24 (1953-59)	100	70	20	9	1	-	0,41	1 166
25-29 (1948-52)	100	23	30	35	10	2	1,37	931
30-34 (1943-47)	100	11	14	44	23	8	2,05	866
35-39 (1938-42)	100	7	10	36	27	20	2,49	640
40-44 (1933-37)	100	7	10	28	27	28	2,71	534

The median age at first birth (the age at which exactly 50 per cent of the group had had their first birth) was 22-23 years for all cohorts in the survey, but we do not know yet whether the youngest cohorts will follow the same pattern. The median age at first birth showed considerable variation for women at different levels of education (see figure 1). Among all women 25-29 years of age (born 1948-52), who had only compulsory education, more than 50 per cent had got their first child before the age of 22. In the same cohort, the age at which 50 per cent of the women with more than 12 years of education had had their first child, was as much as 6-7 years higher.

Figure 1. Median age at first live birth for women in groups by education and age



The first births have to an increasing degree taken place out of wedlock. Of all the first-born in the survey, 86 per cent were born in marriage, 4 per cent in cohabitation without marriage and 10 per cent outside marriage. The proportion born out of wedlock among the first born children was doubled from the end of the 1950s (10 per cent) to the middle of the 1970s (20 per cent). Only one half of this increase is due to births within cohabitations without marriage. The younger the woman was at her first birth, the higher was the probability that it occured out of wedlock. The illegitimacy rate was clearly lower for women at higher educational levels than for women at lower levels.

About 40 per cent of the married couples had had their first child within the first 7 months after the wedding. This figure is not far from similar observations from the middle of the 19th century. During the last 20 years, the percentage has decreased, thus illustrating the weaker connection between marriage and child bearing. This connection varies geographically. In Northern Norway, the average time between the first marriage and the first birth was only one month, as compared with 12 months for the rest of the country. In Northern Norway, the younger cohorts, on average, had negative time difference between the first marriage and the first birth.

As was the case for the first birth, it seems that the age of the women at their second birth has changed only little over time. However, it is only women born 1933 - 1947 who, up to the interview, had experienced a sufficient number of second births to make estimation of trends possible. Among all women born 1933 - 1947, 50 per cent had had at least two births by the time they reached 26-27 years.

Usually, the second child comes a fairly short time after the first one. Among women 30-44 years of age, with at least two births, nearly 50 per cent had their second child within 2½ years after the first one. Only 1/4 of the women had 4 years or more between their first two births.

The time distance between second and third birth is slightly longer than the one between the first two births. It is not so usual to have second and third births very close together, and more than 1/3 of the women had at least 4 years between these two births.

The length of the periods between births are dependent upon the distance between marriage and the first birth. Those who got their first child within the first year of the marriage, have shorter intervals between the first three births than women with first birth 1-3 years after marriage.

Only women older than 34 years of age could be expected to have completed their child bearing at the time of the interview. In the absence of completed birth histories, we have compared the number of children at given ages for women belonging to different birth cohorts. Differences between the cohorts may be the result of changes in the timing of births as well as of changes in total fertility.

The timing and spacing of births show some small differences between the cohorts, but these differences do not appear to be of any significance. At the age of 39, women born 1933 - 1937 have had on the average 2.69 births. It seems very unlikely that women born 1938 - 1947 shall ever reach that fertility level. For them to do so, would imply a considerable increase in the age spesific birth rates for women in their 30s. Over the period 1966 - 1976, the birth rates for this age group had a decrease of about 50 per cent, but after 1976 the rates have been rather constant. For women 18-29 years of age (born 1948 - 1959) it is still to early to give any estimates of their completed fertility, but there are indications of a continued decrease in the cohort fertility.

Among the older women (35-44 years), 10 per cent have had only one birth, 33 per cent have had two births and 27 per cent have had three births. Almost 1/4 of these women have had four or more live births (see table 3). Women grown up in Eastern Norway have on an average had 2.3 children, whereas women from the other parts of the country have had 2.7 - 2.8 children.

The number of children is clearly dependent upon the age of the woman at the time of her first marriage; the younger the age at marriage, the higher the fertility. Women marrying as teenagers have on the average one child more than women marrying for the first time after the age of 25.

Because women at lower educational levels start their reproductive period at earlier ages than women at higher educational levels, and because the differences in birth intervals are rather small, there are considerable differences between the educational groups in the average number of children at given age levels up to the age of 30 years. At the age of 24 as well as at 29, women with 9 years of education or less had on the average, one child more than women with more than 12 years of education. From about the age of 30, the differences in average number of births are decreasing. At the end of their 30s, women at the lowest educational level have 0.5 birth more than women at the medium (10-12 years) and highest levels.

3.2.2. ABORTIONS

Approximately 10 per cent of the pregnancies were terminated by spontaneous abortion. A rate of about 10 per cent seems to be the usual outcome when the incidence of spontaneous abortion is estimated for a society of the same type as Norway and on the basis of the type of sample that was used here. The observed rate increased over time from 7 per cent among pregnancies ended in the 1950s to 12 per cent among pregnancies ended 1976-77. This increase may be explained by forgetfulness, but it might also be caused by a tendency to report newly performed induced abortions as spontaneous. Such a tendency was quite obvious within some subgroups. In interpreting the data, the underregistration of induced abortion reviewed in section 3.2 should be kept in mind.

The proportion of the pregnancies which were reported to have ended in induced abortion, was 2 per cent before 1964, 5 per cent in the period 1964 - 1970 and 11 per cent for pregnancies ending in the 1970s. This reflects the changing laws on abortion and changes in the practising of the various laws. Up to 1964, abortion could be performed only when it was necessary from a medical point of view. The number of legal abortions in Norway from this period is unknown, but might be estimated at 3-5 per cent of the number of births. Estimates of 3 000 legal and 7 000 illegal abortions have been given. In the period 1964 - 1976 the woman could get her doctor to apply for abortion to an abortion board at a hospital. The reasons stated in the law were mainly medical. During this time abortions increased from 4 per cent of the number of births to 27 per cent. The increase was in great part due to a successively more liberal interpretation of the law, particularly, to an increasing emphasis on socio-

medical and social criteria. From 1976 the social criteria were included in the law and from 1979 Norwegian women themselves have the right to decide on induced abortion during the first 12 weeks of the pregnancy. After 1975, the abortion rates have decreased.

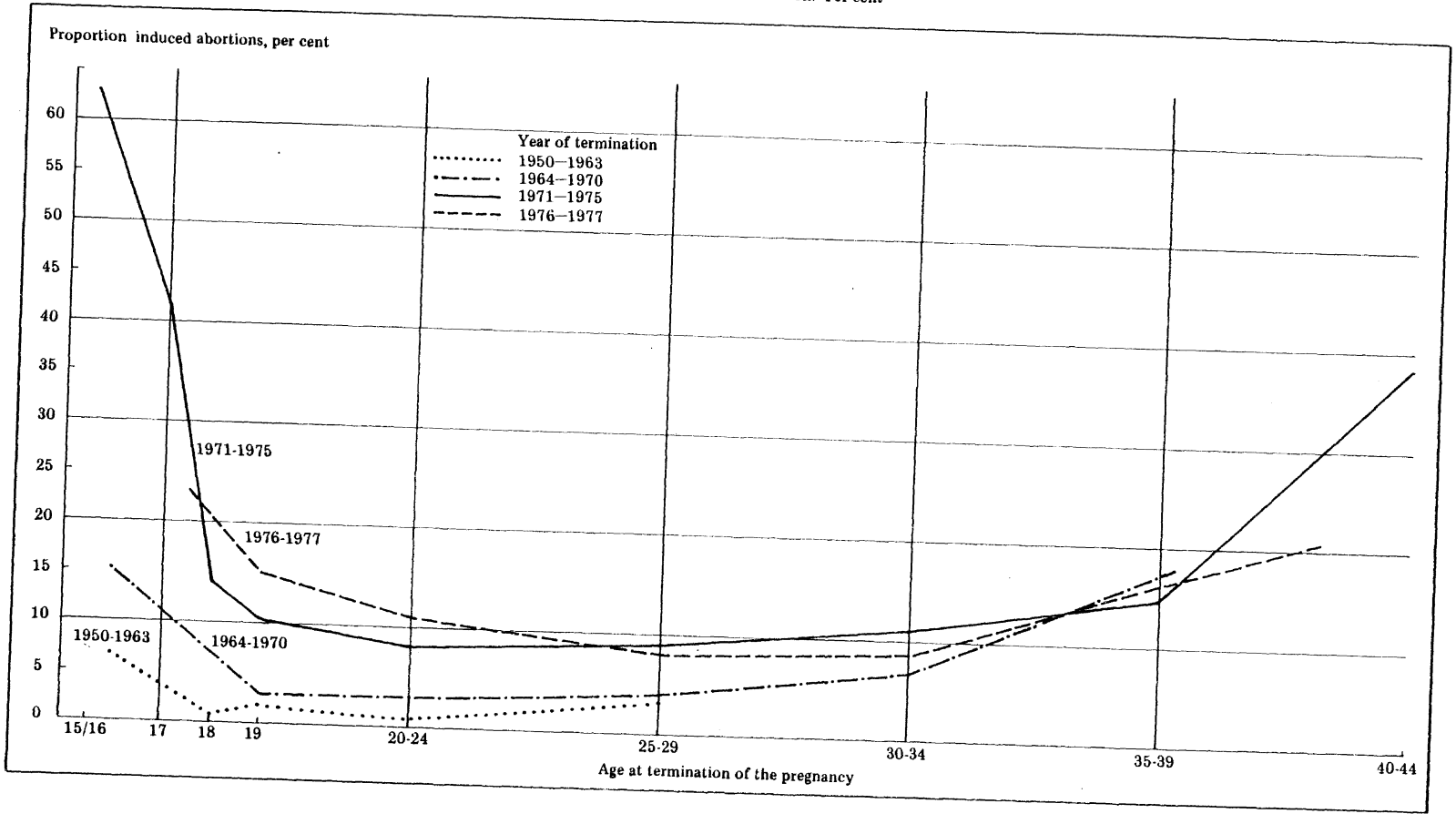
The increase in use of induced abortions from the end of the 1960s to the end of the 1970s were due to increase in possibilities for the young women to have their pregnancies legally terminated. Women in their late 30s had for a long time had relatively high possibility of obtaining an induced abortion if they wanted (see figure 2).

Induced abortions are most frequently used in two typical situations. First, when a young unmarried woman has her first pregnancy terminated, probably because a child would be very inconvenient to her educational plans or housing or family situation, or because her relationship to her partner was too uncertain. Due to the induced abortion, her first birth would be delayed, but it will probably occur later in her life. Secondly, induced abortion is often chosen by women who have had several pregnancies (and births) and do not want or manage another child. Under such circumstances, a comparatively high proportion of pregnancies terminated by induced abortion, have been registered.

The occurrence of repeated abortions in the Fertility Survey sample was not frequent enough to support a suspicion that induced abortion was used as a substitute for contraception, and the use of contraceptives was not substantially different among women who had had induced abortion from what it was among those who had not. Analyses of the time distance between the first and the second pregnancy, made it clear that induced abortion was not used for spacing purposes.

In contrast to previous assumptions, the social differences in the use of induced abortion were quite small, irrespective of how we define social groups. We have seen a slight tendency for women in the higher social classes to have higher rates of induced abortion than others. Particularly high abortion rates were registered among women under education. Their pregnancy rates were low, but when they became pregnant, they had higher abortion rates than other women of the same age, and the rates were increasing with increasing level of education.

Figure 2. Proportion induced abortions of the pregnancies, by year and age of the woman at termination. Per cent



3.3. USE OF CONTRACEPTION

When investigating the use of contraception, we concentrated on the group which was under risk of becoming pregnant. Use of contraception during the four weeks preceding the interview was registered for fecund, non-pregnant women who had had at least one sexual intercourse in the period. Previous use of contraception was covered by asking every woman who ever had had sexual intercourse about what kinds of contraception she had used for periods of at least three months. When comparing Norwegian data with data from other countries, these definitions of the risk group should be kept in mind.

Among those under risk of becoming pregnant during the last four weeks before the interview, 84 per cent had used contraception. The highest use rates occurred among teenagers (18-19 years) and women in their 30s. Nearly three out of four non-users stated that they wanted or did not mind having a child. The lowest rate of non-users not wanting to become pregnant was registered among women in their 20s. The rate was increasing with age.

Table 4. Percentage of women having used the different methods of contraception in the course of the last 4 weeks. Figures for age groups[1)]

Age in 1977 (year of birth)	All	Did not use contraception the last 4 weeks	Used contraception in the course of the last 4 weeks	Method(s) used[2)]								Number of women
				Withdrawal	Rhythm	Spermicides	Condom	Diaphragm	Pill	IUD	Unknown	
ALL	100	13	84	10	6	1	22	1	20	34	3	2 800
18-19 (1958-59)	100	10	87	10	4	1	30	1	30	21	3	140
20-24 (1953-57)	100	15	84	8	5	1	19	0	32	28	1	577
25-29 (1948-52)	100	14	83	5	4	1	19	1	21	38	3	700
30-34 (1943-47)	100	10	88	10	6	1	21	1	15	44	2	653
35-39 (1938-42)	100	11	85	14	9	3	24	3	12	34	3	428
40-44 (1933-37)	100	16	78	18	10	2	28	5	9	21	7	302

1) The table comprises non-pregnant fecund women who have had sexual intercourse during the last 4 weeks before the interview. 2) Some women used more than one method.

Table 4 gives details on the user rates for the various methods. The IUD was the most frequently used contraceptive method. 1/3 of the risk-group used this method. In addition, one out of five used the pill. Thus, more than 50 per cent of the women in the risk group used coitus independent methods. The use of IUD and the pill varied conciderably with age. The use of IUD was most common among women in their 30s, and decreasing both with increasing and decreasing age. The pill was dominating among users under 25 years of age. The differences in choice of non-coitus related contraceptive methods were greater when the women were grouped by number of pregnancies. More than 50 per cent of women who had had at least four pregnancies and were less than 35 years of age used IUD. This percentage was four times higher than that for the use of the pill in this group. Among women who had never been pregnant, the pill users were more than twice as numberous as the IUD users, regardless of age group.

Among the contraceptive methods which have to be decided upon and applied at every coitus, condom is the most common one. It was used by 22 per cent of the risk group. Among the teenagers and women in the beginning of their 40s, the use of condom was more frequent than any other method. Spermicides and diaphragm were virtually not in use, but withdrawal and rhythm were still of some importance, particularly among the older respondents.

The proportion using contraception increased slightly with increasing education within each age group. However, the use of the modern methods (IUD and the pill) did not correlate with education among women younger than 35 years of age.

When considering methods used for periods of at least three months, the pattern of use was mainly in accordance with the pattern described for the last four weeks prior to the interview (see table 5). Among women with coital experience 10 per cent had never used any method of contraception for as long a period as three months. Condom had been used by 52 per cent of the risk group, and was most frequently used in the first part of the sexually active period. Diaphragm and spermicides had not been used by the younger respondents, and are probably vanishing. The proportion who had used the pill (44 per cent) was higher than the proportion who had used IUD (34 per cent). Analysis of the changes of methods shows that many had tried the pill and abandoned it, whereas once a woman had started using the IUD, she seemed to have found her permanent method of contraception.

Table 5. Percentage of women having used the different methods of contraception for at least 3 months. Figures for age groups[1)]

Age in 1977 (year of birth)	All	No method for at least 3 months	At least 1 method for at least 3 months	Method(s) used for at least 3 months[2)]								Number of women
				Withdrawal	Rhythm	Spermicides	Condom	Diaphragm	Pill	IUD	Unknown	
ALL	100	10	89	27	14	7	52	12	44	34	1	3 941
18-19 (1958-59)	100	22	77	20	7	2	47	1	28	16	0	237
20-24 (1953-57)	100	10	90	20	10	3	48	3	53	29	1	786
25-29 (1948-52)	100	5	94	20	12	5	55	7	55	42	1	903
30-34 (1943-47)	100	8	91	29	16	8	57	14	47	45	1	858
35-39 (1938-42)	100	12	86	32	18	10	54	21	36	34	2	633
40-44 (1933-37)	100	16	83	40	19	10	47	22	23	19	2	524

1) The table comprises women with coital experience. 2) Some women have used more than one method.

Among the respondents 10 per cent stated infecundity, half of them because of sterilization. In 1/3 of the cases it was the husband (partner) who had been sterilized. Most of the sterilizations will probably have contraceptive purposes as main or contributory reason. Almost all cases of sterilization involve people with several children, and the frequency increases with increasing number of children. Sterilization is less frequent with increased education, probably connected with the fact that persons having high education have on an average fewer children than those with lower education.

Due to inequalities in the definition of the risk groups, comparisons of contraceptive patterns in different countries are difficult. However, it seems quite clear that the use of IUD is more common in Norway than in any other industrialized country. Everywhere else, the pill or condom is the most frequently used method. The reason why Norway diverges from her neighbours is not easily understood, but it seems reasonable to consider the role that the doctors play when women choose between the pill and the IUD. Furthermore, the resistance against taking medicines with known or suspected side effects may be greater in Norway than in the other countries.

The pill and IUD are comparatively safe methods, and in addition they have a crucial influence on the decision-making process of a couple. Those applying non-coitus-related methods take the decision on whether or not to have a baby independent of the circumstances connected to the sexual intercourse. Using these methods, one has to take a positive decision and action in order to attain the possibility of becoming pregnant. When using coitus-related methods, decision and action are needed at every intercourse in order to avoid pregnancy. Among the users of condom etc., a more incidental preference for having a child or even temporary lowered resistance against having a child, may easily result in a pregnancy. Among the users of coitus-unrelated methods, short-run changes in preferences will not have consequences for the use of contraception or for the risk of becoming pregnant.

3.4. ATTITUDES TO CHILDREN

This section of the questionnaire was partly based on the recommendations of the United Nations Economic Commission of Europe[1]) and deals with attitudes towards children and preferences for number and sex of future children. Compared with questions concerning actual events and characteristics, it is undoubtedly more difficult both to phrase attitude questions and to interpret the answers given to such questions. Not least does the interpretation of this type of data present a problem because the connection between attitude and behaviour may often be ambiguous.

Simple attitude questions, and in particular the various indicators of preferences in regard to number of children (ideal, desired and expected among others) have a long history in fertility surveys, but the same applies to the criticism of this type of questions.

All respondents were asked what they considered to be the ideal number of children for a family in Norway. The average ideal number given was 2.57. Teenagers and women between 35 and 44 years of age had somewhat higher average figures than women between 20 and 34 years. There was a marked concentration on the numbers two and three (92 per cent) as the ideal number of children. Practically nobody considered childlessness or only one child as ideal. In explaining the recent fertility decline, some writers have postulated an increasing prevalence of childless and one-child families. We have found that according to our figures

1) Report of Meeting held in Geneva 30 and 31 October 1975 CES/AC 43/12. UN 1975.

trends in actual number of children do not support such a hypothesis. When we consider the measures for preferred number of children we come to the same conclusion.

In the absence of completed fertility histories, we have asked the women about how many children they expect to get altogether. Total expected number of children shows a clear concentration on 2 and 3 children, but the concentration is not as pronounced as it is for ideal number of children. Only to a small extent, do women expect to be childless or one-child mothers.

To have 2 or 3 children seems to be well in accordance with general norms in the society. One can hardly expect to find very explicite motives for following this norms. Nevertheless, we approached the problem in two rather different ways. First, we asked all women not expecting (additional) children, to state the reasons for this. Secondly, we asked all women in the sample to rank, first, 5 general statements in favour of having children and then 5 general statements against having children.

When women were asked why they did not expect to have children in the future, most of them answered that they were happy with the number they already had. Own age, health problems and lack of surplus energy to look after (additional) children were also mentioned. Wishes to work outside the home, problems with looking after children, and bad housing or environmental conditions were mentioned comparatively seldom.

Due to the phrasing of the questions, we cannot make direct comparisons between the reasons women stated as important for themselves and the reasons they thought were important for women in general when they decided not to have (additional) children. The 5 specified statements on reasons for not having (additional) children related to:

1) problems in combining children and labour force activity,
2) worries about bringing up children,
3) the strain implied by pregnancies, births and care for new children,
4) economic problems and
5) lack of time for children.

The respondents ranked the problems according to importance in the above order.

We anticipated that sex preferences would be of minor importance in Norway. Still, we included one measure of such preferences. The majority answered that the sex of an expected child would not be important to them. Only one in five respondents stated a preference in regard to the sex of their future children. Among these, a majority preferred to have girls. In this connection, we should remember that the Fertility Survey 1977 had only female respondents.

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