Demands made on general practice by women before and after an abortion

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SUMMARY. A retrospective study of the medical records of women requesting abortion within a National Health Service medical practice was conducted. Differences in the demands made on the practice before and after the operation and differences between demands made by different practice populations were investigated. Evidence concerning patients' view of the function of the medical practitioner in times of crisis are discussed.

Introduction

CONSERVATIVE estimates of the incidence of abortions reported by the International Planned Parenthood Federation suggest that, in the world as a whole, approximately one pregnancy is deliberately terminated for every three live births. In England, a woman who is unsure of her feelings about pregnancy or who is seeking an abortion frequently turns to the general practitioner for help.

Since the 1967 Abortion Act the general practitioner's relationship with women requesting abortion has become easier. 'Now at least there can be a clear attempt to be honest, sincere and above-aboard in the doctor-patient relationship', wrote McEwan.[1] Despite this change of climate, consultations with women seeking abortions still present many problems. The general practitioner is sometimes left feeling manipulated and forced to accept patients' overt reasons for requesting abortions with little chance of understanding the covert reasons.[2] Under pressure of time, the general practitioner's professional judgement may be influenced by moral considerations, discounting the adverse effects that full-term delivery may have on the life of the woman or on the life of the unwanted child.[3-9] Thus it is difficult to reach reliable conclusions about the characteristics of women seeking terminations or about the psychological effects of the experience itself without considering the general practitioners' attitudes and beliefs about abortion[10-12] or their acceptance of a woman's right to choose not to bear a child.[13]

Studies of the psychological sequelae of abortion have usually concentrated on the incidence of moderate to severe psychological disturbances within standard clinical diagnostic categories. Typical variables studied have been guilt,[14-18] depression,[18-22] regret,[16,18,20,23,24] anxiety,[21,25,26] ambivalence,[15,25] acute adverse reactions,[19] and psychiatric reactions.[3,27] These reactions may be partly activated by the attitude of the doctors and nurses towards abortion patients and their interpretation may be coloured by the views of the investigators:[28] depression may be viewed as a psychological problem or as a normal reaction to bereavement, depending on the observer's opinion. Most studies agree that the abortion experience is not particularly traumatic.[18,29,30] It has also been claimed that an abortion may be less dangerous to the mental health of a woman than a full-term delivery of an unwanted child.[27,31,32]

Since 1967, the majority of pregnancies have been terminated for psychosocial reasons (clauses 2 and 3 of the Abortion Act). Although the information available is rather scanty, it suggests that widespread post-abortion stress within this group of women[33] may lead to disturbances which are handled by the patient alone or in conjunction with the family or community. The patient may visit the general practitioner, but this rarely results in referral to a psychiatrist. Hence, it is possible that termination of pregnancy is a procedure that leads to increased demands on general practice through a plethora of minor complaints traceable (but not usually traced) to the abortion experience.

Aim

As part of a pilot study for a larger project on provision of abortion counselling within general practice, we

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conducted a retrospective survey of the demands made on a group general practice by patients who had been referred for an abortion between 1962 and 1977 and who were currently registered with either of the two surgeries of the practice. This paper describes the pattern of demands by these women in comparison with a matched control group of women who had never sought a termination. Differences in the patterns of demand between the two surgeries, which serve populations with different social and demographic characteristics, were also explored.

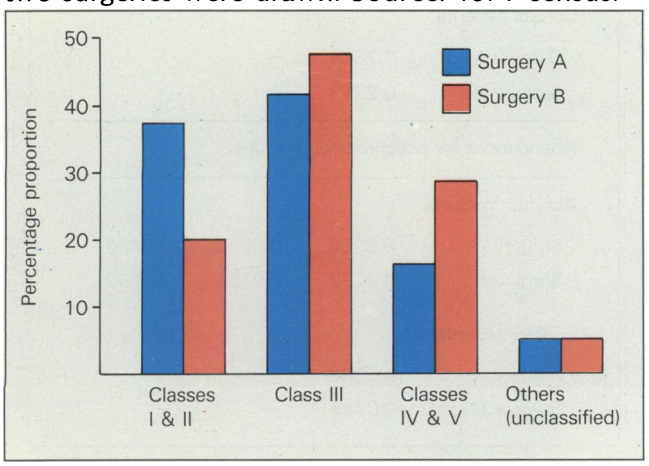
Method

Patient populations

We studied a group practice of four doctors in north-west London which provides medical care for about 10,000 patients who are registered either at surgery A or surgery B of the practice. The social class composition of the catchment areas of the surgeries are quite different (Figure 1). Surgery A is located in an area of high-value property with most patients living in expensive flats and maisonettes or in council houses. Only the younger segment of the population of the catchment area is mobile and this includes a fair proportion of au-pair girls and students. In contrast, surgery B is located in an area where extensive council estates have recently replaced multiple occupancy Victorian houses. A high proportion of the inhabitants are first or second generation immigrants. Despite considerable movement because of rehousing within the catchment area of surgery B, there is a much lower movement of women in and out of the area.

Between 1962 and 1977, 126 and 240 abortions were recorded in the medical records of women registered with surgeries A and B respectively. However, we decided to consider only the 100 women attending surgery A and the 164 women attending surgery B during this period for whom only one abortion had been recorded, since it has been recommended that people who seek repeat terminations should be treated separately.[34] Our sample was further restricted by the fact that sufficient information about the abortion operation and the reasons for its recommendation were not always available in the medical records of these women. Since this information was important for our analysis we concentrated on the 70 women from surgery A and 125 women from surgery B whose records were

Figure 1. *Distribution by social class within the population from which the women attending the two surgeries were drawn. Source: 1971 census.*



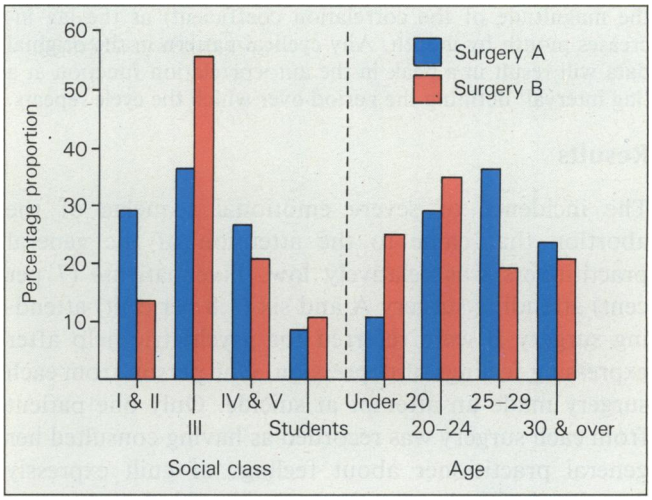


Figure 2. *Social class and age distributions for women in the sample attending the two surgeries. Source: 1971 census. Note that students were not included as a separate category in the census.*

adequate in this respect. Figure 2 shows their distribution by social class[35] and age. At the time of their abortions, 70 per cent of the women attending surgery A were single, 28.6 per cent were married and only one was divorced, while of those attending surgery B 66 per cent were single, 26 per cent were married and 8 per cent were divorced or widowed.

Examination of records

We extracted from the medical records of the patients: (i) background information, (ii) medical history before termination of pregnancy, (iii) information about procedures associated with the termination, (iv) information about contraception and complications after termination, and (v) detailed records of the dates, frequencies, attendances and reasons for attendance at the surgery one year before and two years after the operation. We formed a control group within each surgery by matching each TOP patient in our sample with a female patient from the same surgery who had been born in the same year but who had never requested a termination of pregnancy (TOP). Random sampling (without replacement) from the entire medical records of each surgery was used to select candidates for this matching. For each patient in a control group we extracted detailed records of the attendances in the year in which her matched pair had her termination (that is, when they were both the same age). Comparisons of data from the records of TOP and control patients were made over identical chronological periods to counteract trends due to changes in factors such as populations doctors and abortion laws over time.

Autocorrelation analysis

We calculated monthly rates of attendance at the surgery for the women in our samples starting both from date of termination and from last menstrual period (for 'birthday' reactions). A number of autocorrelation analyses were performed on these data. In an autocorrelation analysis, the pattern of rates of attendance is compared with itself, lagged first one month in time, and then by two months in time and so on. For example, for a three-month lag, the rate for the first month after the abortion is compared with the rate for the fourth month after the abortion, the rate for the second month with that for the fifth month, and so on. The 'autocorrelation function' plots the results of these comparisons (in terms of

the magnitude of the correlation coefficient) as the lag increases month by month. Any cyclical pattern in the original data will result in a peak in the autocorrelation function at a 'lag interval' defining the period over which the cycle repeats.

Results

The incidence of severe emotional sequelae of the abortion that came to the attention of the general practitioners was relatively low. Five patients (7 per cent) attending surgery A and six (4.8 per cent) attending surgery B were referred for psychiatric help after expressing feelings of depression. One person from each surgery made an attempt at suicide. Only one patient from each surgery was recorded as having consulted her general practitioner about feelings of guilt expressly associated with the abortion, considerably less than one would expect from the literature based on interview studies.[16,36,37] However, our findings excluded cases where demands were made on general practice through sequelae which were not overtly linked to the termination. While there have been suggestions in the literature of the need to be aware of the possibility of 'anniversary reactions',[38] a sequel like insomnia may involve a number of visits to the surgery over a long period of time without its aetiology being unravelled.

Anniversary reactions

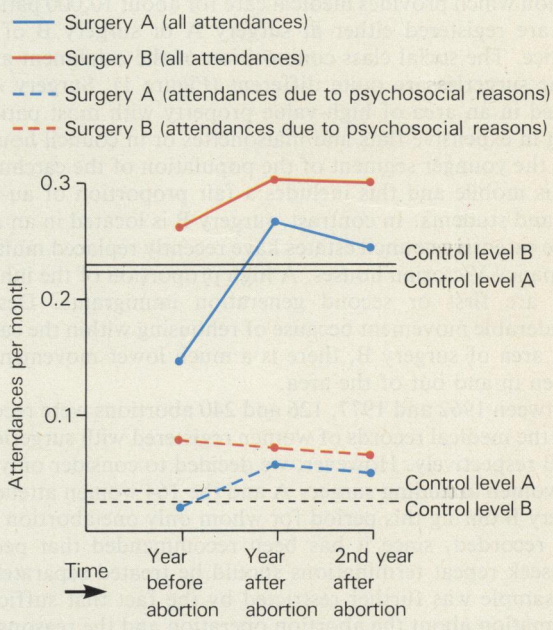
It has been suggested that increased stress may be experienced either at the anniversary of a termination or at the time when the baby would have been born. If anniversary reactions involve turning for help through a visit to the surgery, then this should show up as a peak at 12 months in the relevant autocorrelation function.[39] However, no significant peak was found at this or at any other time, regardless of whether the autocorrelation analysis started from the last menstrual period or from the time of termination. We repeated these analyses, examining only attendances for 'psychosocial' reasons. These were: sexual difficulties; psychiatric problems such as depression, phobia, insomnia, anxiety states; social problems such as work difficulties or difficulties in relationships; psychotropic drugs and complaints with no apparent cause. Again, no general evidence for anniversary reactions was found.

This does not mean that such reactions may not be found in particular patients, but it does imply that they are not a general phenomenon and that, for example, screening patients who have had an abortion for possible sequelae on the anniversary of their abortion would be no more prophylactic than screening them at any other time.

Level of demand on general practice

The absence of any cyclical pattern in demands made on general practice following abortion does not preclude the possibility of change in the general level of demands made after the abortion, compared with those made before the abortion. So we established a baseline rate of attendances for each woman seeking an abortion in the period between the twelfth month to the third month before her abortion. We compared this 'year before' baseline with her monthly rate of attendance from the third to the twelfth month in the year after her abortion and from 13 months to 24 months in the second year after her abortion. The exclusion of the five month period around the abortion effectively excluded the peak in attendances specifically concerned with arrangements relating to the abortion itself. Figure 3 shows the mean rate of attendances during these periods for

Figure 3. *Mean attendances per month by TOP (termination of pregnancy) patients at the two surgeries.*



Attendances for all reasons	Year before TOP	Year after TOP	2nd year after TOP
Abortion patients			
Surgery A	0.1477	0.2668	0.2416
Surgery B	0.2573	0.3025	0.2983
Control patients			
Surgery A	0.2304	—	—
Surgery B	0.2313	—	—
Attendances for psychosocial reasons			
Abortion patients			
Surgery A	0.0204	0.0572	0.0482
Surgery B	0.0792	0.0735	0.0642
Control patients			
Surgery A	0.0338	—	—
Surgery B	0.0244	—	—

women from each of the two surgeries, together with the rates of attendances for the control groups.

Attendances at surgeries for all reasons

TOP patients attended surgery A less often in the year before their abortion than patients in the control group ($P<0.005$), but at surgery B attendance rates were about the same for the two groups. In the first year after termination, there was an 80 per cent increase in attendances at surgery A, compared with the year before termination ($P<0.01$), and an 18 per cent increase at surgery B ($P<0.05$). In the second year after termination, the increased rate of attendance fell slightly, but not significantly, for women attending surgery A, and was maintained at the new level for women attending surgery B. Both these second year rates of attendances were also significantly higher than the pre-abortion rates of attendance ($P<0.01$ and $P<0.05$ respectively).

With regard to differences between surgeries, there was a significant difference in attendance rates in the year before the termination of pregnancy ($P<0.01$) and no significant differences in rates in the first year after termination, but a significant difference reappeared again in the second year after termination, from a slight falling off in attendances at surgery A. Hence, we can see that there is an increase in demands on general practice by women seeking abortions extending over at least two years after the abortion, but the pattern of demand is different for the two surgeries despite the fact that the control groups for the two surgeries exhibited nearly identical degrees of demand on general practice.

Attendances for psychosocial reasons

Analysis of the rates of attendance for psychosocial reasons revealed a similar pattern, but with some interesting differences. TOP patients attended surgery A at a slightly lower rate than control patients, but this difference was not significant. On the other hand, TOP patients attending surgery B did so more than three times as often as their controls ($P<0.001$). In the first year after the termination there was a 180 per cent increase in rate of attendance at surgery A, whereas there was a nonsignificant 7 per cent decrease in attendance at surgery B. For both surgeries there were slight decreases in attendances from the first to the second year after the termination, but the rate of attendance at surgery A during the second year after termination was still significantly higher than in the year before the abortion ($P<0.05$).

Differences between surgeries

There was no significant difference between the mean age of the women who were registered at surgery A (26 years) and surgery B (24.7 years) or in the proportion of women who were single. While a higher proportion of women attending surgery A were divorced or separated, they still comprised only 7 per cent of the group. However, the pattern of parity at time of termination of pregnancy, shown in Figure 4, was significantly different between the two groups; women attending surgery B tended to have larger families ($\chi^2=9.49$, $df=3$, $P<0.025$). They also had a history of more gynaecological problems and more miscarriages before the abortion request. It is unlikely that this greater fertility can be explained in terms of differences in contraceptive practices, as we found no significant differences in the pattern of use or non-use of various types of contraception between the two groups.

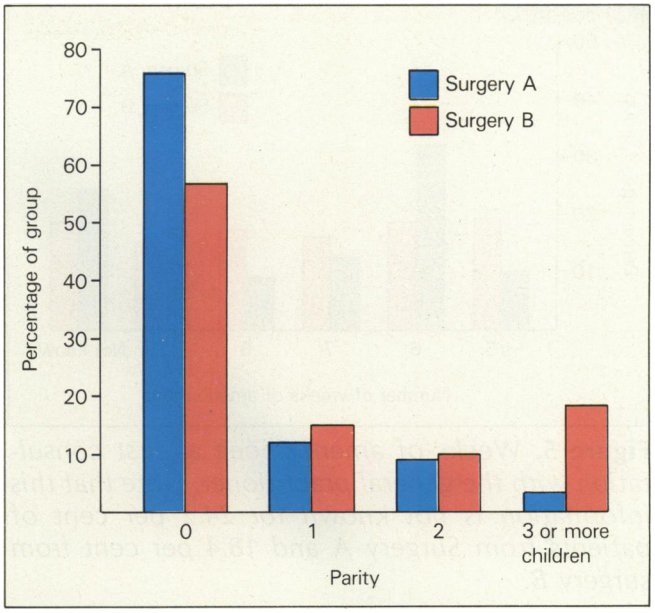


Figure 4. *Parity at time of termination of pregnancy.*

Once a menstrual period was missed the time that elapsed before the women consulted the general practitioner varied between the two surgeries. Figure 5 shows that women attending surgery A in the main consulted the doctor after about six weeks of amenorrhoea. In contrast a significantly higher proportion of women attending surgery B consulted their general practitioner when it was too early to arrange a pregnancy test, or when the pregnancy was already well advanced ($\chi^2=14.56$, $df=4$, $P<0.0005$).

Having decided on a termination, 34 per cent of the women attending surgery A had their operation performed privately, as opposed to only 21 per cent of the women attending surgery B ($\chi^2=4.24$, $df=1$, $P<0.05$). There was no significant difference between the proportion of women in the two groups (7.1 and 8.8 per cent respectively) who experienced one or more hospital refusals before finally procuring an abortion; neither was there any significant difference between the reasons accepted by the hospitals as the basis for the termination. There was a higher incidence of termination after the twelfth week of amenorrhoea for women from surgery B, and of methods associated with late terminations (hysterotomy, interamnionic saline, utus paste) but this is probably explained by the higher proportion of late initial consultations shown in Figure 5.

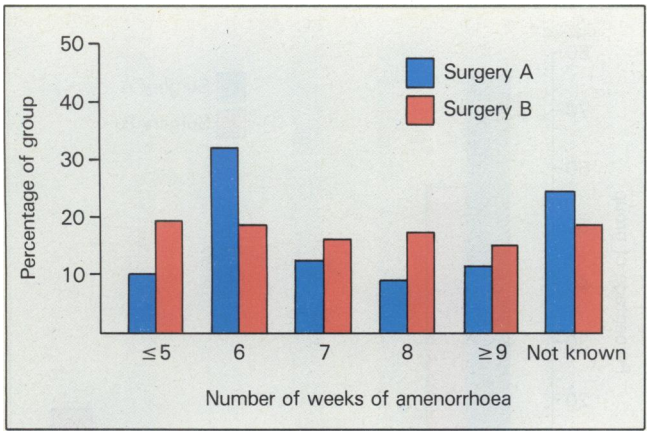


Figure 5. *Weeks of amenorrhoea at first consultation with the general practitioner. Note that this information is not known for 24.2 per cent of patients from Surgery A and 18.4 per cent from surgery B.*

There was, however, a marked difference in the incidence of sterilizations performed concurrently with the abortion or negotiated in conjunction with the arrangements for termination. No women attending surgery A were sterilized but 12 per cent of women attending surgery B ($P<0.01$) were sterilized. However, mean age (32.7 years), parity (3.0), number of weeks of amenorrhoea (12.8) and incidence of hysterotomy were all higher for group B, and this may well account for the difference in sterilizations. There was no significant difference between the two groups in terms of the incidence of either immediate or subsequent complications resulting from the termination procedures.

Discussion

Women attending surgery B came from a more working class area and had a higher parity (and fertility rate) at the time they first consulted their general practitioner. There was also more variability in the time they allowed to elapse before seeking consultation concerning their amenorrhoea. Women attending surgery B had been registered on average much longer with the surgery at the time of their request (52 months as opposed to 26 months, $P<0.02$). They had attended the surgery significantly more frequently than their controls in the year before their request for a termination and this relatively high rate of attendance was maintained for at least two years after the abortion. Conversely, women attending surgery A did so significantly less often than their controls in the year before the termination, but attended significantly more often than their controls in the year after, moving up towards the rate of attendance of their counterparts from surgery B.

Our interpretation of these differences is that women seeking abortions through surgery A represent a relatively mobile group who, under stress, do not usually perceive the general practice as a place to turn for advice and consultation until forced to. Having received help and support from the practitioners, they are more likely to turn to him or her for help in coping with low level sequelae of the termination. However, in the absence of any effective post-abortion counselling for such sequelae (which is currently only available on referral), the sequelae are likely to persist, as does the increased level of demand on general practice.

Women seeking abortion through surgery B have generally been coming to the surgery for a longer period of time and started to raise a family earlier. They have had a longer experience of help and support through general practice and have lived in a community in which neighbourhoods have suffered continued and severe disruption through rehousing and motorway policies. Here, the general practice is more likely to represent a stable point of reference which is consulted in the time of stress. Hence, despite the higher demand on general practice before the request for termination, without a satisfactory solution, the latent (rather than presenting) problem continues through an abortion to a continuing high level of demand afterwards. We would anticipate that such increased and apparently unsatisfied demands could be reduced and satisfied through the provision of counselling within the general practice. In situations like that of surgery B, such counselling might also serve a prophylactic function in identifying and helping women who might otherwise embark on an unwanted pregnancy.

A recent article[40] pointed out that the nationwide increases in abortion rates throughout the 1970s and early 1980s could be due to:

> '. . . disenchantment with the "safe" methods of contraception—in particular, oral contraception and the intrauterine device—after the publication of research findings about their side effects; the pressure on health authorities to reduce regional variations in the availability of abortion services; the reluctance of people to cope with an unplanned child because of the economic recession and the impact of a child on their disposable income; and the reduction in family planning clinics and sessions as a result of financial constraints in the Health Service . . .'

All these reasons point to material which could be picked up through family counselling within general practice. In our study we found evidence that women sought out their general practitioners at times of stress which were followed by unwanted pregnancies. Supporting prophylactic counselling facilities within general practice would, in our opinion, be a more fruitful approach to securing a real reduction in demands for abortion than the introduction of further restrictions on grounds for referral for termination. The latter, rather than solving the problems we have identified here, would simply hide them with the likely result of forcing women to resort to the 'back street' abortions which were the anathema of a woman's reproductive life before 1967.

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Diet and sleep patterns in newborn infants

Sleep behaviour is modulated by serotonergic neurons within the brain, and the synthesis and release of serotonin by such neurons is thought to be influenced by the availability of tryptophan, the amino acid precursor of serotonin. The authors investigated the effects on the sleep patterns of newborn infants of variations in diet designed to affect tryptophan availability.

Twenty healthy newborns (two to three days of age) were randomly assigned to receive a feeding consisting either of tryptophan in 10 per cent glucose or valine in 5 per cent glucose (valine competes with tryptophan for entry into the brain). Sleep patterns during the three hours after this feeding were compared with those after a feeding of routine formula (Similac). The infants fed tryptophan entered active sleep 14.1 minutes sooner than they did after Similac, and entered quiet sleep 20 minutes sooner. Those fed valine entered active sleep 15.8 minutes later than they did after Similac, and entered quiet sleep 39 minutes later. The differences between the tryptophan and valine groups were significant ($P<0.01$ for active sleep and $P<0.005$ for quiet sleep). It is concluded that variations in the composition of the diet may influence sleep behaviour in newborns.

Source: Yogman MW, Zeisel SH. Diet and sleep patterns in newborn infants. *N Engl J Med* 1983; **309:** 1147-1149.