NHS
Greater Glasgow and Clyde

Maternity Booking Appointment Survey 2015:

Key Findings

Abstract

To improve breast feeding rates and provide an opportunity for early intervention with regards to health behaviours in pregnancy, the Scottish Government set an antenatal HEAT (Hospital Efficiency and Access Target) that, by March 2015, at least 80% of pregnant women in each Scottish Index of Multiple Deprivation (SIMD) quintile will have booked for antenatal care by 12 weeks gestation. To support this intervention, NHS Greater Glasgow and Clyde (NHSGGC) introduced a new central booking line to improve the pathway into antenatal care.

Data extraction from the Pregnancy and Newborn Screening system was used to assess the extent to which NHSGGC was meeting the antenatal HEAT target. A self completion questionnaire survey methodology was employed to explore expectant women's experience of the new booking line and the extent to which health improvement featured in women's first meeting with their midwife (the booking appointment).

Results indicated that NHSGGC, as a whole, exceeded the HEAT target of 80% of women booking by 12 weeks gestation. Specifically, women residing in the more affluent SIMD quintiles (3, 4 & 5) exceeded the target; those in SIMD 1 were very close to target but a slight shortfall existed for women residing in SIMD 2. A total of 256 women completed the survey. Views of the new booking line were mixed with the biggest complaint relating to the time taken to get through. Communication around health improvement issues were evident with around three quarters of women indicating that they were asked about big public health issues such as healthy eating; smoking and alcohol consumption. However, the number reporting that they had a meaningful discussion around health improvement was considerably lower. Nevertheless, satisfaction with the booking appointment was high.

Acknowledgements

This report was produced by researchers from the Public Health/Health Improvement Directorate (Health Services Section) at the request of the Child and Maternal Health Improvement Group. The researchers would like to thank the following individuals for their assistance in the creation of this report: all service user respondents; all participating community midwives; Kate McGrory (Health Improvement); members of the Child and Maternal Health Improvement Group (especially Uzma Rehman & Lesley Nish); Paul Burton (NHS GGGC Information Services) and the Head of Midwifery (Evelyn Frame)/maternity service representatives for their considered feedback on the study design.

Contents

Rationale

The Scottish Government set an antenatal HEAT (Hospital Efficiency and Access Target) that, by March 2015, at least 80% of pregnant women in each Scottish Index of Multiple Deprivation (SIMD) quintile will have booked for antenatal care by the 12th week of gestation. The rationale for this is to improve breast feeding rates and provide an opportunity for early intervention with regards to health behaviours in pregnancy. To support this initiative, NHS Greater Glasgow and Clyde (NHSGGC) introduced a new booking line for expectant mothers to contact and arrange their first appointment with a midwife/initial scan. The booking line was launched in June 2014 with the aim of providing smoother and quicker access to maternity services.

Routinely collected data by NHS Greater Glasgow and Clyde Information Services can be used to determine the extent to which the HEAT target of 80% of expectant women from each SIMD quintile booking by 12 weeks gestation is being met. However, there is limited (and often poorly completed) routinely collected data with regards to the health improvement needs of women during pregnancy. As a result, from mid October 2014 to mid January 2015, a survey was conducted with women in NHSGGC who had attended their first (booking) appointment with a midwife. The survey asked about women's experience of the new booking line and the extent to which health improvement featured in their initial interaction with a midwife. This report presents the key findings from the survey.

Maternity Service Model in NHS GGC

NHS GGC deliver a `Hub and Spokes' model of maternity care. The `Hub and Spokes' model consists of 3 main hospital (Hub) sites (at the time of this survey: Princess Royal Maternity (PRM) covering the North and East of Glasgow; Southern General Hospital (SGH) covering the South and West of Glasgow and the Royal Alexandra Hospital covering the Clyde area) and their associated `spokes' (clinics based largely in Health Centres/Maternity Care units within the geographical catchment area of their associated main Hub).

Survey response rate

Over the duration of the survey, a total of 3, 837 women attended their booking appointment with a midwife. Of these women, 256 completed the survey resulting in a low survey response rate of **7% of eligible participants**. A more accurate response rate can be calculated from the number of questionnaires distributed to hubs/spokes over the study period. In total 1, 800 hard copy questionnaires were distributed to sites with 256 returns, providing a response rate of **14%**. It is apparent from the numbers of women that had a

booking appointment over the study period that there were insufficient numbers of questionnaires to ensure that all women received a questionnaire. It is also unclear if all questionnaires distributed to booking locations were disseminated to eligible parties. Consequently, an actual response rate cannot be calculated.

Points to note in surveys of this kind

The Hawthorne Effect

The Hawthorne effect refers to the alteration of behaviour solely as a result of being observed. For the effect to exist it is necessary for the individuals involved to realise they are under observation. It is possible that the Hawthorne effect may have influenced the results of this study. Paper copies of the questionnaire were distributed to women by midwives following their consultation. As a result, midwives were aware of the nature and purpose of the survey and may have changed their usual practice as a result. This should be borne in mind when interpreting the results of the study.

Response bias

Self completion surveys as used in this study are prone to response bias. In essence, those that feel strongly about a particular issue or have had a particularly good or bad experience are more likely to want to express their views which can affect the generalisablity of findings to the population as a whole (in this instance, all women who had a booking appointment with a NHSGGC midwife from mid Oct 14- mid. January 15). This should be borne in mind when interpreting the results of the study.

Method

Participants

All women who had a booking appointment with a NHSGGC midwife from mid. October 2014 to Mid January 2015 were eligible to participate in the survey. In total, 3, 837 women attended a booking appointment with a NHSGGC midwife over the survey time period. A total of 256 women responded to the survey. Whilst the response rate to the survey was low at 7% of eligible participants, the demographic spread of participants indicates little/no sampling bias in that respondents appear in numbers proportional to their size in the eligible population (i.e. derived sample is representative of the population in terms of deprivation and ethnic spread).

Specifically, just over a quarter of participants (n = 67) resided in the most deprived quintile (SIMD 1) whilst 13.3% (n = 34) resided in the most affluent quintile (SIMD 5) with an equal spread (14.5%: n = 37) of remaining participants residing in SIMD quintiles 2, 3 & 4. The vast majority of participants were white UK nationals (85.2%, n = 218) with the remaining proportion of participants coming from a wide range of ethnics backgrounds including Eastern European, Pakistani; African; Chinese and other mixed or multiple groups (all in small numbers). Less than half the respondents (44.1%; n = 113) indicated this was the first time they had received care from a midwife.

There was some variation in respondent characteristics/demographics associated with the location of their booking visit e.g. there were no non-white respondents from the PRM/associated spokes; there was a higher proportion of `affluent' responders from the SGH/associated spokes whilst more than half the respondents (57.1%, n = 36) that had their booking visit at the PRM indicated this was the first time they had received care from a midwife compared with just over a third (35.1%, n = 33) that had their booking visit at the SGH.

The variation in participant demographics associated with the booking visit location should be considered when interpreting findings within this report as they may influence the nature and content of the midwife/expectant mother interaction e.g. first time expectant mothers may have differing needs from 2nd time (or more) expectant mums. See table 1 for participant demographics by location of the booking visit with more marked variations highlighted in bold.

Table 1 Survey participant demographics by location of their booking visit.

Participant demographics	**PRM/spokes (n = 63)**	**SGH/spokes (n = 94)**	**RAH/spokes (n = 87)**	**Total: NHSGGC (n = 256)**
Scottish Index of Multiple Deprivation 2012 Quintile				
SIMD 1 (Most deprived)	28.6% (18)	25.5% (24)	26.4% (23)	26.2% (67)
SIMD 2	14.3% (9)	13.8% (13)	12.6% (11)	14.5% (37)
SIMD 3	14.3% (9)	7.4% (7)	21.8% (19)	14.5% (37)
SIMD 4	17.5% (11)	16.0% (15)	11.5% (10)	14.5% (37)
SIMD 5 (Least deprived)	**4.8% (3)**	**19.1% (18)**	**13.8% (12)**	13.3% (34)
Missing Data	20.6% (13)	18.1% (17)	13.8% (12)	17.2% (44)
Ethnicity				
Any White UK National	**93.7% (59)**	**79.8% (75)**	**86.2% (75)**	85.2% (218)
Missing data	1.6% (1)	2.1% (2)	2.3% (2)	2.3% (6)
First time received care from midwife	**57.1% (36)**	**35.1% (33)**	**46.0% (40)**	44.1% (113)
Missing data	1.6% (1)	0.0%	1.1% (1)	2.3% (6)

Please note that the discrepancy between Hub/spoke totals and NHSGGC total is the result of missing data/other in relation to location of booking appointment.

Design

A self completion questionnaire (largely paper based) survey methodology was employed to assess the views of women. The questionnaire was designed by the Public Health/Health Improvement Directorate following consultation with NHS GGC maternity care representatives. An option existed for online completion if this was preferred. NHS GGC Interpreting Services were contacted to determine how many requests they had to provide interpreting services for women at their booking appointment over the study period. At time of contact, they had no requests for interpreters. Consequently, the questionnaire was created in English language format. It is acknowledged that this may have been a barrier to participation for non-English speakers that may subsequently have required interpreting services for their booking appointment.

Materials

1. *Pregnancy & Newborn Screening System* (PNBS)

The Pregnancy and Newborn Screening System (PNBS) was utilised to determine the extent to which the HEAT target of 80% of expectant women from each SIMD quintile booking by 12 weeks gestation was being met in NHS Greater Glasgow and Clyde over the study period.

2. *Questionnaire*

A 29 item questionnaire, comprising tick box and free text response options, was developed to obtain feedback from service users on the following:

1. **Experience of the new booking line**: specifically whether they used the booking line to arrange their booking appointment/first scan; how long they waited for their booking appointment; satisfaction with the booking line and any comments they had on this new service.

2. **Health/social issues pertinent to service user/respondent at the time of their booking visit**. This question consisted of 12 tick box response items (weight; healthy eating; alcohol consumption; smoking; recreational drug use; exercise; mental health (sadness/anxiety/worries); financial situation; housing situation; relationships and `other': please specify). Respondents were asked to indicate the issues that were relevant for them by `ticking all that apply'.

3. **The health/social issues that the midwife spoke to them about**: specifically what they were asked about; what was discussed in more depth and how comfortable they felt with these discussions.

4. **Any health behaviour change recently contemplated/made.**
5. **Any information respondents would have liked but did not get at the booking appointment.**
6. **Usefulness of support provided by midwives.**
7. **Treatment from midwives:** specifically did they feel they were treated with dignity/respect.
8. **Overall level of satisfaction with the booking appointment**
9. **Any additional comments they would like to make about the booking appointment**
10. **Respondent demographics:** specifically postcode (to enable SIMD quintile to be assigned); whether respondent had a disability/additional needs; ethnic group & whether this was the first time respondents had received care from a midwife for a pregnancy.

For a copy of the questionnaire: see Appendix 1.

Procedure

Data extraction from PNBS

A request was made to NHSGGC Information Services for a data extraction from PNBS to determine the extent to which the HEAT target of 80% of expectant women from each SIMD quintile booking by 12 weeks gestation was being met in NHS Greater Glasgow and Clyde over the study period.

Survey

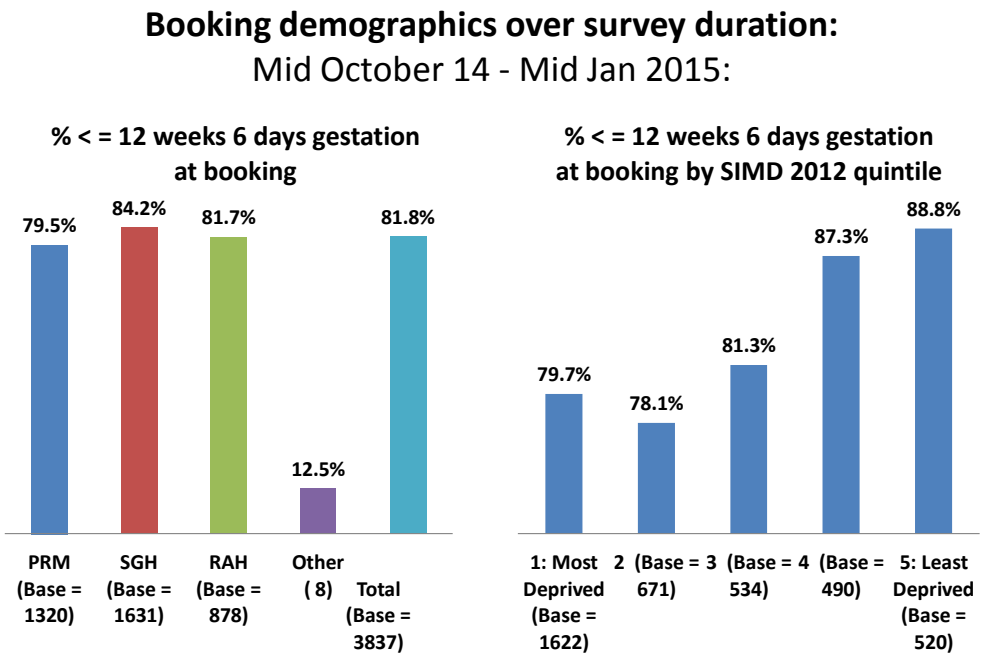
In total, 1, 800 hard copy questionnaires/accompanying FREEPOST reply envelopes were distributed to NHSGGC main maternity hubs/associated spokes at the beginning of October 2014. The survey period was from mid. October 2014 to mid January 2015. Midwives were able to request additional copies of questionnaires as required. Due to location differences with regards to resources/facilities, the most practical way of disseminating questionnaires to eligible participants was via their booking midwife. Specifically booking midwives (i.e. the midwives that conducted the booking appointment) were asked to distribute questionnaires/FREEPOST reply envelopes to all women that they saw over the study period.

Results

Pregnancy and Newborn Screening System:

Extent to which NHSGGC is meeting the HEAT target of at least 80% of pregnant women (in each Scottish Index of Multiple Deprivation (SIMD) quintile) booking for antenatal care by 12 weeks gestation.

Over the survey period, 81.8% of expectant women (n = 3, 139) in NHSGGC had booked for antenatal care by 12 weeks gestation. The HEAT target was met/very close to being met at each main hub/associated spokes. In terms of level of material deprivation, expectant women from more affluent SIMD quintiles exceeded the target of at least 80% booking by 12 weeks gestation. Those residing in the most deprived quintile (SIMD 1) were close to target (79.7%). The biggest shortfall with regards meeting the target were expectant women residing in SIMD 2 (78.1%). See figure 1 for the percentage of expectant women booking by 12 weeks gestation by location of booking appointment and SIMD quintile.



NHS Greater Glasgow & Clyde Sites & Residents. Source: Pregnancy & Newborn Screening System, March 2015

Fig. 1 Percentage of women booking by 12 weeks gestation during the survey period by booking location and SIMD quintile.

Booking Appointment Survey

Experience of the new Booking Line Appointment System

Nearly two third of respondents (65%, n = 165) indicated that they had used the new booking line system to arrange their booking appointment and their initial scan. Women generally had their booking appointment within 2- 8 weeks following contact with the central booking line irrespective of locality. Experience of the central booking line system varied with approximately two thirds (64.3%, n = 106) that had used it reporting satisfaction with the service. However, more than a quarter (27.9%, n = 46) indicated that they were unsatisfied with the service they received from the central booking line. See Figure 2 for levels of satisfaction with the Central Booking Line.

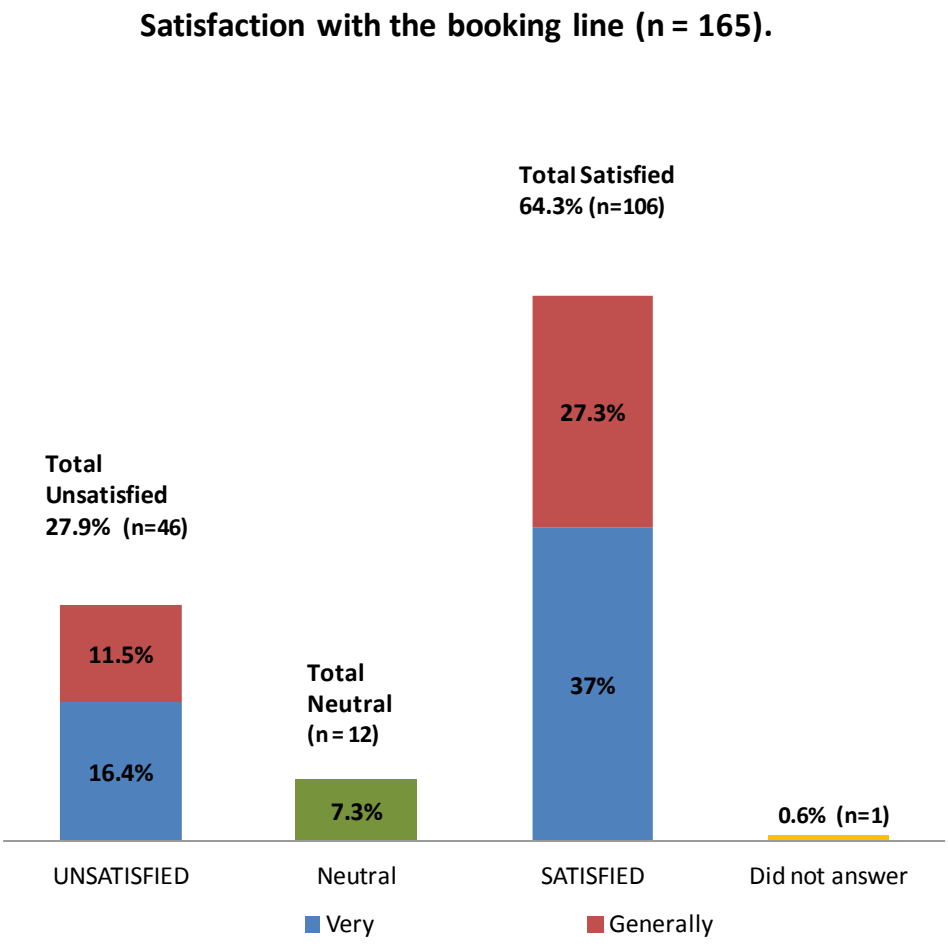


Fig. 2 Level of satisfaction with the new central booking line.

Comments: Booking Line

Comments on the booking line were mixed and largely fell into the following themes:

- **Positive**: better than previous system/helpful and courteous.
- **Negative:** Difficulties getting through on the booking line/unhelpful & discourteous/no option to select booking location.

Health/Lifestyle Issues relevant for women at booking

Perhaps surprisingly, less than half the respondents (46.1%, n = 118) indicated that they had at least one health/lifestyle issue that was relevant for them at booking. Exercise (17.2%, n = 44); healthy eating (14.8%, n = 38) and weight (11.7%, n = 30) respectively were the issues most relevant for respondents. Approximately 1 in 10 respondents indicated that mental health related issues (sadness/anxiety/worries) were an issue for them at booking. See Figure 3 for the health/lifestyle issues relevant for responders at booking.

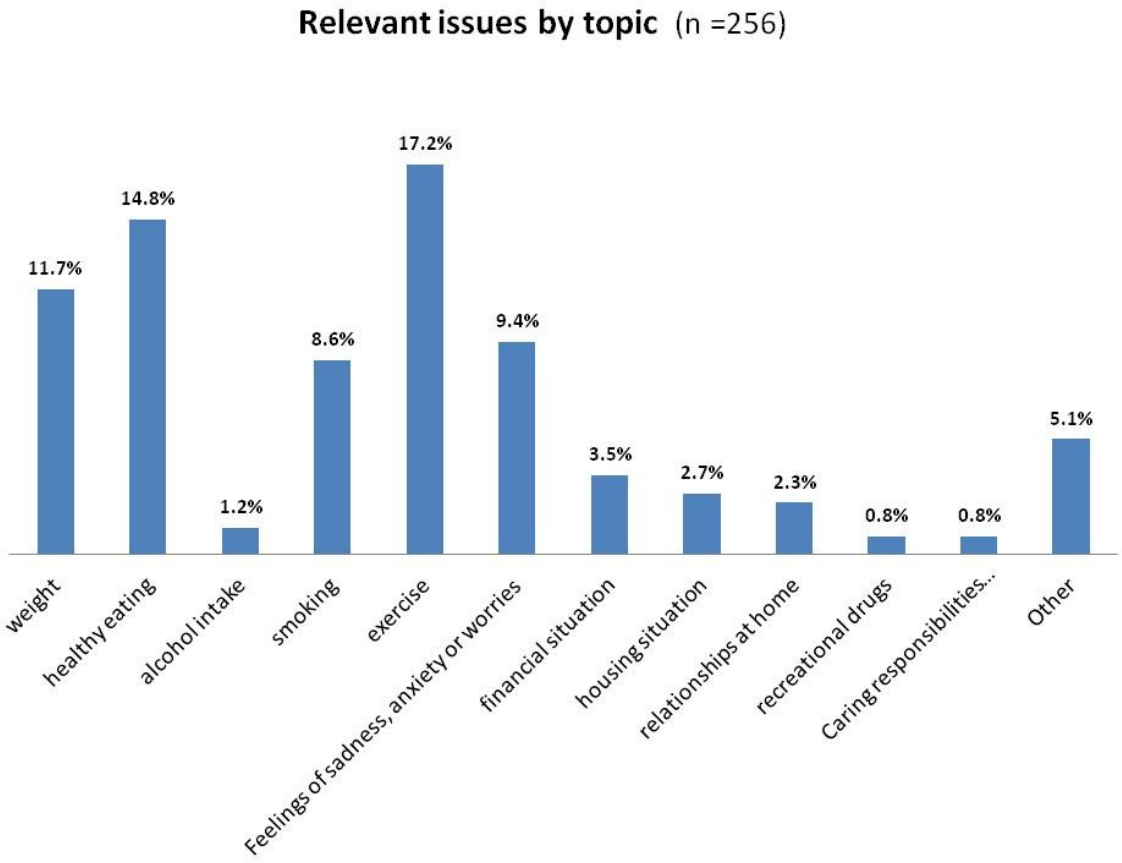


Fig. 3 Percentage of respondents indicating that specified topics were an issue for them at booking.

Communication around health/lifestyle at booking

Tools (e.g. prompts from the Pregnancy and Newborn Screening system; self completion health/life circumstances section of the Scottish Woman Held Maternity Record) exist to support and promote midwife led discussions around health/lifestyle and personal circumstances at the booking appointment. However, it is unclear how these are used in practice and if there is variation across the board area with regards to the nature and depth of discussions in relation to health behaviours/improvement.

Approximately three quarters of respondents indicated that they had at least been asked about public health priority issues such as healthy eating; smoking; alcohol consumption and relationships at home (gender-based violence). See Figure 4 for the prevalence of topic specific communications between respondents and their booking midwife.

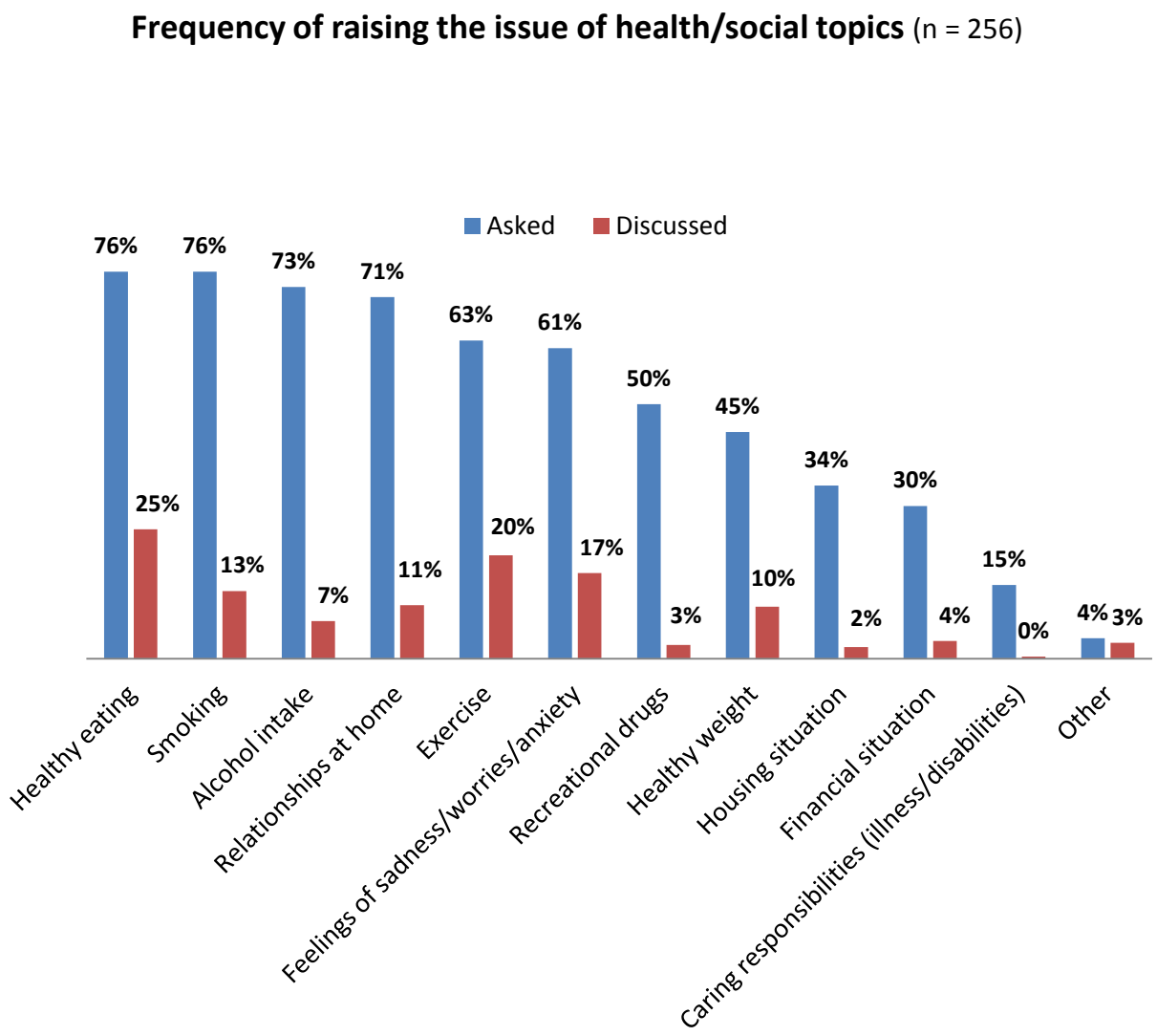


Fig. 4 Percentage of respondents indicating that specified topics were asked and/or discussed with them at booking.

Communication around health/lifestyle at booking with those that had health/lifestyle issues

A considerable proportion of respondents that indicated they had health/lifestyle issues at booking were not asked about that issue and/or had no meaningful discussion with the midwife with regards to the issues that were relevant for them. For example:

- 30 women indicated that weight was an issue for them at their booking appointment.
- Of these 30 women, 13 had no communication with the midwife about this issue (were neither asked about or discussed); 7 were briefly asked about the issue and 10 indicated that they had a meaningful discussion with their midwife about their weight

See figure 5 for nature of the communication with their booking midwife on issues that were relevant to them at booking.

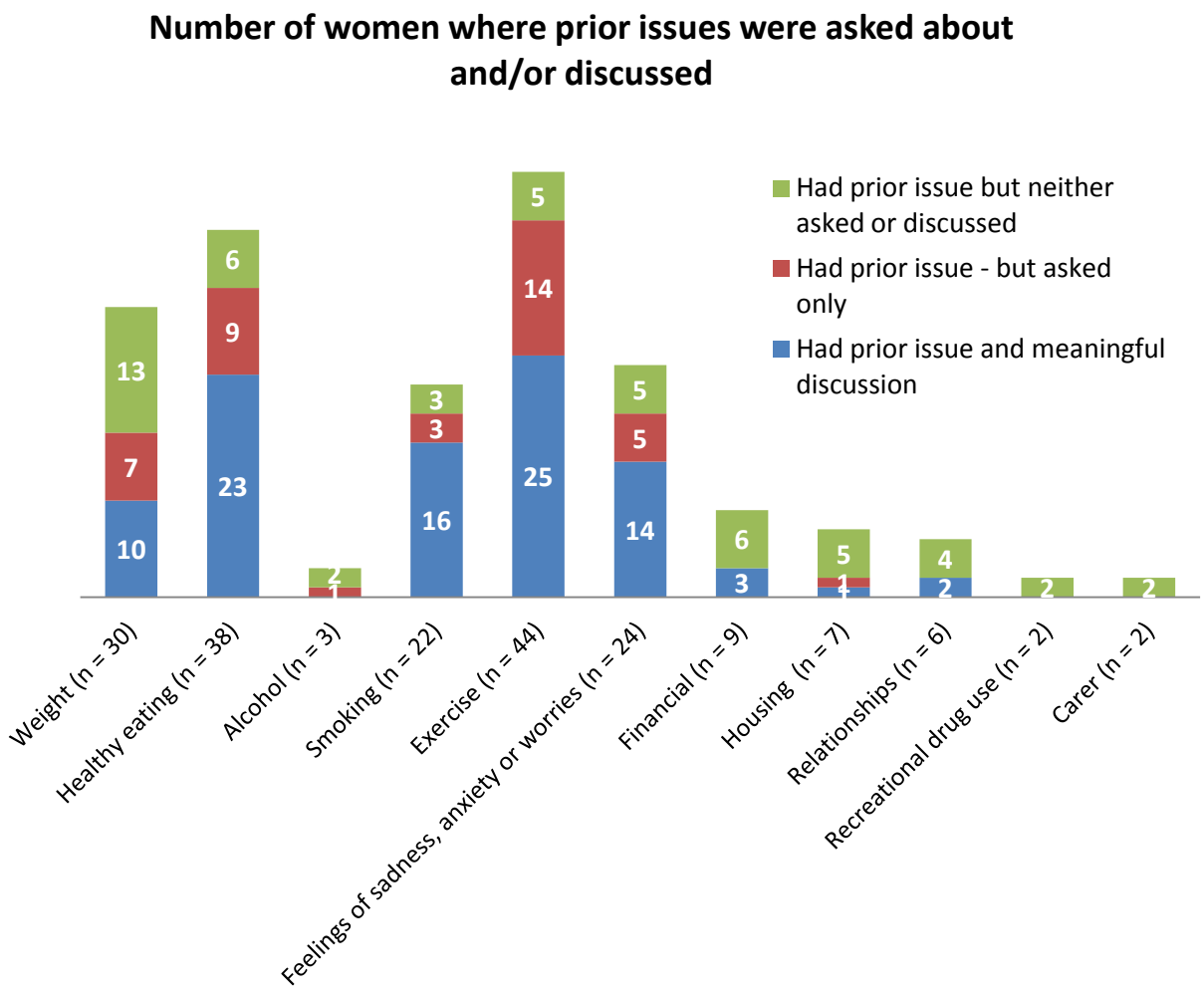


Fig. 5 Nature of communication with midwife on topics relevant for women at booking.

Midwives appear to have more meaningful discussion around some topics than others. For example, nearly three quarters (73%, n = 16) of those that had an issue with smoking indicated that they had a meaningful discussion on this issue. However, only a third of those with concerns about their weight; financial situation and relationships at home reported that they had a meaningful discussion with their midwife on these issues. Just over half (58%, n = 14) those with mental health issues (sadness/anxiety/worries) reported having a meaningful discussion about this at their booking appointment whilst those with alcohol /recreational drug or caring responsibilities indicated that they had no discussion with their midwife around these issues. See figure 6 for the percentage of women with specific issues that discussed these with their midwife at booking.

Please note: caution required in interpreting findings due to small numbers

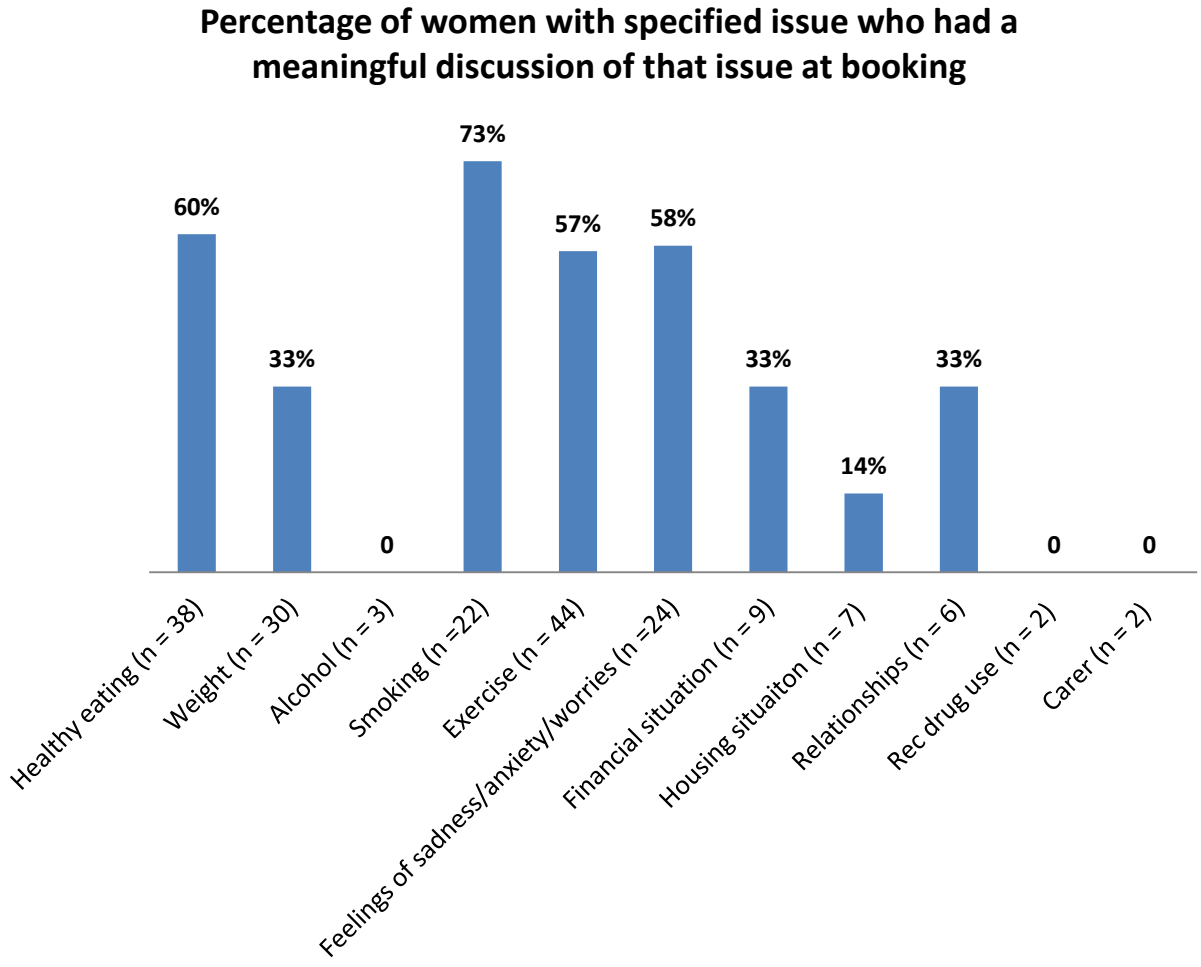
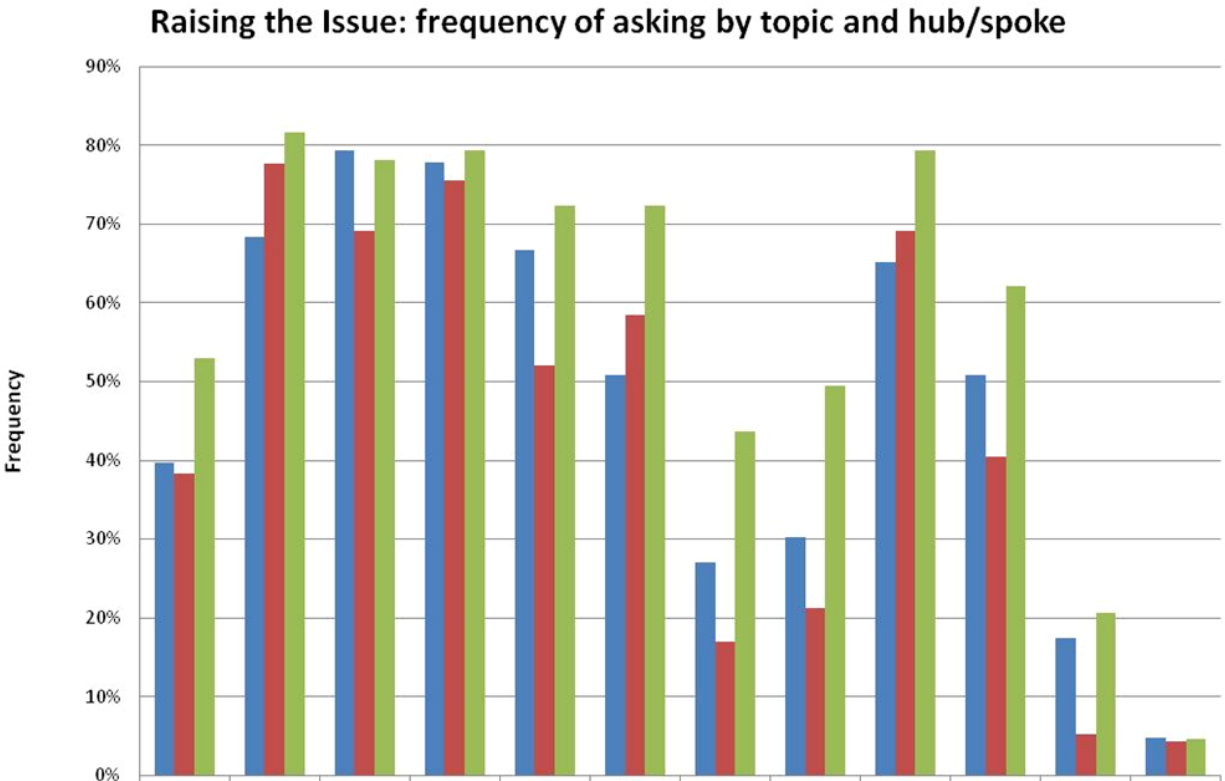


Fig. 6 Percentage of women with a specified issue that had a meaningful discussion on that topic.

Communication around health/lifestyle by location of booking appointment

Respondents that had their booking appointment at the Royal Alexandra Hospital/associated spokes reported a higher incidence of being asked about all specified health/lifestyle factors (with the exception of alcohol intake) when compared to those attending other booking locations. Those that attended the Southern General Hospital/spokes reported a considerably lower incidence (when compared with those attending other booking locations) of being asked about: exercise; their financial situation; their housing situation; recreational drug (Rec Drugs) use and caring responsibilities.

See figure 7 for frequency of being asked about specific health/lifestyle issues by location of booking appointment.



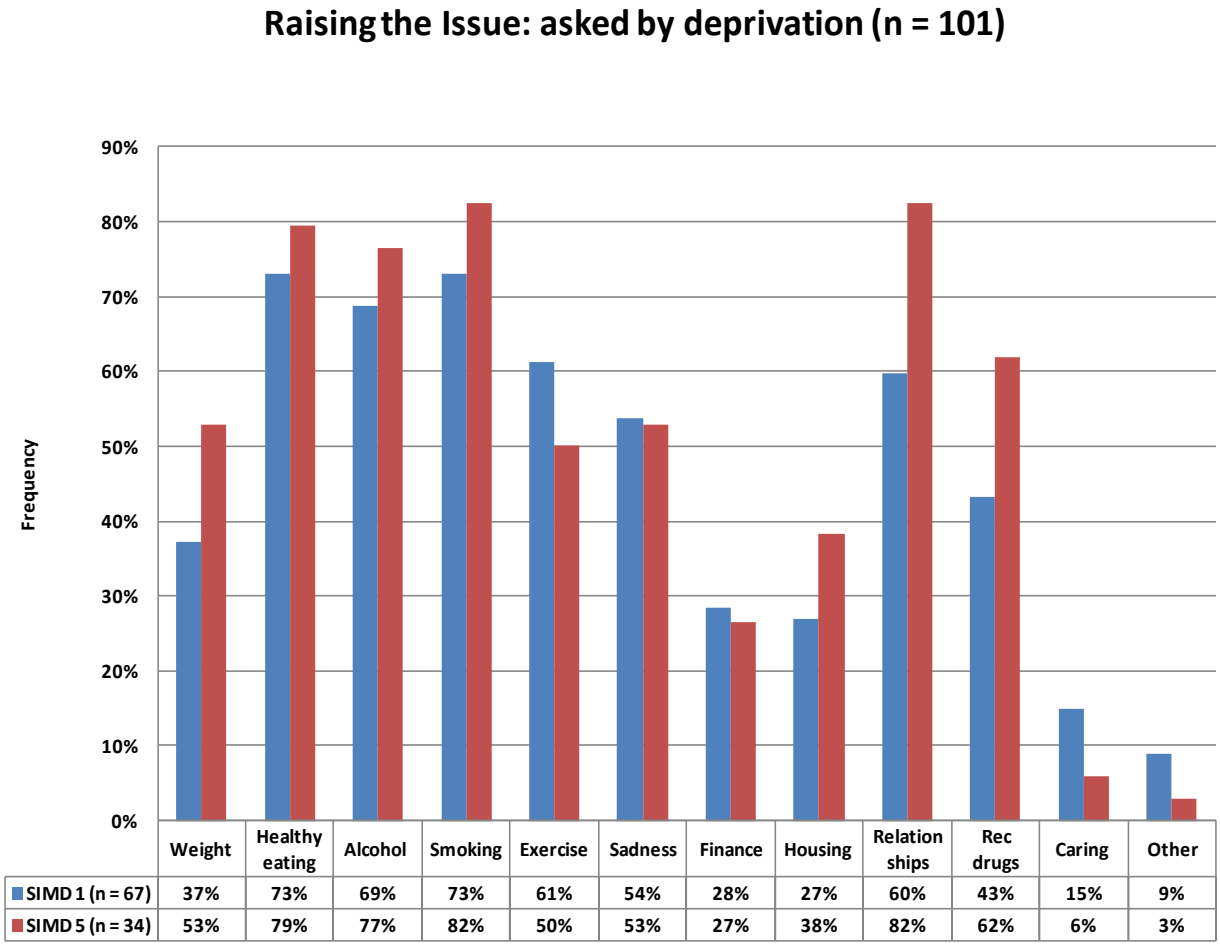
	Healthy weight	Healthy eating	Alcohol intake	Smoking	Exercise	Sadness/ worries/ anxiety	Financial situation	Housing situation	Relations at home	Rec drugs	Caring: illness/ disability	Other
PRM/spokes	40%	68%	79%	78%	67%	51%	27%	30%	65%	51%	18%	5%
SGH/spokes	38%	78%	69%	76%	52%	59%	17%	21%	69%	40%	5%	4%
RAH/Spokes	53%	82%	78%	79%	72%	72%	44%	49%	79%	62%	21%	5%

Fig. 7 Percentage of respondents indicating that they had been asked about specified topics by location of booking appointment.

Communication around health/lifestyle by SIMD quintile of respondent

To determine if deprivation level (SIMD quintile) of the respondent affected the nature and type of health/lifestyle issues asked about at booking, a comparison was made between responses from SIMD 1 (most materially deprived) and SIMD 5 (most affluent) respondents. Caution should be exercised when interpreting findings due to small numbers and demographic (SIMD) differences in booking location. However, findings from the survey indicate that the most affluent respondents were more likely than the most materially deprived respondents to report being asked about: weight; healthy eating; alcohol; smoking; their housing situation and relationships at home. SIMD 1 respondents were more likely than the most affluent to report being asked about caring responsibilities and exercise. There was little/no SIMD difference in the reported incidence of being asked about feelings of sadness/anxiety/worries and finance.

See figure 8 for differences between the most deprived and most affluent responders with regards to the health/lifestyle issues asked about at booking.



	Weight	Healthy eating	Alcohol	Smoking	Exercise	Sadness	Finance	Housing	Relation ships	Rec drugs	Caring	Other
SIMD 1 (n = 67)	37%	73%	69%	73%	61%	54%	28%	27%	60%	43%	15%	9%
SIMD 5 (n = 34)	53%	79%	77%	82%	50%	53%	27%	38%	82%	62%	6%	3%

Fig. 8 Percentage of respondents from SIMD 1 and SIMD 5 2012 quintiles indicating they had been asked about specified topics at their booking appointment.

Comfort in discussing health/social issues

If women had a discussion about a specific social/health issue with their midwife at booking, they were asked to indicate how comfortable they were having this discussion. In reality, respondents answered this question based on their experience of being asked about the topic and/or having a meaningful discussion. Respondents indicated that they largely felt comfortable (78-93% dependent on topic) communicating with their booking midwife over the specified topics. The issue that respondents felt most uncomfortable being asked about and/or discussing was mental health issues (sadness/anxiety/worries). See figure 9 for respondents self reported level of comfort in communicating with their midwife on health/social issues.

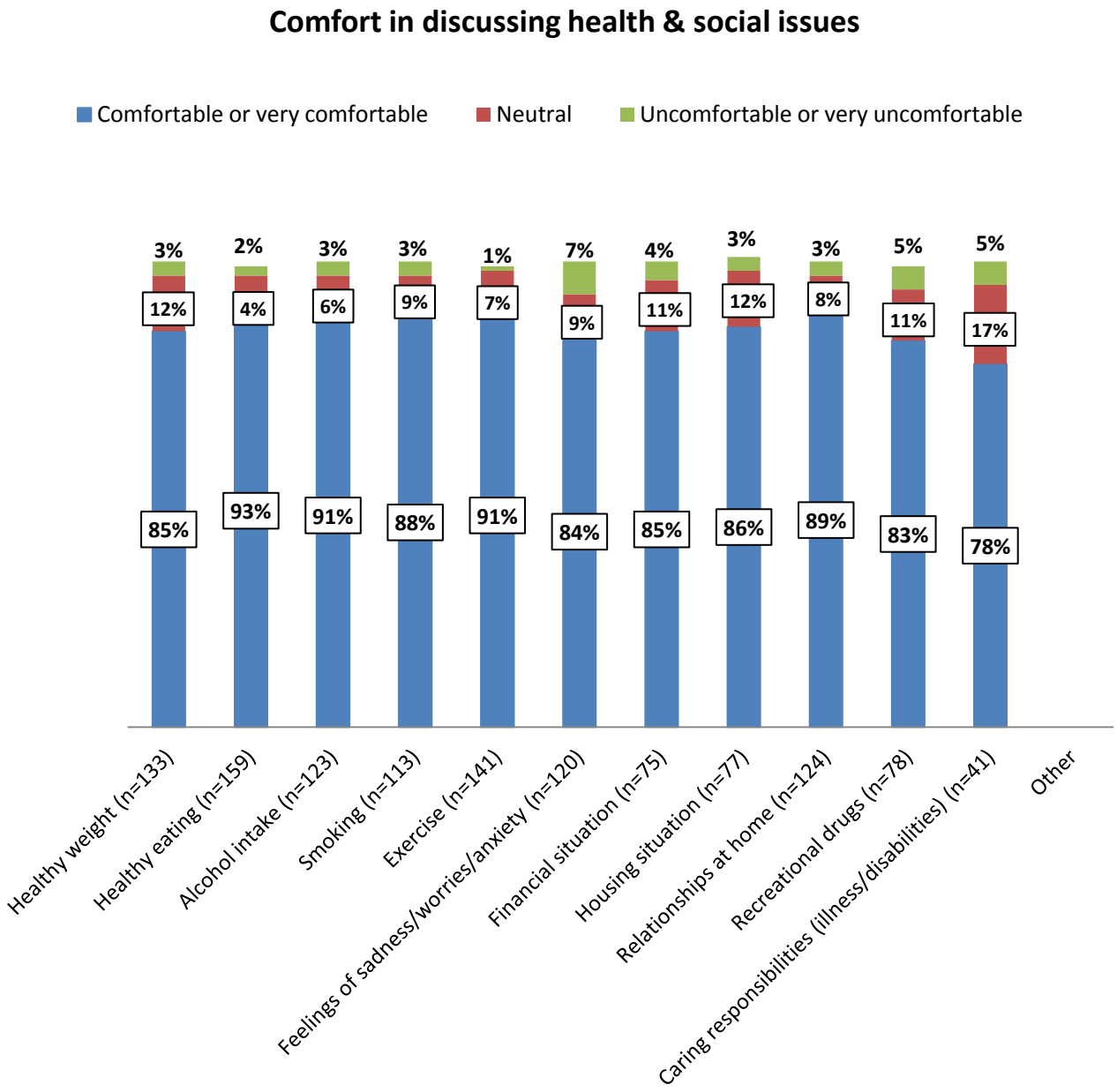


Fig. 9 Respondents level of comfort being asked about/discussing specified health and lifestyle

Intention to change lifestyle as a result of current pregnancy

Women were asked to indicate if they had considered making any changes to their lifestyle as a result of their current pregnancy. Just under half the respondents (47%, n = 120) indicated that they had considered making changes when they found out they were pregnant. A further 8% indicated that they had thought about lifestyle change following the booking appointment whilst a third stated that they had not really considered making any lifestyle changes as a result of their current pregnancy.

See figure 10 for respondents' thoughts on making changes to their lifestyle as a consequence of their current pregnancy.

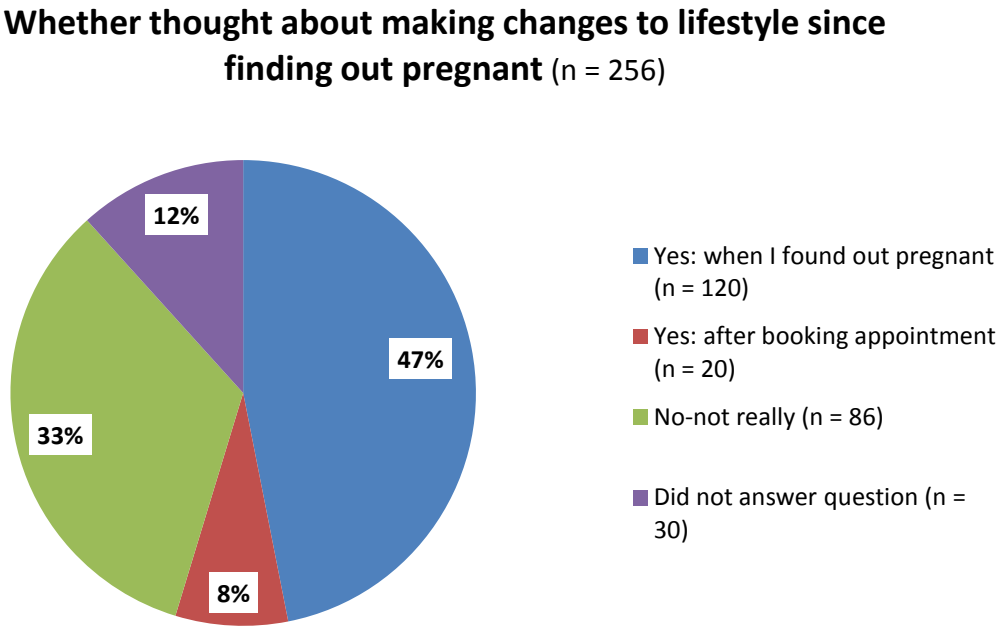


Fig. 10 Health behaviour change intent as a consequence of current pregnancy.

Women most commonly indicated that the changes they intended to make related to: abstaining from alcohol; giving up/cutting down smoking; eating healthier and either taking more exercise or cutting back on their exercise regime.

Value of differing forms of support provided by midwife at booking

Women were asked how useful they found the various sources of support provided by midwives at the booking appointment. The person centred nature of antenatal care means that not all women will have required/received the resources enquired about in the questionnaire. Results indicated that 9 out of 10 respondents (89.5%, n = 229) found any leaflets/booklets they had been given useful. However approx. 8% indicated arranging an appointment with another service had not been useful.

See Fig. for how useful respondents found the various sources of support provided by midwives at booking.

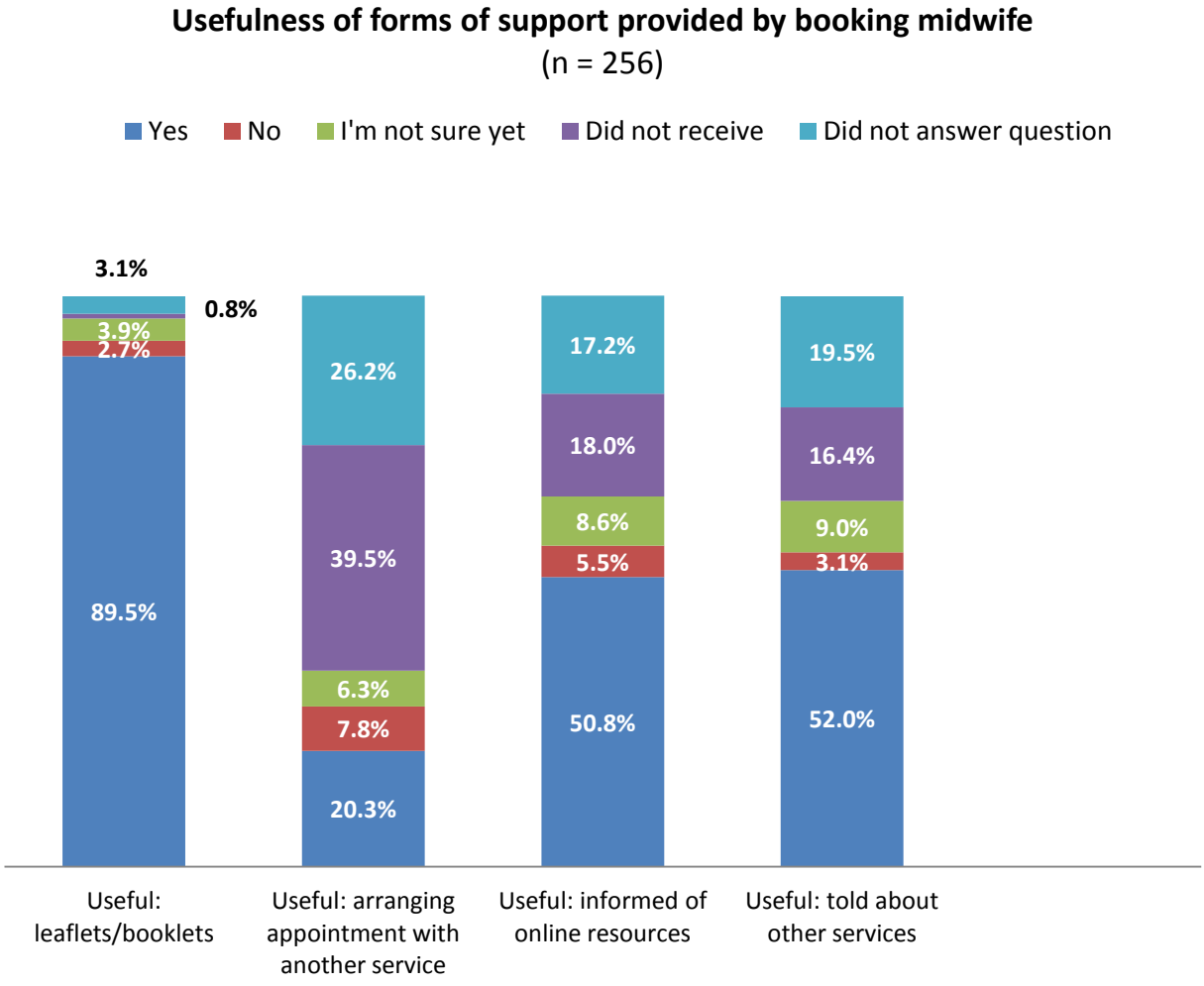


Fig. 11 Respondents views on the usefulness of various forms of support provided by their midwife at booking.

Experience of the booking visit

Almost exclusively, respondents indicated that that they had been treated with dignity and respect by their midwives at the booking appointment. In total, 252 respondents provided information on how they had been treated by their booking midwife. Of the 252 respondents, 98% (n = 247) indicated they had been treated with dignity/respect.

Respondents were asked to rate their level of satisfaction with their booking appointment. Eighty-five percent of those that answered this question indicated that they were very satisfied (61%) or satisfied (24%) with their booking appointment. However, nearly 1 in 10 (9%) indicated that they were unsatisfied with their booking appointment. The greatest source of dissatisfaction related to waiting times with some respondents indicating that they had to wait in excess of 1 hour beyond their scheduled appointment.

Caution should be exercised when interpreting level of satisfaction as some of the more negative responses seemed inconsistent with other comments noted in the questionnaire suggesting that some respondents may have accidentally mixed up the `satisfied' and `unsatisfied' options.

See figure 12 for level of satisfaction with the booking appointment by site.

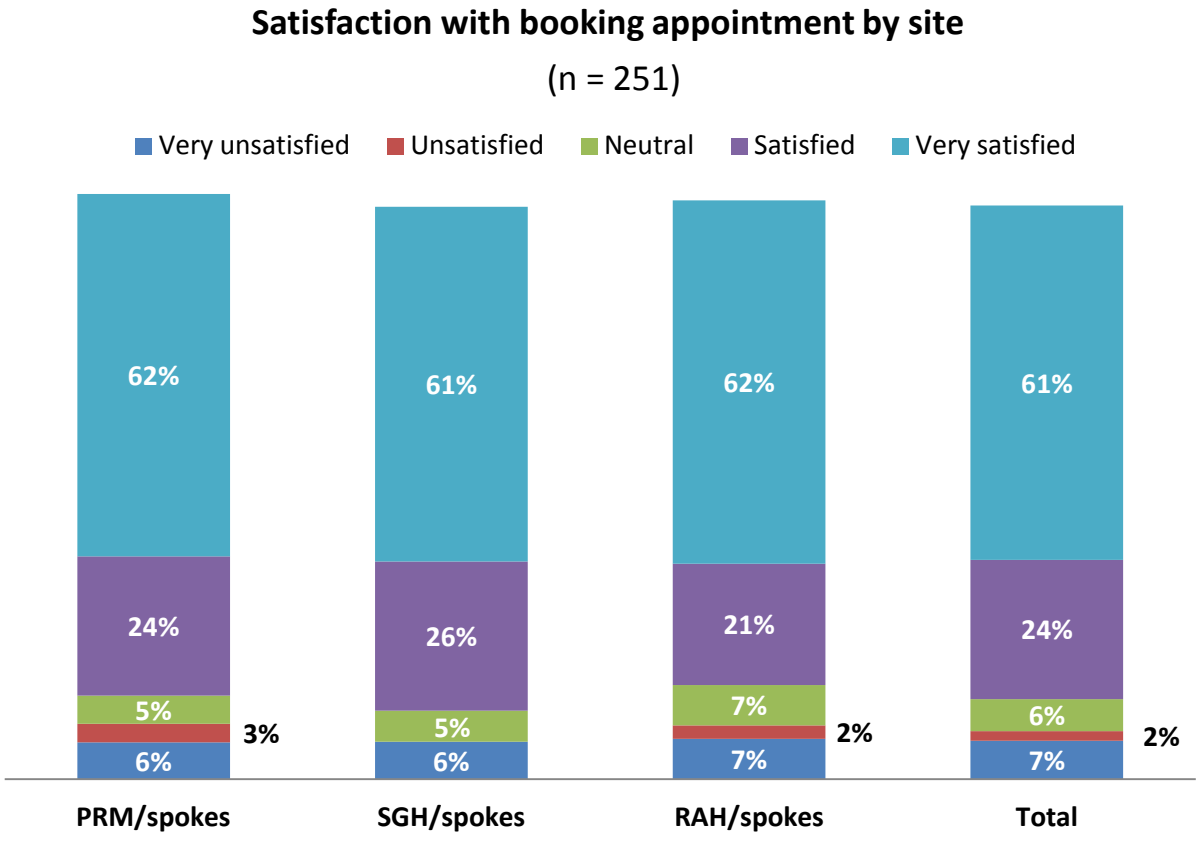


Fig. 12 Level of satisfaction with the booking appointment by site.

Information women would have liked/comments on booking appointment

- Acknowledgement and discussion of previous miscarriage (s) and its implications for current pregnancy/maternal anxiety.
- More evidence based advice (rather than personal experience).
- Information on sources of financial support/benefit entitlement/free dental care.
- Flu vaccine: lack of awareness of who should provide, when should be vaccinated and why.
- Not always aware of the rationale for referral to specialist services (e.g. SNIPS).
- More information on the tests done at booking and their significance.
- Lack of inclusion of fathers/significant others in booking appointment.
- Additional information sought was largely obtainable/deliverable within current policy/practice (e.g. advice on exercise, when to stop taking folic acid, whether it was safe to have sex at certain stages of pregnancy, etc.).

- A large number of respondents commented on the high quality and compassionate care they had received from their midwife at booking.

Appendix 1

Booking appointment questionnaire