Baseline Survey Report

Reproductive, Maternal and Neonatal Health Knowledge, Attitudes and Practices among Female Garment Factory Workers in Phnom Penh and Kandal Provinces

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Table of contents

List of tables

List of figures

Abbreviations

ANC	Antenatal Care
CDHS	Cambodia Demographic and Health Survey
CLU	Coordination and Learning Unit
DFAT	Department of Foreign Affairs and Trade
FGD	Focus Group Discussion
FP	Family Planning
FTIRMN	Fast Track Initiative Roadmap for Reducing Maternal and Neonatal Mortality
GF	Garment Factory
GFW	Garment Factory Worker
GMAC	Garment Manufacturers Association of Cambodia
IUD	Inter-Uterine Device
MERI	Monitoring, Evaluation, Reporting and Improvement
MSIC	Marie Stopes International Cambodia
MoH	Ministry of Health
NGO	Non-Governmental Organisation
NIPH	National Institute of Public Health
PNC	Postnatal Care
PSL	Partnering to Save Lives
RMNH	Reproductive, Maternal and Neonatal Health
STI	Sexually-Transmitted Infection
TBA	Traditional Birth Attendant

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Executive Summary

Cambodia has a large population of recent rural-to-urban migrants, predominantly between the ages of 18 and 30, which is clustered around the garment manufacturing industry. Up to half a million people are estimated to be working in the garment industry; approximately 85% of these are women. They represent an important target population for reproductive, maternal and neonatal health (RMNH) interventions and have particular needs and vulnerabilities.

Partnering to Save Lives (PSL) is a partnership between three non-governmental organisations (NGOs) (CARE, Marie Stopes International Cambodia and Save the Children), the Cambodian Ministry of Health (MoH) and the Australian Department of Foreign Affairs and Trade (DFAT).

PSL's activities in the garment factories focus on improving delivery of RMNH services through garment factory infirmaries, facilitating referrals to external health service providers, and promoting positive RMNH behaviour change. In order to improve equitable access to and utilisation of quality RMNH information and services for female garment factory workers (GFW), it is critically important for PSL to have relevant and accurate baseline data. This information will help to design more effective program activities and to measure the impact of this work.

Overall objective: to establish baseline information about the knowledge, attitudes and practices relating to RMNH among women of reproductive age working in garment factories in Phnom Penh Municipality and Kandal Province.

Specific objectives:

- to describe socio-economic characteristics of female GFW;
- to understand their health seeking behaviour linked to RMNH;
- to determine their knowledge and perceptions of RMNH issues;
- to assess their level of RMNH service access and utilisation, and financial costs involved;
- to make evidence-based recommendations for project design and implementation.

The research involved a quantitative survey with 909 women of reproductive age working in four of the 12 garment factories covered by PSL, selected using multi-stage cluster sampling. Women were interviewed by trained female interviewers with a structured questionnaire. Four complementary focus group discussions (FGD) explored in greater depth complex motivations, behaviours and challenges that were not fully captured by the quantitative questionnaire.

The key findings are summarised below.

Demographics:

- Almost 80% of respondents were younger than 30 years of age.
- The mean duration of education was 6.2 years.
- 34.2% of respondents were married; 38.9% had no partner.
- 81.3% lived with spouses, parents or other relatives.
- The mean total income in the previous month was US$ 142.
- Half of the respondents had worked in garment factories for more than three years.
- 81.6% owned a mobile phone.
- 7.3% were living with one or more severe functional impairments/disabilities; the most common severe impairments were visual or related to concentration or memory.

Health-seeking behaviour:

- 69.6% of respondents had used garment factory infirmaries in the past 12 months, but only 3.6% of consultations at infirmaries were for RMNH services.
- FGDs revealed perceived problems with the range, quality and friendliness of services at the infirmaries.

- Outside the factories, workers were more likely to access health services from private clinics (57.7%) than public facilities (28.6%).
- The mean (median) expenditure on services for abortion was around US$ 48 (US$ 30), for delivery US$ 73 (US$ 30), and for postnatal care (PNC) US$ 82 (US$ 37.50), not including transport. Service fees for family planning (FP) and antenatal care (ANC) were lower.
- Only 11% of women accessed RMNH services using a financial support mechanism.

Sexual activity and contraceptive use:

- 43.7% of respondents reported ever being sexually active with a mean age of sexual debut of 21.4 years.
- 40.9% of ever sexually active women had used some form of contraception in the past 12 months, most commonly daily pills (44.4%), withdrawal (22.2%) and injection (19.8%).
- Some modern contraceptive methods were well-known but perceptions of side-effects and inconvenience deterred their use.
- Modern contraceptives were most commonly obtained from pharmacies (29.8%), followed by public health facilities (24.1%) and private clinics (15.9%).

Pregnancy and maternal health:

- 35.6% of respondents had been pregnant and 30.7% had delivered at least one live baby.
- The mean (median) age of the most recent baby was 62 (48) months.
- 80.1% of their most recent deliveries were in a health facility; more than 90% were delivered by a skilled birth attendant.
- 70.6% had attended at least four antenatal care appointments prior to their most recent live delivery; only 22.1% attended two or more postnatal care visits afterwards.

Abortion and post-abortion care:

- Only 7.9% of respondents knew that abortion is legal in Cambodia.
- 26.6% could identify a source of safe abortion services.
- 17.9% of ever sexually active women reported having an induced abortion; 51% had used vacuum aspiration and 42% a medical abortion pill.
- Abortions most commonly took place in private hospitals or clinics (49.3%) and women's own homes (24.0%).
- About half of the women reported that providers had discussed contraception with them within 28 days of the abortion.
- 22.5% had taken up a modern method of contraception within 28 days of the abortion, most commonly a short-term method.

RMNH knowledge and self-efficacy:

- Only 4.0% of respondents with children could identify at least three danger signs of neonatal distress and 1.2% could identify five danger signs during pregnancy.
- Only 5.0% of women answered 'completely sure' across all four criteria of self-efficacy in the negotiation and use of family planning. Only 3.7% felt completely sure that they could refuse sex in all of five different situations.

According to these results, the average female GFW is young, single and childless, has limited education, lives with relatives, earns $142/month, has worked in the garment industry for three years and owns a mobile phone. In general, this profile is consistent with other studies. However, as our survey shows, this typical picture masks the fact that the GFW population is very diverse and therefore has a variety of RMNH information and service needs. For example, more than a third of GFW are married and more than 30% have children.

These results demonstrate that the women surveyed do not currently have adequate access to affordable, high quality RMNH information and services to meet their diverse needs. There is a high need to address the financial barriers that GFW face in accessing RMNH services and to increase their awareness of and access to available financial support mechanisms.

Awareness of family planning methods among GFW in this study is reasonably good. However, use of reliable contraception appears to be a challenge. The risk of unplanned pregnancy is heightened by the low self-efficacy expressed by women in relation to refusing sex and using family planning in challenging circumstances. This highlights the importance of activities aimed at empowering women and engaging men in RMNH issues.

There is very low awareness of the legal status of abortion and sources of safe abortion services, which increases the risk that women will access unsafe abortion without appropriate clinical back-up. Counselling on post-abortion FP is also inconsistent.

The women have very limited knowledge of danger signs relating to pregnancy or newborn distress. Despite this, and the high cost of services, most pregnant GFW endeavour to follow MoH guidelines for their own health and that of the baby. The quality of the available services is unclear, however, especially as it is likely that some of the women delivered their last baby before they started working in the garment sector. The results show that a significant minority delivered at home and/or with unskilled attendants.

These results reveal the need to reconsider and refine approaches to improve the RMNH status of women working in the garment manufacturing sector. Recommendations, which may be applicable to the PSL program or to other agencies working in this sector, include:

- developing and exploring a range of interventions tailored to meet the differing RMNH needs of this diverse group of women;
- conducting more in-depth analysis of the data to explore associations between demographic factors, such as education, marital or disability status, and RMNH indicators;
- improving the range, quality, friendliness and affordability of services available through garment factory infirmaries;
- increasing access to quality RMNH services in the communities where GFW live and work;
- addressing the financial barriers that GFW face in accessing RMNH services by raising awareness of available financial support mechanisms and exploring and evaluating new approaches;
- applying evidence-based behaviour change communication approaches to ensure that good awareness about family planning translates into appropriate and consistent use of effective contraceptive methods;
- implementing empowerment activities to increase women's self-efficacy in relation to negotiating sex and family planning use;
- raising awareness on the legal status of abortion and sources of safe and affordable abortion services;
- integrating counselling on family planning into provision of surgical and medical abortion services and postnatal care, whether through the public or private sector;
- raising awareness on danger signs during pregnancy and for the newborn, and the importance of delivering in a health facility.

1 Background

Cambodia has a large population of recent rural-to-urban migrants, predominantly between the ages of 18 and 30, which is clustered around the garment manufacturing industry. Up to half a million people are estimated to be working in the garment industry; approximately 85% of these are women[1]. They represent an important target population for reproductive, maternal and neonatal health (RMNH) interventions and have particular needs and vulnerabilities.

Partnering to Save Lives (PSL) is a partnership between three non-governmental organisations (NGOs) (CARE, Marie Stopes International Cambodia [MSIC] and Save the Children), the Cambodian Ministry of Health (MoH) and the Australian Department of Foreign Affairs and Trade (DFAT). Funded by DFAT for three years starting in August 2013, and with the possibility of a two-year extension, the PSL program is mandated to accelerate progress towards the objectives of the MoH's Fast-Track Initiative Roadmap for Reducing Maternal and Neonatal Mortality (FTIRMN)[2]. PSL focuses on six key components of the FTIRMN: basic emergency obstetric care, skilled birth attendance, family planning (FP), safe abortion, behaviour change communication and financial barriers to accessing healthcare. PSL targets particularly vulnerable populations, including ethnic minorities in the north-east of the country and women working in Cambodia's garment manufacturing sector.

PSL's activities in the garment factories focus on improving delivery of RMNH services through garment factory infirmaries, facilitating referrals to external health service providers, and promoting positive RMNH behaviour change. In order to improve equitable access to and utilisation of quality RMNH information and services for female garment factory workers (GFW), it is critically important for PSL to have relevant and accurate baseline data. This information will help the PSL partners to design more effective program activities and to measure the impact of this work.

1.1 Objectives

Overall objective: To establish baseline information about the knowledge, attitudes and practices relating to RMNH among women of reproductive age working in garment factories in Phnom Penh Municipality and Kandal Province.

Specific objectives:

- to describe socio-economic characteristics of female GFW;
- to understand their health seeking behaviour linked to RMNH;
- to determine their knowledge and perceptions of RMNH issues;
- to assess their level of RMNH service access and utilisation and financial costs involved;
- to make evidence-based recommendations for project design and implementation.

[1] Up-to-date figures are maintained by the Garment Manufacturers Association of Cambodia (GMAC): www.gmac-cambodia.org.

[2] MoH, 2010: Fast track initiative roadmap for reducing maternal and neonatal mortality, 2010-2015. Phnom Penh, Cambodia.

2 Methods

2.1 Study sites

The research team conducted this baseline survey among female GFW in Phnom Penh and Kandal provinces from 28th December 2013 to 13th January 2014. In these two provinces, PSL estimates that the program will reach more than 25,000 women working in 12 garment factories.

2.2 Sample size

The researchers used two sample comparisons of proportion to calculate the sample size needed for the baseline and final evaluation using STATA 12. The sample size calculation uses a 95% confidence interval and power of 80% with one-sided direction, taking into account a cluster effect of 2. The calculation was based on three main indicators: use of any family planning in the past 12 months (30%[3]), delivery at a health facility (65%[2]) and induced abortion in the past 5 years (25%[4,5]). The sample size calculation anticipated a change of 7-15% in these indicators from the baseline to the evaluation. In total, the required minimum sample size was 900 female GFW. Table 1 summarises the expected samples from the four selected garment factories.

Table 1: Summary of minimum samples needed from selected factories

Factory number	Location	Number to be interviewed
1	Phnom Penh	134
2	Kandal	203
3	Phnom Penh	295
4	Phnom Penh	269
Total		**901**

2.3 Sampling approach

The researchers used a multi-stage cluster sampling technique to recruit women from the catchment areas, defined as the neighbourhoods surrounding each selected factory. This involved:

- randomly selecting one third (four out of twelve) of PSL's target garment factories based on equal probability of selection;
- calculating the number of women to be interviewed from each factory proportional to the total female workforce of that factory (Table 1);
- within the catchment area of each of the selected factories, randomly selecting clusters (i.e. rental rooms and dormitories) and interviewing all eligible women living there who gave their consent.

Interviews took place in the residences after factory working hours in the late afternoon (4.30-8.00pm) and at the weekend. The selection of clusters depended heavily on the assistance of peer educators and PSL partner staff working in each factory as workers' accommodation was scattered throughout and beyond the catchment areas.

[3] Ministry of Health and Ministry of Planning, 2013: Levels and trends of contraceptive prevalence and unmet need for family planning in Cambodia. Further analysis of CDHS. Phnom Penh, Cambodia.

[4] National Institute of Statistics, Directorate General for Health, and ICF Macro, 2011: Cambodia demographic and health survey 2010. Phnom Penh, Cambodia, and Calverton, Maryland, USA.

[5] Sopheab H., *et al*., 2012: End of project evaluation: changes in HIV integrated prevention, care and impact mitigation efforts from 2009 – 2011 (KHANA). Phnom Penh, Cambodia.

A national strike from 2nd-8th January 2014 greatly increased the challenge of interviewing GFW due to the reluctance of Village Heads, landlords and workers to collaborate. Some women were absent either because they were participating in the strike or had returned home for security reasons.

One of the four factories was in an area declared as unsafe by the Government. Therefore, the team conducted the survey with workers from a fifth randomly-selected factory instead. During this period the researchers went door to door to seek any female GFW in the catchment area of the selected factories to participate in the survey.

A total of 58 women (6%) refused to participate in the survey. However, the research team were able to reach the required minimum sample size and interviewed a total of 909 women.

2.4 Qualitative data

In addition to the quantitative questionnaire, the research included a complementary qualitative approach to gain further insights into the varying points of view of the GFW. Focus group discussions (FGDs) explored a variety of issues related to RMNH, including safe abortion, pregnancy, and access to services. The purpose was to have some sense of the complex behaviours, problems and challenges that were not fully captured by the quantitative questionnaire.

As it was expected that knowledge, attitudes and practices could be different between married and unmarried women, there were two FGDs each with married and unmarried GFW from two of the four selected in factories. No other selection criteria were used, but in general, the participants were broadly representative of the socio-demographic profile of the interview respondents. Each FGD consisted of seven or eight women, lasted 90-120 minutes and was guided by a female facilitator and recorded by a female note-taker.

2.5 Study tool development

2.5.1 Quantitative questionnaire

The questionnaire was based on PSL's program objectives and monitoring, evaluation, reporting and improvement (MERI) framework, which includes indicators from the FTIRMN.

After close consultation with PSL technical staff, the researchers pre-tested the questionnaire in one project factory during the interviewer training to ensure the appropriateness of the wording and content of the questionnaire. There were ten interviews during the pretesting of the questionnaire, which was then revised accordingly.

The questionnaire included 66 main questions divided into seven sections:

- socio-demographic characteristics;
- disability;
- utilisation of health services;
- sexual activity and contraceptive use;
- pregnancy and maternal health;
- abortion and post-abortion care;
- RMNH self-efficacy.

2.5.2 Quantitative questionnaire

The field guide covered different themes designed to be complementary to the questionnaire. The four FGDs had note-takers and were tape recorded, with consent from the participants. The FGDs covered the following information:

- demographic characteristics of participants;
- awareness about RMNH services;
- RMNH service needs and preferences and their previous experiences in accessing services;

- how to make services more friendly to women;
- challenges and recommendations.

2.6 Training of interviewers

The main objective of the training was to make sure that all interviewers and supervisors understood and followed the same procedures to ensure the consistency and quality of the data collected. The training, including pre-testing of the questionnaire, involved two supervisors and ten interviewers. It included a presentation on the survey protocol and covered the necessary skills, including interview technique and maintaining confidentiality and privacy, and involved role-play and practice of the questionnaire. Interviewers received cards with information about MSIC's hotline to give to women during the interview.

2.7 Data collection and monitoring

The trained interviewers collected data under the supervision of experienced researchers. The supervisors ensured strict adherence to the informed consent, confidentiality and privacy of the subjects. When a woman refused to participate in the survey, interviewers approached another eligible woman, until the required total sample size was reached. Interviewers and supervisors recorded any refusals. After obtaining informed consent, the female interviewers conducted each interview face to face over approximately 20-25 minutes. After the interview, they gave each woman a small 'thank you' gift, which included two packs of instant noodles, a cracker bar and a bar of soap, together with the MSIC hotline card.

To support and ensure the quality of the data collection, the supervisors regularly reviewed the completed questionnaires and gave feedback and clarification to the interviewers before the next day's fieldwork.

2.8 Data entry and analysis

Experienced researchers coded the survey data and entered them into a database using Epi-Data Version 3 (Odense, Denmark), which was controlled by the check range and consistency check set by the software to minimise the entry errors. The data were imported and analysed using STATA 13.

The researchers conducted data cleaning and calculated descriptive statistics for all variables to determine mean, median, range and frequency, and performed cross-tabulation to find any association between marital status and contraceptive use.

2.9 Ethical considerations

The researchers submitted the final protocol and questionnaires for approval by the National Ethics Committee for Health Research at MoH. The protocol guaranteed the anonymity of all participants. Data collectors did not record the names of survey participants and ensured privacy and confidentiality during the interview sessions. The Principal Investigator is responsible for safe storage of all questionnaires at the National Institute of Public Health (NIPH). Participation in the survey was totally voluntary. Women had the right to refuse if they did not want to participate in the survey and were able to stop at any time during the interview without any consequences. In case the questions revealed the need for any referral for RMNH services, the women all received the MSIC hotline card at the end of the interview.

3 Results

3.1 Socio-demographic characteristics

Researchers interviewed a total of 909 GFW in this baseline survey. Their mean age was about 26 years old (median: 25 years old). GFW aged 30 or under accounted for about 80% of the sample (Table 2). Half of all the women in this survey had six years of schooling or less (primary education, grades 1 to 6) with about 4% reporting no schooling at all. The median duration of education (six years) is slightly lower than that for urban resident women in general, as reported in the Cambodian Demographic and Health Survey, 2010 (CDHS)[4]. Only 7% reported high school education or more (≥ 10 years).

Table 2: Socio-demographic characteristics of respondents

Variables	GFW (n = 909)	
	Freq	%
Age in years, mean (median)	25.8 (25)	
Age group, in years		
16 – 24	439	48.3
25 – 30	285	31.4
31 – 35	125	13.7
36 – 49	60	6.6
Education level in years, mean (median)	6.2 (6)	
Report no schooling	38	4.2
Marital status		
Unmarried and no partner	354	38.9
Unmarried and have partner	171	18.8
Married and living with spouse	243	26.7
Married but not living with spouse	68	7.5
Divorced or widowed	73	8.0
Currently living with		
Relatives	439	48.3
Spouses	239	26.3
Friends	123	13.5
Parents	61	6.7
Alone	41	4.5
Sweethearts	3	0.3
Others	3	0.3
Total income in the previous month, mean (median)	US$ 142 (138)	
Level of total income in the previous month		
US$ 15 – 80	25	2.8
US$ 80 – 120	214	23.6
US$ 121 – 160	533	58.8
US$ 161 – 550	134	14.8
Duration working in factories, mean (median)	49.2 (36) months	
Mobile phone ownership	739	81.6

Fewer than 40% of the women were single with no sexual partner and a further 8% were divorced or widowed. The total proportion of women who were married (34.2%) is much lower than for women in the general population, which is 61.4%[4]. Most of the workers reported living or staying with their

relatives (48.3%) and spouses (26.3%). Their total income in the previous month was about US$140 including salary, overtime and other sources. This compares with a reported average wage for workers in garment and shoe factories in Cambodia of about $100[6]. It should be noted that these data were collected before the new minimum wage of $100 came into effect in February 2014. About 15% of the women reported they earned more than $160 last month from all sources. The mean duration of working in garment factories was about four years. Half of the women had worked for at least three years in the garment industry (although not necessarily in the same factory). Most respondents (81.6%) reported owning a mobile phone.

The survey included a panel of six internationally-validated questions to assess the disability status of the women[7]. Overall this showed that 7.3% of the women reported that they were living with one or more severe functional impairments. The breakdown of functional impairment is shown in Table 3. This shows that the most common severe impairments were visual or related to concentration or memory.

Table 3: Reported levels of functional impairment

Variables	GFW (n = 909)	
	Freq	%
Level of difficulty in seeing even if wearing glasses		
Not difficult	684	75.3
Yes, some difficulty	188	20.7
Yes, a lot of difficulty	37	4.0
Level of difficulty in hearing even if using a hearing aid		
Not difficult	801	88.1
Yes, some difficulty	93	10.2
Yes, a lot of difficulty	15	1.7
Level of difficulty in walking or climbing stairs		
Not difficult	780	86.0
Yes, some difficulty	106	11.7
Yes, a lot of difficulty	21	2.3
Level of difficulty in remembering or concentrating		
Not difficult	633	69.7
Yes, some difficulty	235	25.9
Yes, a lot of difficulty	40	4.4
Level of difficulty with self care (i.e. washing, dressing)		
Not difficult	880	96.8
Yes, some difficulty	26	2.9
Yes, a lot of difficulty	3	0.3
Level of difficulty in communicating (i.e. understanding or being understood)		
Not difficult	817	90.0
Yes, some difficulty	84	9.2
Yes, a lot of difficulty	7	0.8

[6] Minimum wage for the garment and shoe industry in Cambodia, October 1, 2010 to 2014, accessed on May 6th 2014, at http://www.wageindicator.org/main/salary/minimum-wage/cambodia

[7] CDC National Center for Health Statistics, 2006: Overview of implementation protocols for testing the Washington Group short set of questions on disability. Atlanta, USA. www.cdc.gov/nchs/washington_group/wg_questions.htm

3.2 Health-seeking behaviour

About 70% of women reported that they had used the factory infirmary in the past 12 months (Table 4). The vast majority of consultations at the infirmary (605/640; 94.5%) were for minor health problems (e.g. tiredness, dizziness, headache) with only 3.6% (23/640) being for RMNH services, including HIV counselling and testing, pregnancy testing, FP counselling and short-term FP services. Of the 633 women using the factory infirmary, 9% were referred to services outside the factory by infirmary staff or peer educators.

Table 4: Utilisation of health care services at garment factory infirmaries

Variables	GFW	
	Freq	%
Ever used the factory infirmary in the past 12 months (n = 909)	633	69.6
Reason for not using the factory infirmary (n = 276)		
No need for health services	233	84.4
Services are not of good quality	9	3.3
Length of time taken to use the service	7	2.5
Required services are not available	7	2.5
Medicines are not available	5	1.8
Expensive services, unfriendly staff and no confidentiality	5	1.8
Services are not available when workers are free	3	1.1
Other reasons	13	4.7
Nature of consultations at the factory infirmary (n = 640*)		
Minor health problems	605	94.5
HIV counselling and testing	10	1.6
Pregnancy counselling and testing	7	1.1
Short term family planning (condoms, pills, injections)	3	0.5
FP counselling	2	0.3
Sexually-transmitted infection (STI) counselling	1	0.2
Other	12	1.9
Level of satisfaction among those using infirmaries for RMNH services (n = 21)		
Highly satisfied	7	33.3
Satisfied	10	47.6
Acceptable	4	19.0
GFW accessing RMNH services at the garment factory (GF) infirmary who would recommend the services to their friends (n = 21)	16	76.2
GFW using any GF infirmary service in the past 12 months who were referred to external health services by infirmary staff or peer educators (n = 633)	57	9.0
Breakdown of referral to services outside factories (n = 57)		
HIV counselling and testing	15	26.3
FP services	14	24.6
STI services	11	19.3
ANC and PNC services	7	12.3
Safe abortion services	4	7.0
Others	9	15.8

Variables	GFW	
	Freq	%
Source of most recent health service outside the factory in the past 12 months (n = 440)		
Private clinic or hospital	251	57.0
Public facility	126	28.6
NGO clinic (RHAC, MSIC)	53	12.0
Others	10	2.3
Level of satisfaction with the health service visit (n = 454)		
Highly satisfied	104	22.9
Satisfied	212	46.7
Acceptable	106	23.3
Not satisfied	32	7.1

*Some women accessed more than one service at the infirmary.

The low proportion accessing RMNH services from factory infirmaries is consistent with the findings from the FGDs which showed that few workers were aware that these services were available from the infirmaries, unless they had participated in a peer educator program. Some women were aware of the presence of NGOs providing services at their workplace but they did not know which NGO or which services. However, women at one factory reported the availability of RMNH services every Saturday, publicised through 10-15 minute health messages.

> *"I don't know the name of the NGO, but the NGO staff used to join meetings at the factory…there is a worker representative [who] collects ID of those [female factory workers] who want to receive [intra-uterine device] for family planning." (FGD with married woman)*

> *"On Saturday, health workers broadcast, via loud speakers, informing workers, for example those who are pregnant, to take care of their health and have their pregnancy checked up and take medicine as prescribed." (FGD with unmarried woman).*

Among the 30% of women who reported never having used the factory infirmary, the main reason was that they were not in need of healthcare (84.4%). Much smaller proportions mentioned such reasons as the lack of the required services, inconvenient opening hours or poor quality services.

Among the few (21) women that used RMNH services at a factory infirmary, more than 80% were satisfied or highly satisfied with the services and 76% said that they would recommend the infirmary service to their friends. The FGDs painted a different picture, revealing complaints about the range and quality of services provided and the friendliness and helpfulness of the health workers at the infirmary. (It was not recorded whether FGD participants had used the infirmaries in the past 12 months.)

> *"I don't like it [infirmary] because it is hard to understand [staff]. It is not easy to talk with [staff]. His face is not friendly with us at all." (FGD with unmarried women)*

> *"…in factory infirmary, some [health staff] are ok. Some are arrogant and only self benefit. They paid attention when [women are] buying [their medicine]." (FGD with married women)*

> *"It [infirmary service] is better than before. The former health staff resigned...we can ask for some medicine without paying." (FGD with unmarried women)*

> *"There are contraceptive pills [at the infirmary], but we needed to pay for them [at the infirmary] before [but now they are free]." (FGD, married women)*

Only three women reported using the infirmary to obtain (short-term) FP services. A further 14 had been referred for FP services outside the factory by infirmary staff or peer educators (Table 4).

In general, health services in factory infirmaries offered basic symptomatic management. For serious injuries or medical problems, the infirmary transferred workers to health facilities outside the factory. For RMNH, services focused mostly on health education including FP and maternal and child health counselling and the FGDs found these to be inadequate. In addition, only a few women mentioned that there was a peer educator program at the factory run by NGOs. Some relevant quotations are cited below.

> *"…services offered by the infirmary included prescribing tablets or coining for wind illness [dizziness], loss of strength [fatigue], [as well as prescribing] balms, pain relief patches, helping with needle injury." (FGD with married women)*
>
> *"They [MSIC] come about 3 times in every 2-3 months." (FGD with married women)*
>
> *"Pregnant factory workers receive one day off per month to have antenatal care (ANC) visit." (FGD with unmarried women)*
>
> *"I wish to have [health] education on family planning and abortion…" (FGD with married women)*

Furthermore, it was perceived that married and unmarried women had different access to information about sexual and reproductive health. Workers identified a need to improve services at the factory infirmary.

> *"Marie Stopes selected only married women with pregnancy or who had just delivered a baby through the group leader to receive health education on antenatal care, postnatal care and breast feeding." (FGD with unmarried women)*
>
> *"I want NGOs to have their office [located] in the factory, where they [NGO staff] could offer services such as [caring for women's illnesses], family planning and abortion." (FGD with married women)*

Echoing previous comments regarding satisfaction with services at the infirmaries, workers also identified the need to improve the quality of the services as well as the friendliness and helpfulness of the health workers.

> *"…when we got in [the infirmary], they [health staff] only tell us to have coining (scratching)…they did not tell about the health problem." (FGD with unmarried women)*
>
> *"I want the factory infirmary to have enough drug supplies for factory workers, especially for those who stay away from home." (FGD with unmarried women)*

The 440 women who visited health facilities outside factories in the past 12 months most commonly accessed private clinics and hospitals (57.7%), public facilities (28.6%), and NGO clinics (e.g. RHAC and MSIC) (12%). About 70% of these women reported being satisfied with the health services they received.

Further questions assessed expenditure incurred by women in the past 12 months for services including FP, abortion, ANC, delivery and postnatal care (PNC) (see Table 5). The mean (median) expenditure on services for abortion was around US$ 48 (US$ 30), for delivery US$ 73 (US$ 30) and for PNC US$ 82 (US$ 37.50), not including transport (exchange rate: 1$ = 4000 Riel). Service fees for FP and ANC were lower. The large differences between means and medians indicate that the means were skewed by a few very high expenditures. Given the mean monthly income for these women was $142, mean total costs of services, including transport, represented about 36% (US$ 51/142), 57% (US$ 81/142) and 60% (US$ 85/142) of their average monthly income for abortion, delivery and PNC, respectively.

Additionally, among those who responded to the question (n =195), most women (89%) did not receive any financial support to help with the cost of accessing services. Among the 11% who reported receiving financing support, these included referral slips for the poor (5.6%, 11/195) and FP

vouchers (3.6%, 7/195). In the FGDs, some women reported receiving FP vouchers from MSIC. In one factory, women reported receiving support from the National Social Security Fund for job-related injuries.

> *"…Social security card helped us when we had injuries during work with no charge." (FGD with unmarried women)*

Table 5: Out of pocket expenditure for RMNH services

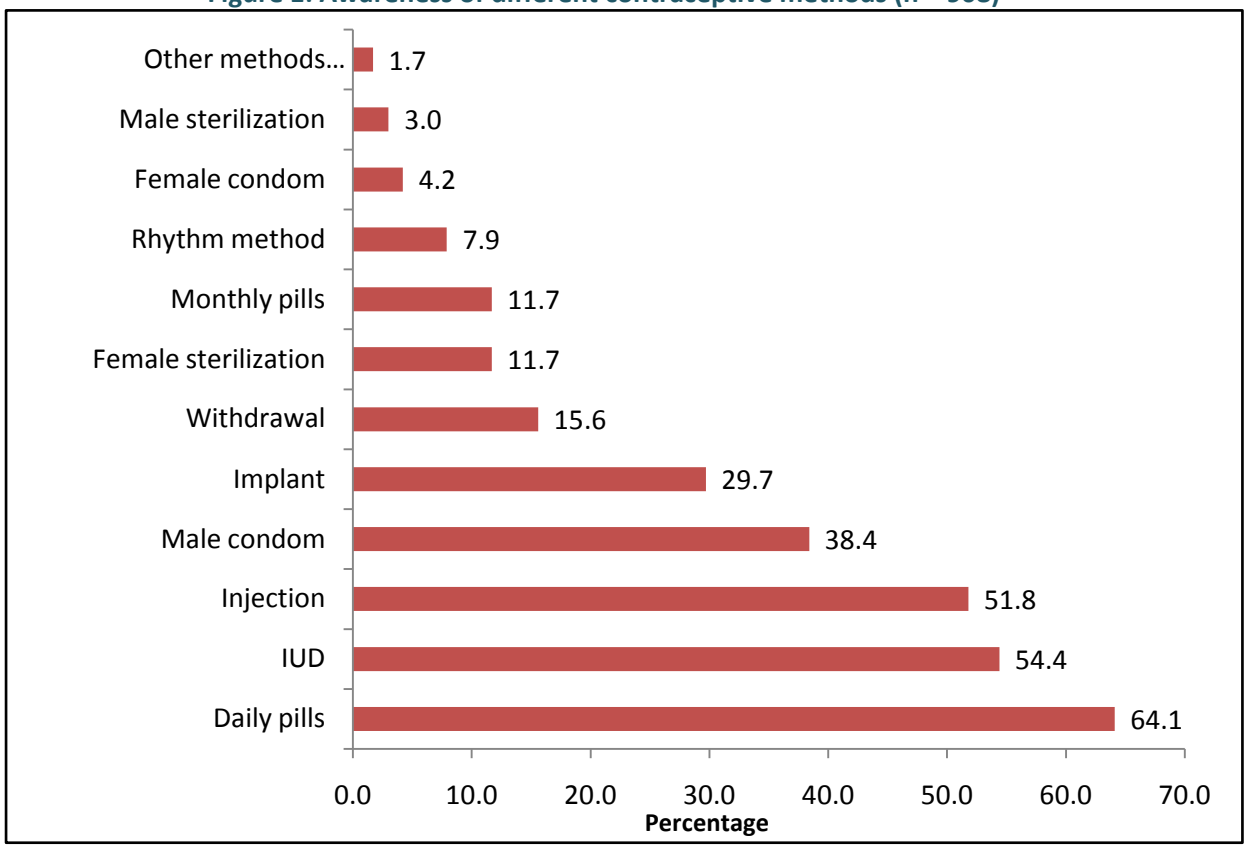
Service	Service fee Mean (median) in Riel	Transport fee Mean (median) in Riel	Total fee Mean in Riel
Abortion (n = 45)	190,044 (120,000)	13,363 (10,000)	203,406
ANC visit (n = 109)	17,904 (5,000)	11,174 (6,000)	29,078
Delivery (n = 91)	290,819 (120,000)	33,363 (10,000)	324,182
Family planning (n = 107)	12,694 (2,000)	10,148 (5,000)	22,842
PNC visit (n = 50)	326,880 (150,000)	14,807 (15,000)	341,687

Note: The average total fees were the sum of the service fees and transport fees. No median was available for the total fee. Exchange rate: 4000 Riel = US$ 1.

3.3 Sexual activity and contraceptive use

Interviewers asked the GFW about their awareness of different contraceptive methods. They were most commonly aware of daily pills (64%), inter-uterine devices (IUDs) (54%), injections (52%) and male condoms (38%) (Figure 1).

Figure 1: Awareness of different contraceptive methods (n = 908)



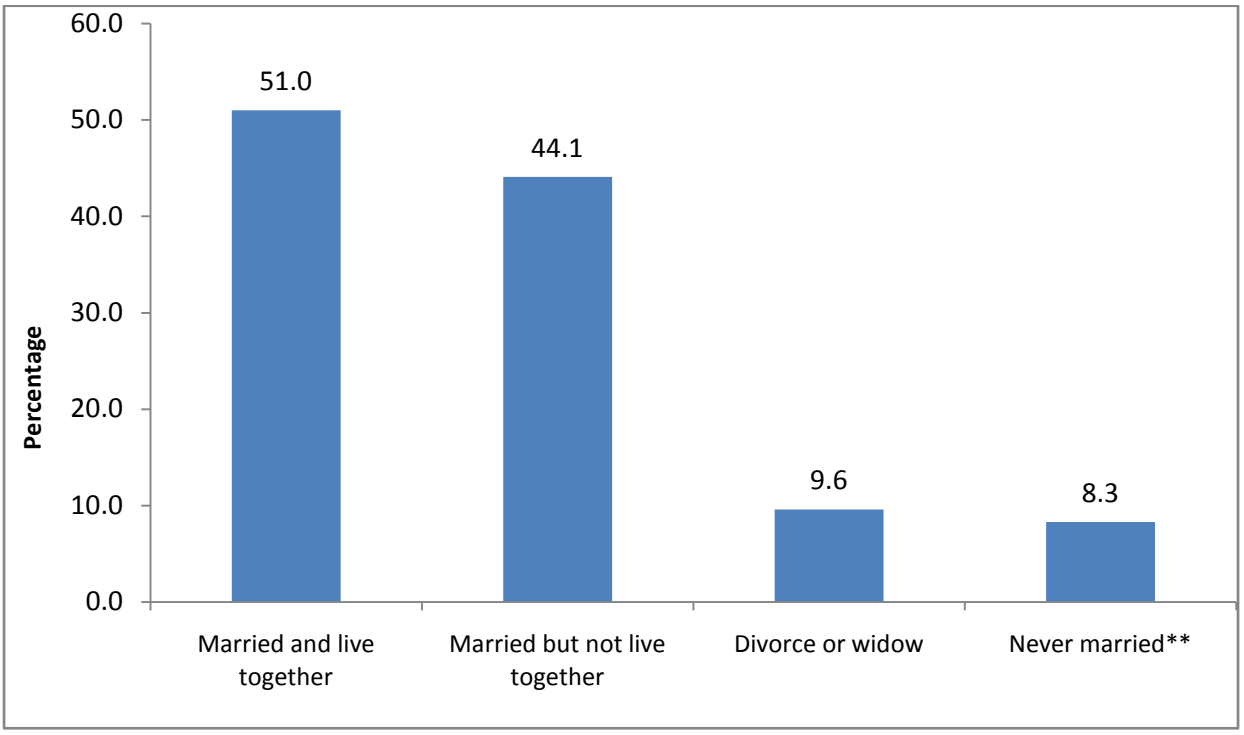
Among the female GFW, close to 44% reported ever being sexually active. The mean age of sexual debut was approximately 21 years old (ranging between 14 and 36 years), very similar to that in the general population[4]. Of these women, 41% reported having used some contraceptive in the past 12 months (Table 6), of whom 78% had used modern contraceptives.

Table 6: Sexual behaviour and contraceptive use in the past 12 months

Variables	GFW	
	Freq	%
Women reporting ever having sexual intercourse (n = 908)	397	43.7
Mean (median) age of sexual debut in years (n = 397)	21.4 (21)	
Women reporting using any contraceptive in the past 12 months (n = 396)	162	40.9

When stratified by marital status, married women currently living with spouses reported higher contraceptive use (51%, 124/243) than those married but not living with a spouse (44.1%, 30/68), divorced/widowed (9.6%, 7/73) or never married but having a partner (8.3%, 1/12) (Figure 2). This finding is consistent with CDHS 2010, which also shows higher rates of contraceptive use among married women than non-married women[4].

Figure 2: Contraceptive use by marital status (n = 396)



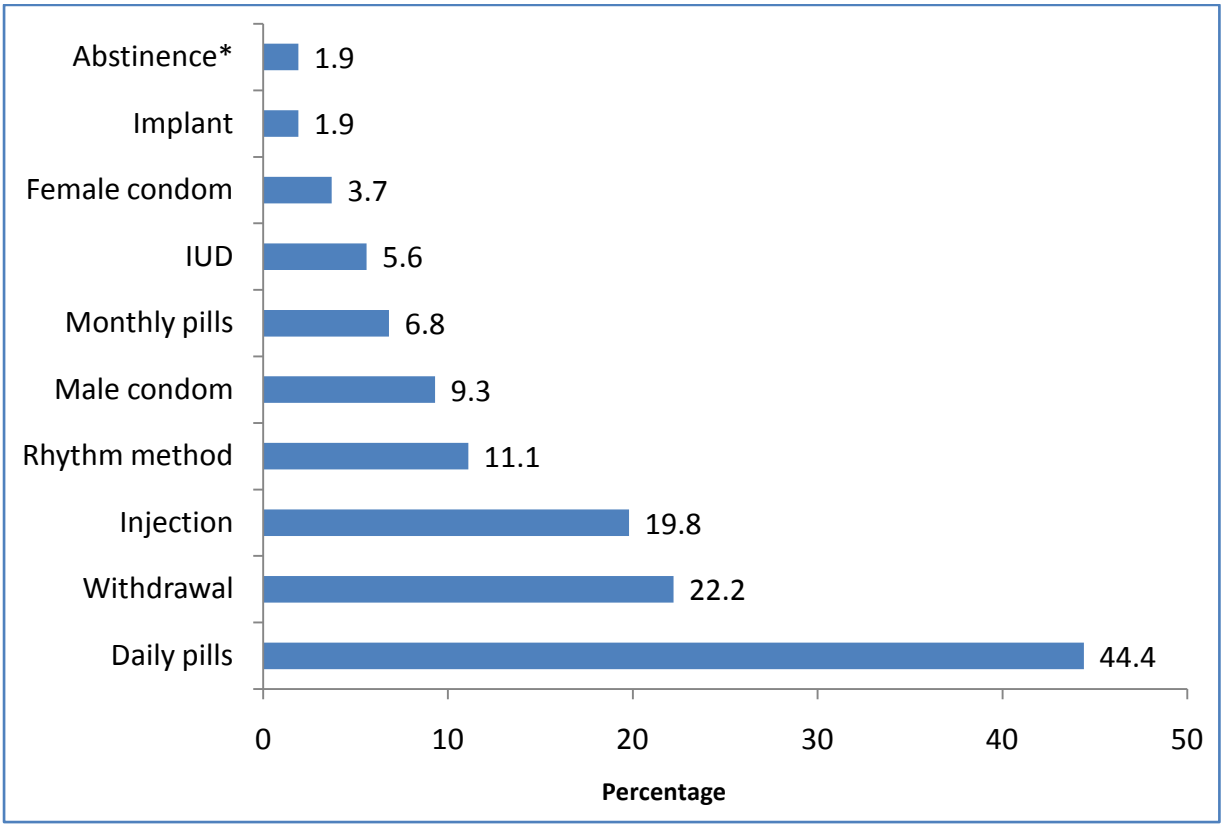
***Never married but sexually active*

Among 162 women who reported having used contraceptives in the past 12 months, the most commonly-used methods were daily pills (44.4%), withdrawal (22.2%), and injection (19.8%), followed by the rhythm method, male condoms and monthly pills. The detail is shown in Figure 3. The CDHS 2010 also reported that the pill was the most commonly-used contraceptive method but shows a higher reliance on long-acting and permanent methods of FP in the general female population[4].

These survey results were supported by findings from the FGDs, which showed that FP methods were well known among female GFW. The contraceptive pill appeared to be commonly known and used by the group. Implants and IUDs were also discussed, but their perceived side effects were a deterrent for many women (although no specific side effects were recorded).

"I like pill for one month, one pill per day." (FGD, married women)

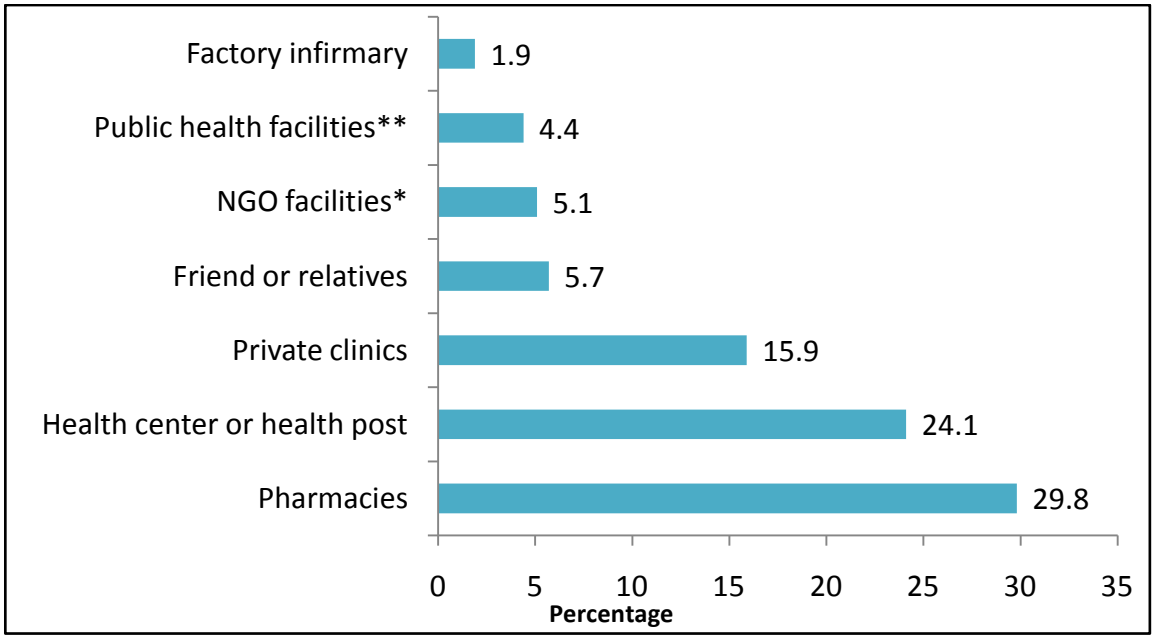
Figure 3: Contraceptive methods used in the past 12 months (n = 162)



**Abstinence meaning a woman is sexually active but did not have sex in the past 12 months.*

When asked where GFW most recently obtained contraceptives, the most common response was pharmacies (29.8%), followed by public health centres and health posts (24.1%), and private clinics (15.9%), including Sinat and Bopha Phuong Clinics. Only 5% reported using NGO clinics including RHAC and MSIC (Figure 4). This shows much higher reliance on pharmacies and friends as sources of contraceptives and much less on the public sector than the general population in the CDHS[4].

Figure 4: Most recent source of contraceptives (n = 158)



** NGO facilities included RHAC and MSIC*
*** Public health facilities including national, provincial and referral hospitals*

Among 147 women who reported current use of contraceptives, daily pills were most commonly used (34.0%), followed by withdrawal (19.0%) and injection (10.2%) (Table 7). The FGDs supported the inference that traditional methods such as withdrawal are still popular and may be considered safe for women for whom the pill is not suitable.

> *"Before my first pregnancy, I did not use the pill. I used natural method [withdrawal]. We had sex and then we did not pour the water in the jar [withdrawal]." (FDG with married women)*

> *"I do not fit well with the pill. I asked my husband to delay pregnancy. Mostly, he does not use condoms, he used natural method, he pours the water outside the jar [withdrawal]." (FGD with married women)*

For sexually active women who reported not using any contraceptive method (n = 48), the main reasons were side effects (29.2%) and inconvenience (20.8%) of the contraceptive methods.

Table 7: Current use of contraception and reasons for non-use

Variables	Freq	%
Current use of contraception (n = 147)		
Modern methods		
Daily pills	50	34.0
Injection	15	10.2
Male condom	9	6.1
Monthly pills	8	5.4
IUD	8	5.4
Implant	3	2.0
Female condom	3	2.0
Traditional methods		
Withdrawal	28	19.0
Rhythm method	15	10.2
Abstinence	2	1.4
Other methods	6	4.1
Main reasons for not using contraception (n = 48)		
Side effects	14	29.2
Inconvenience	10	20.8
Not reliable	4	8.3
Fear of not being able to have children later	1	2.1
Partner's opposition to FP use	1	2.1
Others (e.g. sterility, want children)	18	37.5

3.4 Pregnancy and maternal health

Of the 396 women who have had sex and answered the question, 324 (81.8%) reported ever being pregnant. One in five women reported that they were using modern contraception when they last became pregnant (Table 8).

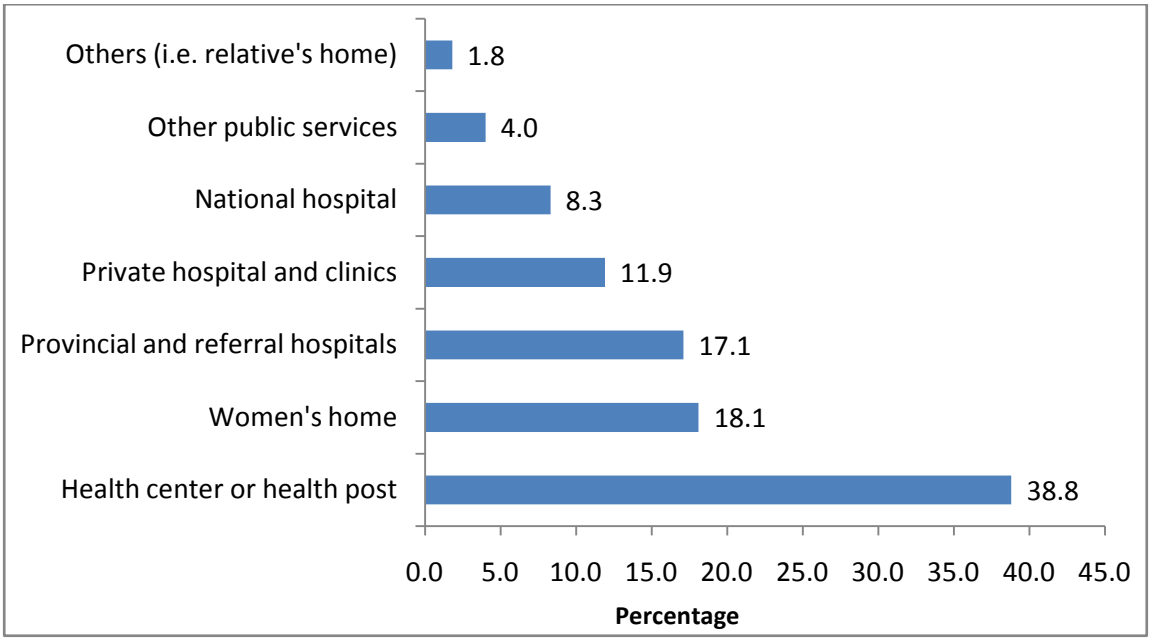
Among the 279 women who had delivered a live baby, most (60.6%) had delivered one live baby, while about 14% had more than two live births. The mean age of their most recent baby was 62 months (median = 48 months). As the mean and median durations of working in garment factories were 49.2 and 36 months, respectively, this suggests that at least some of the children were born before the women started working in the industry.

Table 8: Pregnancies and live deliveries

Variables	Ever sexually active GFW	
	Freq	%
Number of pregnancies including abortion and miscarriage (n = 324)		
One	143	44.1
Two	94	29.0
Three	50	15.4
Four	23	7.1
Five or more	14	4.3
Use of modern contraceptive when they last became pregnant (n = 324)	69	21.3
Number of live babies delivered (n = 279)		
One	169	60.6
Two	70	25.1
Three or more	40	14.3

The greatest proportion of deliveries took place in a health centre or health post (38.8%). However, nearly 20% of deliveries took place at home (Figure 5).

Figure 5: Location of most recent delivery (n = 276)



Most women reported that their last live birth was attended by a midwife (67%), or doctor/medical assistant (22%) (Table 9). Overall, more than 90% of women delivered with a skilled birth attendant, defined as a doctor, nurse or midwife.

Referring to maternal health, 91.8% (256/279) of the women reported accessing ANC before their most recent live birth and 70.6% (197/279) attended at least four ANC visits as recommended by MoH guidelines (Table 10). Among the 39 GFW who gave birth in the past 12 months, 32 (82.1%) had accessed any ANC and 25 (64.1%) had attended at least four ANC visits.

Table 9: Assistance at delivery for the most recent live birth

Variables	GFW (n = 275)	
	Freq	%
Person who assisted with delivery for the most recent live birth		
Midwife	184	66.9
Doctor or medical assistant	60	21.8
Traditional birth attendant (TBA)	24	8.7
Nurse/other trained health staff	5	1.9
Friend or relatives	2	0.7
Total assisted by skilled birth attendant at the most recent live birth	249	90.5

The FGDs confirmed the importance that female GFW place on ANC for the health of both mother and baby. Some comments below related to women's own experience of ANC, others to general perceptions among the group.

> *"[During ANC visit] we learned how the baby will be delivered; head first or vertically." (FGD with unmarried women)*

> *"[During ANC visit] the health worker recommends us to take Vitamin A and 90 iron tablets…" (FGD with married women)*

> *"Women could receive tetanus vaccination 3 to 4 times." (FGD with married women)*

The most recent ANC visit most commonly took place at health centres/posts (64.4%), provincial/ referral hospitals (10.5%) and private facilities (9%) (Table 10).

Table 10: Antenatal care

Variables	Freq	%
Number of ANC visits prior to most recent live birth (n = 279)		
None	23	8.2
One	9	3.2
Two	13	4.7
Three	37	13.3
≥ Four	197	70.6
Location of the most recent ANC visit (n = 256)		
Health centre or health post	165	64.4
Provincial or referral hospital	27	10.5
Private hospital, clinic or other facility	23	9.0
National hospital (e.g. Calmette)	17	6.6
NGO clinic	11	4.3
Other public service	8	3.1
Others (e.g. woman's home, relative's home)	5	2.0

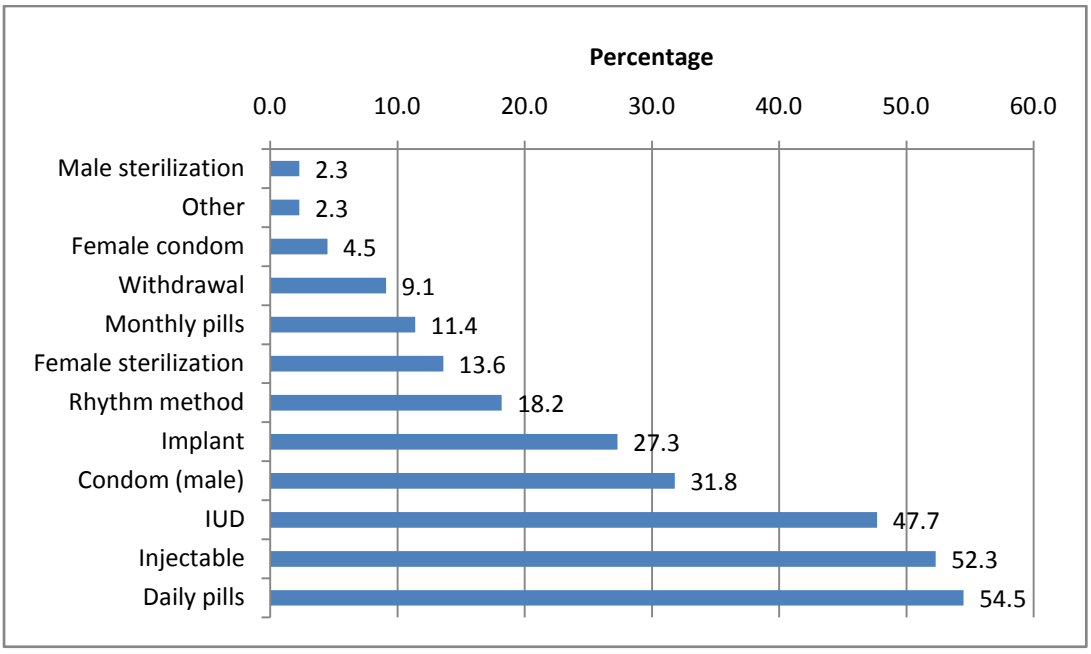
About 30% (82/272) of women reported accessing PNC after the most recent live birth; 22.1% reported at least two PNC visits as recommended by MoH. Among the 32 women who had delivered in the past 12 months, only five (15.6%) had accessed any PNC and four (12.5%) had attended at least two PNC visits. The most common location for the most recent PNC visit was a health centre/health post (63%) or provincial/referral hospital (11.1%) (Table 11).

Table 11: Postnatal care

Variables	Freq	%
Number of PNC visits after the last delivery (n = 272)		
None	190	69.9
One	21	7.7
≥ Two	60	22.1
Not specified	1	0.4
Location of the most recent PNC visit (n = 81)		
Health centre or health post	51	63.0
Provincial or referral hospital	9	11.1
National hospital	5	6.2
NGO clinic (RHAC clinic)	5	6.2
Private hospital or clinic	5	6.2
Others (i.e. woman's home, relatives, other)	6	7.4

About 56% (46/82) of women reported that a service provider had discussed contraception choices with them within 24 hours after the most recent delivery. According to the women, the most common methods discussed were daily pills (55%), injections (52%) and IUDs (48%) (Figure 6). Post-natal uptake of FP methods was not recorded.

Figure 6: Contraceptive methods discussed with women after delivery (n = 44)

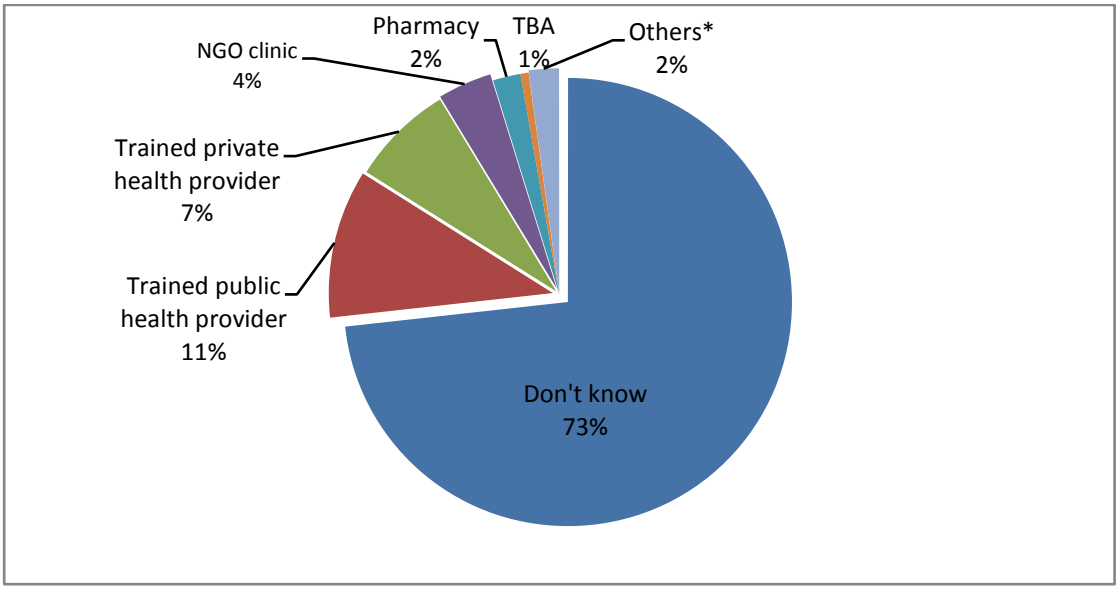


3.5 Abortion and post abortion care

Only 7.9% of all women surveyed (72/909) reported that abortion is legal in Cambodia. Most thought that it is illegal (80.4%) and 11.7% said that they did not know.

About 27% (242/909) of the women reported knowing where they could access a safe abortion service. Identified sources were most commonly public, private and NGO providers (Figure 7).

Figure 7: Knowledge on sources of safe abortion services (n = 909)



**Others including public and private hospital and clinics, hospitals in Vietnam*

FGDs reflected a similar lack of knowledge about safe abortion among GFW, although some participants reported experiencing (medical) abortion themselves. They defined a 'safe abortion' as one that was performed by skilled health workers or that took place at health centres, hospitals or NGO clinics. However, some GFW did not know how to identify proper skilled health providers or suitable health facilities.

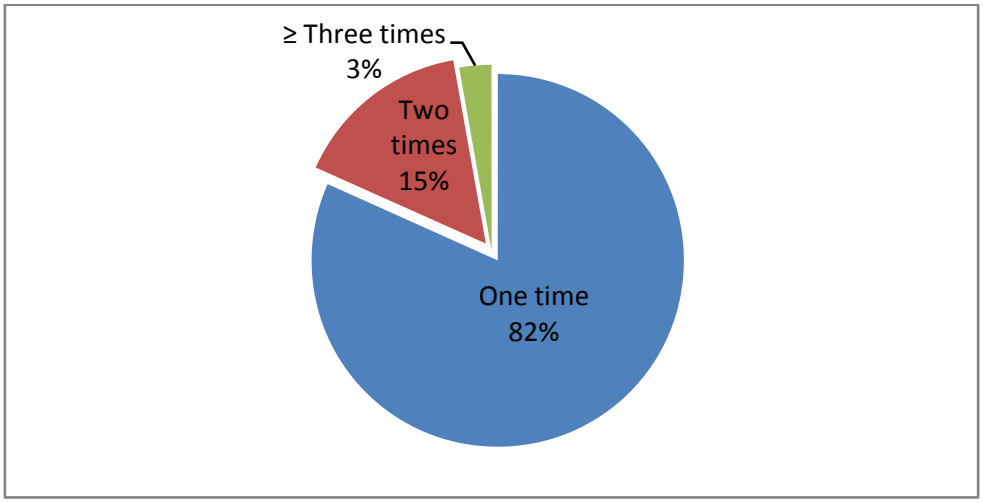
> *"Public hospitals are safe, private are also safe… as long as it is a hospital." (FGD with married women)*

Some women recalled that abortion services are offered by MSIC.

> *"I used to receive training from MSI[C]. They gave us a referral form and an information card with a phone number if someone wanted to have abortion, they should bring the form and they got a discounted price." (FGD with unmarried woman)*

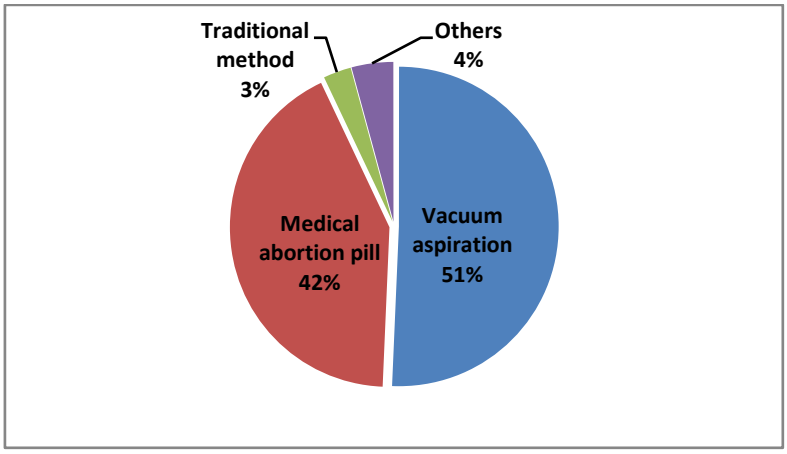
Among ever sexually active women, nearly 18% (71/397) reported ever having an abortion. Most of these (81.7%) had experienced one abortion (Figure 8).

Figure 8: Frequency of induced abortion (n = 71)



The most common abortion methods reported were vacuum aspiration and medical abortion pills (Figure 9). This shows a greater reliance on medical abortion than found in the CDHS[4].

Figure 9: Reported method for the most recent induced abortion (n = 71)



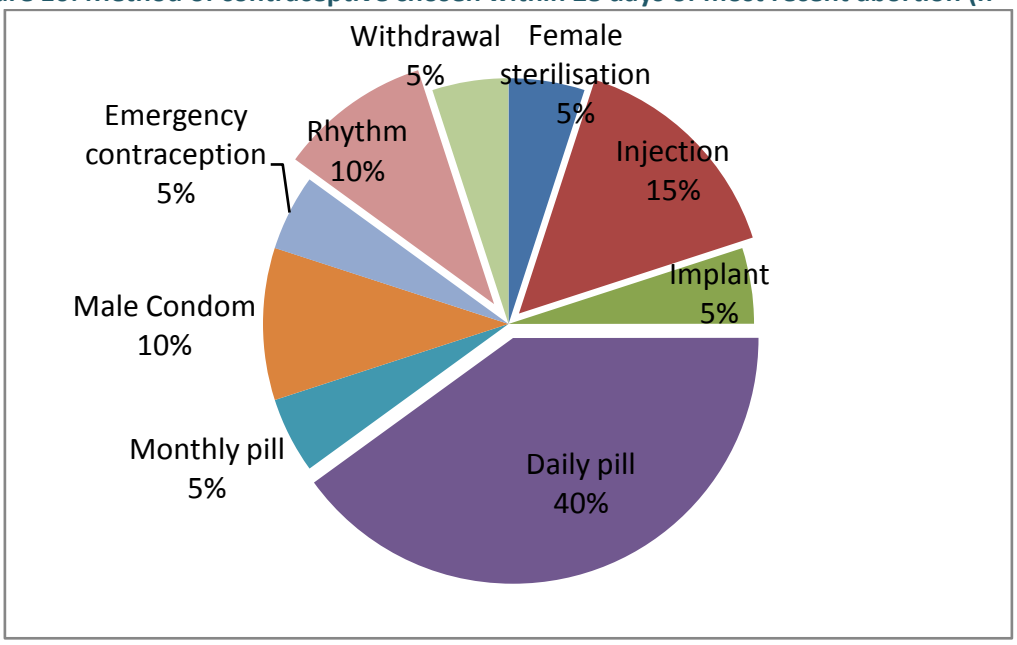
Abortions most commonly took place in private hospitals or clinics (49.3%) and women's own homes (24.0%). Only four women out of 71 reported they had their last abortions at MSIC (three cases) or other NGO clinics (one case). These proportions are broadly similar to the location of abortions identified in CHDS[4], but with more in this study occurring in the private sector and fewer in other people's homes. About half of the women reported that providers had discussed contraception with them within 28 days of the abortion. The most common contraceptive methods discussed were daily pills (55.6%), injections (55.6%) and IUDs (36%). The detail is shown in Table 12.

Table 12: Abortion and post-abortion counselling on contraceptive choices

Variables	Freq	%
Location of the most recent abortion (n = 71)		
Private hospital or clinic	35	49.3
Own home	17	24.0
National, provincial or referral hospital	5	7.0
Health centre or health post	4	5.6
NGO clinic (e.g. MSIC)	4	5.6
Friend's or relative's home	4	5.6
Pharmacy	2	2.8
Discussion of contraceptive choices within 28 days after the most recent abortion (n = 71)	36	50.7
Contraceptive methods discussed (n = 36)		
Daily pills	20	55.6
Injection	20	55.6
IUD	13	36.1
Implant	6	16.7
Monthly pills	6	16.7
Male condom	6	16.7
Female sterilisation	3	8.3
Rhythm method	2	5.6
Withdrawal	2	5.6
Male sterilisation	1	2.8
Female condom	1	2.8
Abstinence	1	2.8

Among the 36 women who received family planning counselling after their most recent abortion, 55.6% (20 women) reported using a contraceptive method within 28 days. The breakdown of methods used is shown in Figure 10. The two most common methods were daily pills (eight women) and injection (three women), confirming the predominance of short-term methods. Four women were not using reliable modern contraceptive methods, relying instead on withdrawal, rhythm or emergency contraception.

Figure 10: Method of contraceptive chosen within 28 days of most recent abortion (n = 20)



3.6 RMNH knowledge and self-efficacy

Table 13 shows in detail the findings regarding the knowledge of women with children about danger signs during pregnancy and of neonatal distress. In general, knowledge of danger signs in both situations was low. The most commonly-recognised danger signs during pregnancy were vaginal bleeding, anaemia and high blood pressure. About 20% of women were able to say that abnormal body temperature was the danger sign for neonatal distress. Awareness of other danger signs was even lower.

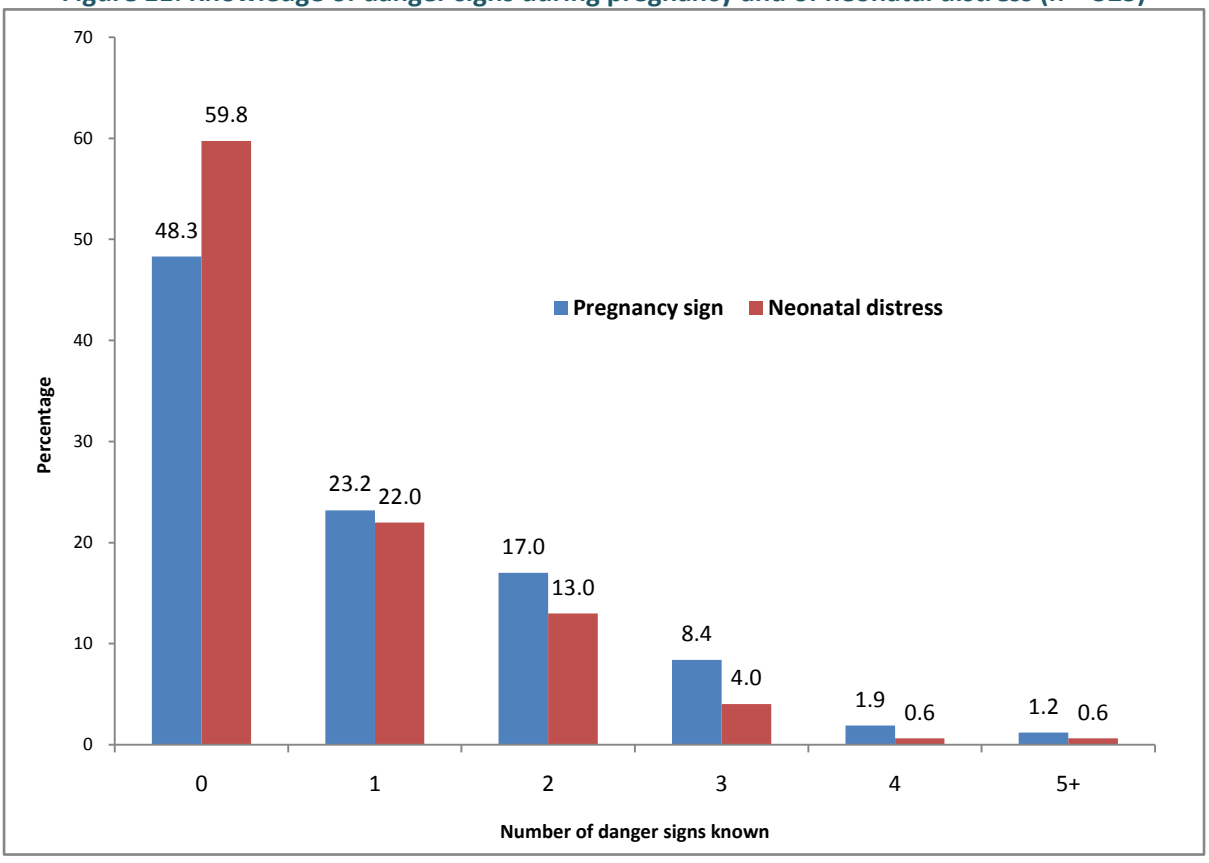
Table 13: Women's knowledge of danger signs during pregnancy and of neonatal distress

Variables	Freq	%
Reported danger signs during pregnancy (n = 323)		
Vaginal bleeding	87	26.9
Anaemia	54	16.7
Elevated blood pressure	41	12.7
Abdominal pain in early pregnancy	27	8.4
Loss of foetal movement	21	6.5
Difficulty breathing	11	3.4
Fever during pregnancy and labour	9	2.8
Abdominal pain in later pregnancy	6	1.9
Pre-labour rupture of membranes	2	0.6
Others (e.g. transverse position)	52	16.1

Variables	Freq	%
Reported danger signs of neonatal distress (n = 323)		
Abnormal body temperature	70	21.7
Feeding difficulty	26	8.1
Lethargy	21	6.5
Vomiting and or abdominal distension	21	6.5
Red and swollen umbilicus, draining pus or foul smelling	11	3.4
Convulsion	9	2.8
Red eyes, swollen, or draining pus	6	1.8
Jaundice	5	1.6
Bleeding and or pale	4	1.2
Others (i.e. fast breathing)	39	12.1

Figure 11 shows the number of danger signs that women are aware of in relation to pregnancy and neonatal distress. Around half of the women do not know any danger sign.

Figure 11: Knowledge of danger signs during pregnancy and of neonatal distress (n = 323)



Four questions were asked to assess women's self-efficacy in negotiating and using FP. The detail is shown in Table 14. Less than a quarter of women were completely sure that they could raise the topic of FP with husbands or partners and tell them about their willingness to use FP. This level of confidence decreased further to 20.5% when referring to the actual use of FP and 7.3% regarding their ability to use FP against their partner's wishes. Overall, only 5% of women gave the response 'completely sure' across all four criteria.

Table 14: Self-efficacy regarding family planning

	Freq	%
How sure are you that you could:		
Bring up the topic of family planning with your husband or partner? (n = 909)		
No answer	12	1.3
Not sure at all	28	3.1
Somewhat unsure	41	4.5
Unsure	44	4.8
Somewhat sure	569	62.6
Completely sure	215	23.7
Tell your husband or partner you want to use FP? (n = 909)		
No answer	8	0.9
Not sure at all	33	3.6
Somewhat unsure	51	5.6
Unsure	33	3.6
Somewhat sure	562	61.8
Completely sure	222	24.4
Use family planning? (n = 908)		
No answer	16	1.8
Not sure at all	77	8.5
Somewhat unsure	67	7.4
Unsure	45	5.0
Somewhat sure	517	56.9
Completely sure	186	20.5
Use family planning even if your husband or partner did not want to? (n = 907)		
No answer	32	3.5
Not sure at all	130	14.3
Somewhat unsure	131	14.4
Unsure	78	8.6
Somewhat sure	470	51.8
Completely sure	66	7.3

Researchers also asked women about their level of confidence in refusing sex with spouses and partners. The detail of the answers is shown in Table 15. Across the five questions the proportion of women who felt completely sure that they could refuse sex under the different scenarios ranged from 9.5% to 22.6%. However, only 3.7% felt completely sure that they could refuse sex in all five situations.

Table15: Self-efficacy regarding refusing sex with spouses or partners

Variables	Freq	%
How sure are you that you could refuse sex with your partner:		
When you don't want to but he does? (n = 907)		
No answer	30	3.3
Not sure at all	54	6.0
Somewhat unsure	96	10.6
Unsure	86	9.5
Somewhat sure	489	53.9
Completely sure	152	16.8
When you are tired? (n = 908)		
No answer	13	1.4
Not sure at all	22	2.4
Somewhat unsure	38	4.2
Unsure	28	3.1
Somewhat sure	602	66.3
Completely sure	205	22.6
When he gets angry with you if you don't want to? (n = 908)		
No answer	53	5.8
Not sure at all	63	6.9
Somewhat unsure	113	12.4
Unsure	82	9.0
Somewhat sure	511	56.3
Completely sure	86	9.5
When he threatens to hurt you if you don't want to? (n = 908)		
No answer	35	3.9
Not sure at all	76	8.4
Somewhat unsure	110	12.1
Unsure	86	9.5
Somewhat sure	505	55.6
Completely sure	96	10.6
When he threatens to have sex with other women if you don't want to? (n = 908)		
No answer	42	4.6
Not sure at all	97	10.7
Somewhat unsure	121	13.3
Unsure	80	8.8
Somewhat sure	469	51.7
Completely sure	99	10.9

4 Conclusions

According to these results, the average female garment factory worker is young (median 25 years), single and childless, has limited education (6 years), lives with relatives, earns $142/month, has worked in the garment industry for 36 months and owns a mobile phone. In general, this profile is consistent with other studies[2,8,9,10]. However, as this survey shows, this typical picture masks the fact that the GFW population is very diverse and therefore has a variety of RMNH information and service needs. So, for example, more than a third of GFW are married and more than 30% have children. More than 7% of GFW are living with a severe functional impairment or disability.

These results demonstrate that currently the women surveyed do not have adequate access to the RMNH information and services required to meet their diverse needs. The factory infirmaries provide only a limited range and variable quality of RMNH services (FP counselling and short-term methods, pregnancy testing, STI and HIV counselling and testing), and only 21 out of 909 women surveyed had used them in the past year. GFW are more inclined to use RMNH services outside the factory, provided by the public or private sector, but these consume a high proportion of their monthly income, particularly for abortion, delivery and PNC services. There is a high need to address the financial barriers that GFW face in accessing RMNH services and to increase their awareness of and access to available financial support mechanisms.

Awareness of family planning methods among GFW in this study is reasonably good, given that the methods were identified unprompted by the respondents, not described by the interviewer as in the CDHS[4]. This may reflect the impact of previous RMNH education activities among GFW by PSL NGOs and others. However, good awareness does not automatically lead to positive behaviour change, and consistent use of reliable contraception appears to be a key challenge. Less than one third of sexually active GFW are using modern contraceptive methods, similar to the rate (30.7%) found among urban married women in the CDHS[4], and there is a predominance of short-term methods. In addition, correct contraceptive use may not be consistent as one fifth of women who became pregnant in the past 12 months reported that they were using modern FP methods at the time. Effective counselling is an important component of high quality FP services and needs to be combined with consistent and convenient provision of appropriate and effective contraceptive methods. The risk of unplanned pregnancy is heightened by the low self-efficacy expressed by women in relation to refusing sex and using FP in challenging circumstances. This highlights the importance of activities aimed at empowering women and engaging men in RMNH issues.

Nearly a fifth of sexually active women surveyed have had at least one abortion. Abortion has been legal in Cambodia since 1997[11], but it appears the change in law has not been backed up by awareness-raising to ensure that women can access safe services when they need them. There is very low awareness of the legal status of abortion (8%) and sources of safe abortion services (27%), which increases the risk that women will access unsafe abortion without appropriate clinical back-up. Counselling on post-abortion FP is also inconsistent, possibly reflecting the popularity of medical abortion, which can be purchased through pharmacies and used at home.

The women have very limited knowledge of danger signs relating to pregnancy or newborn distress. Despite this, and the high cost of services, most pregnant GFW endeavour to follow MoH guidelines for their own health and that of the baby. So, more than 70% attended four or more ANC appointments prior to their most recent live birth and more than 90% delivered with a skilled birth

[8] Levi Strauss, 2013: The Cambodia report: Report of survey findings and qualitative study results from a factory in Phnom Penh, Levi Strauss & Co. workers' well-being study. Phnom Penh, Cambodia.
[9] ILO/CARE 2012: Survey results in preparation for mobile phone project. Phnom Penh, Cambodia.
[10] Sim S, 2004: Report on the health status of woman workers in the Cambodian garment industry, women's agenda for change. Phnom Penh, Cambodia.
[11] Fetters T, Vonthanak S, Picardo C, Rathavy T, 2008: Abortion-related complications in Cambodia. BJOG 115(8): 957-968.

attendant, including the 80% who delivered in a health facility. However, only one in five accessed two or more PNC appointments and the quality of these services is unclear. For example, only 56% of women received any counselling on post-natal family planning during PNC. These proportions are similar to those found for urban women in the CDHS[4] and may reflect the greater availability of services in urban areas. However, it cannot be assumed that all ANC, delivery and PNC encounters in our survey occurred in an urban area: women may have had their last child before they started working in the garment sector or may return to their home around the time of birth[12]. This hypothesis is supported by the results showing that a significant minority delivered at home and/or with unskilled attendants, which is concerning and needs to be addressed.

[12] ILO, 2012: Action-oriented research on gender equality and the working and living conditions of garment factory workers in Cambodia. Phnom Penh, Cambodia.

5 Recommendations

These results reveal the need to reconsider and refine approaches to improve the RMNH status of women working in the garment manufacturing sector. Recommendations, which may be applicable to the PSL program or to other agencies working in this sector, include:

- developing and exploring a range of interventions tailored to meet the differing RMNH needs of this diverse group of women;
- conducting more in-depth analysis of the data to explore associations between demographic factors, such as education, marital or disability status, and RMNH indicators;
- improving the range, quality, friendliness and affordability of services available through garment factory infirmaries;
- increasing access to quality RMNH services in the communities where GFW live and work;
- addressing the financial barriers that GFW face in accessing RMNH services by raising awareness of available financial support mechanisms and exploring and evaluating new approaches;
- applying evidence-based behaviour change communication approaches to ensure that good awareness about family planning translates into appropriate and consistent use of effective contraceptive methods;
- implementing empowerment activities to increase women's self-efficacy in relation to negotiating sex and family planning use;
- raising awareness on the legal status of abortion and sources of safe and affordable abortion services;
- integrating counselling on FP into provision of surgical and medical abortion services and post-natal care, whether through the public or private sector;
- raising awareness on danger signs during pregnancy and for the newborn, and the importance of delivering in a health facility.

6 Appendices

6.1 Summary of MERI baseline data for garment factory indicators

Outcome Level	Indicators	Baseline Data
5 Year Outcomes		
Improved quality RMNH services for target populations	O1.2. % of women delivering in a health facility with a skilled birth attendant	80%
Greater equity of access to appropriate RMNH services for target populations	O2.1. % of target population using modern contraception - WRA - ever sexually active	 10.6% 24.2%
	O2.2. % of garment factory workers accessing RMNH services in the previous 12 months	8.6%
More responsive RMNH services meet the needs of target populations	O3.1. % of women receiving Comprehensive Abortion Care who receive post abortion FP	22.5%
	O3.2. % of women attending PNC who receive counselling in modern FP methods	56%
	O3.3. % of target population who report being highly satisfied with RMNH services provided	23.5%
Improved RMNH behaviours amongst target population	O4.1. % of women of reproductive age who can identify 5 danger signs during pregnancy	1.2%
	O4.2. % of women attending 4 or more ANC consultations: - most recent delivery - delivery within the past 12 months	 70.6% 82.1%
	O4.3. % of women receiving 2 or more PNC visits: - most recent delivery - delivery within the past 12 months	 22.1% 12.5%
	O4.4. % of women (modern FP users) using long acting or permanent methods of FP	11.5%
Intermediate Outcomes		
Financial mechanisms enable access to RMNH services	I5.1. % of target population accessing RMNH services using a financial support mechanism in the previous 12 months	11%
RMNH BCC strategy developed and implemented	I6.2. % of target population who can identify 3 danger signs for neonatal distress	4%
	I6.3. % of women who feel empowered to discuss and use modern family planning	5%
	I6.4. % of women who know that abortion is legal	8%
	I6.5. % of women delivering with a skilled birth attendant	90.6%

6.2 Survey questionnaire

Questionnaire for Female Garment factory Workers

Introduction (The following is to be read by the interviewer to the respondent)

I (name) am working for the Partnering to Save Lives program in collaboration with the National Institute of Public Health at the Ministry of Health. We are conducting a baseline survey of female garment factory workers in Phnom Penh and Kandal provinces to assess their reproductive, maternal and neonatal health knowledge, access and service utilisation. We would like to request your cooperation for no more than 30 minutes to ask you some questions. I will ask you some personal questions. You are free to refuse to answer any question or to terminate the interview at any time. What you tell me will be kept strictly confidential. Please be totally truthful in your responses. Your participation is very important and will help female garment factory workers to improve their access to health services. May we begin?

ID code: ……

Garment factory:

Cluster number: ……

Date: ……

Interviewer's name: ……

Section 1. Socio-demographics			
1.1	How old are you now? (in western age)	_____yrs	
1.2	What grade did you reach in school?	_____ grade (0 if no schooling)	
1.3	What is your current marital status?	1 = Single and not in a regular relationship 2 = Single with boyfriend living elsewhere 3 = Single living with a partner 4 = Married 5 = Married but not living with spouse 6 = Widowed/ Divorced	
1.4	Who do you live with now? (Only one answer)	1 = Parents 2 = Relatives 3 = Husband 4 = Friends (in rental room) 5 = Alone (in rental room) 6 = Sweethearts (intimate partner) 7 = Other (specify).....	
1.5	How long have you worked as a garment factory worker in total? (Add together total time of all garment factory contracts)	_____ months	
1.6	How much did you earn last month in riel? (including overtime and	_____ USD	

	other sources of income)		
1.7	Have you owned a mobile phone in the past 12 months	1 = Yes 2 = No	
Section 2. Disability			
2.1	Do you have difficulty seeing, even if wearing glasses?	1 = No difficulty 2 = Yes, some difficulty 3 = Yes, a lot of difficulty 4 = Yes, cannot do it at all	
2.2	Do you have difficulty hearing, even if using a hearing aid?	1 = No difficulty 2 = Yes, some difficulty 3 = Yes, a lot of difficulty 4 = Yes, cannot do it at all	
2.3	Do you have difficulty walking or climbing stairs?	1 = No difficulty 2 = Yes, some difficulty 3 = Yes, a lot of difficulty 4 = Yes, cannot do it at all	
2.4	Do you have difficulty remembering or concentrating?	1 = No difficulty 2 = Yes, some difficulty 3 = Yes, a lot of difficulty 4 = Yes, cannot do it at all	
2.5	Do you have difficulty with self-care (i.e. washing, dressing etc)?	1 = No difficulty 2 = Yes, some difficulty 3 = Yes, a lot of difficulty 4 = Yes, cannot do it at all	
2.6	Do you have difficulty communicating (i.e. understanding or being understood in your native language)	1 = No difficulty 2 = Yes, some difficulty 3 = Yes, a lot of difficulty 4 = Yes, cannot do it at all	
Section 3. Utilisation of health services			
3.1	Have you ever used the factory infirmary in the past 12 months?	1 = Yes 2 = No 98 = Don't know/maybe	If Yes, skip to Q 3.3
3.2	If no, why not? (Multiple answers)	1 = Service not available at convenient times 2 = Service takes too long 3 = Service is too expensive 4 = Quality of service is not good 5 = Provider is unfriendly 6 = No commodity available 7 = Infirmary is not clean 8 = Type of health service required is not available 9 = Lack of confidentiality 10 = They did not require any health services 11 = Other (Specify)_____	Skip to Q 3.7
3.3	If yes, what services have you used from the factory infirmary? (Multiple)	1 = Minor health problem 2 = ANC counselling 3 = Short term family planning (condom, pill, injection)	If answer 1, then skip to Q 3.6

		4 = HIV counselling/testing referral 5 = STI counselling and referral 6 = FP counselling and referral 7 = Abortion counselling and referral 8 = Others (Specify).....	
3.4	How satisfied are you with the services provided at the infirmary?	1 = Highly satisfied 2 = Satisfied 3 = Acceptable 4 = Not satisfied 5 = Highly unsatisfied	
3.5	Would you recommend the infirmary services to your friends/co-workers?	1 = Yes 2 = No	
3.6	Have you received a referral from the infirmary staff or factory peer educators in the past 12 months for any of the following services? (Multiple answers)	0 = Never used service or been referred 1 = FP services 2 = Safe abortion 3 = STI services 4 = ANC/PNC visit 5 = VCCT 6 = Others (Specify).....	
3.7	Have you used a public or private health facility in the past 12 months other than the factory infirmary?	0 = No 1 = Public hospital 2 = Private clinic or hospital 3 = NGO clinic 4 = Others (specify)_____	
3.8	How satisfied are you with the services provided at the health facility?	0 = Not applicable 1 = Highly satisfied 2 = Satisfied 3 = Acceptable 4 = Not satisfied 5 = Highly unsatisfied	
3.9	Could you tell me how much money (actual out-of-pocket payments, excluding subsidies by different schemes) you have spent in the past 12 months for: 1. family planning services? 2. abortion services? 3. antenatal care services? 4. delivery and related services? 5. postnatal care services?	*Record the reported amount in Riels. Record 00 if no expenditure, 99 if no service use and 98 if don't know the amount* Service fees | Transport |	
3.10	Have you received any financial assistance from an NGO under the following schemes for using the above-mentioned services?	0 = Never used the service 1 = No 2 = Yes FP voucher (specify NGO) …… 3 = Yes referral slip (specify NGO) …… 4 = Yes other (Specify)_____	

Section 4. Sexual activity and contraceptive use			
4.1	What methods of contraception have you heard of? (UNPROMPTED, Multiple) 0 = None 1 = Female sterilisation 2 = Male sterilisation 3 = IUD 4 = Injectable 5 = Implant 6 = Daily pills 7 = Monthly pills 8 = Condom (male) 9 = Female condom 10 = Emergency contraception 11 = Lactational amenorrhea method 12 = Rhythm method 13 = Withdrawal 14 = Abstinence 15 = Other method (specify_____)	**Yes No** 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	
4.2	How old were you when you first had sex?	_____ years old (O if never had sex)	If no, skip to Q 6.1 and 6.2 then skip to Section 7
4.3	In the past 12 months have you used any methods of contraception?	1 = No 2 = Yes	If no, skip to Section 5.
4.4	If yes, which ones? (Multiple) 1 = Female sterilisation 2 = Male sterilisation 3 = IUD 4 = Injectable 5 = Implant 6 = Daily pills 7 = Monthly pills 8 = Condom (male) 9 = Female condom 10 = Emergency contraception 11 = Lactational amenorrhea method 12 = Rhythm method 13 = Withdrawal 14 = Abstinence 15 = Other method	**Yes No** 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	

	(specify_____)		
4.5	Last time, where did you go to get your contraceptive method?	1 = National hospital (PP) 2 = Provincial hospital (RH) 3 = Referral hospital (RH) 4 = Health centre or health post 5 = Garment factory infirmary 6 = NGO facility (Specify)……. 7 = Private hospital..... 8 = Private clinic…… 9 = Private pharmacy/drug store 10 = Community-based distributor (CBD) 11 = Friend/relative 12 = Other (Specify)_____	
4.6	Are you still using that method? (Multiple) 1 = Female sterilisation 2 = Male sterilisation 3 = IUD 4 = Injectable 5 = Implant 6 = Daily pills 7 = Monthly pills 8 = Condom (male) 9 = Female condom 10 = Emergency contraception 11 = Lactational amenorrhea method 12 = Rhythm method 13 = Withdrawal 14 = Abstinence 15 = Other method (specify_____)	**Yes No** 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	
4.7	If no, why not? (One answer)	1 = Not convenient for me 2 = Due to side-effects 3 = The method is expensive 4 = Afraid of not being able to have a child later 5 = Husband opposes 6 = Unreliable 7 = Other (Specify).....	
Section 5. Pregnancy and maternal health			
5.1	Have you ever been pregnant?	1 = No 2 = Yes	If no, skip to Section 6
5.2	How many times have you been pregnant in your life (including miscarriages and abortions)?	____ times	
5.3	When you last got pregnant, were you using any modern	1 = Yes 2 = No	

	method of contraception? (condom, pills, injection, IUD, etc.)		
5.4	How many live babies have you delivered?	___ babies	
5.5	How long ago was your last live birth?	……..Months	
5.6	For your last live birth, where did you deliver the baby? (One answer)	0 = Not yet delivered 1 = National hospital (PP) 2 = Provincial hospital (PH) 3 = District hospital (RH) 4 = Health centre or health post 5 = Military hospital 6 = Other public facility (specify): _____ 7 = Private hospital 8 = Private clinic/cabinet 9 = NGO facility…….. 10 = Other private medical facility 11 = Garment factory infirmary 12 = Your home 13 = Other home 14 = Other place (specify): _____	
5.7	Who assisted with the delivery of your last live birth?	0 = Not yet delivered 99 = No-one 1 = Doctor/Medical assistant 2 = Midwife 3 = Nurse 4 = Other trained health personnel 5 = Traditional birth attendant 6 = Relative/friend 7 = Other person (specify): _____	
5.8	Did you ever go for antenatal care visits before your most recent live birth?	1 = No 2 = Yes	If no, skip to Q 5.11
5.9	How many antenatal care visits did you have?	_____ times	
5.10	Where did you go for your most recent antenatal care visit?	1 = National hospital (PP) 2 = Provincial hospital (PH) 3 = District hospital (RH) 4 = Health centre or health post 5 = Military hospital 6 = Other public facility (specify): _____ 7 = Private hospital 8 = Private clinic/cabinet 9 = NGO facility…….. 10 = Other private medical facility 11 = Garment factory infirmary 12 = Your home 13 = Other home	

		14 = Other place (specify): _____	
5.11	Can you name any danger signs that indicate a problem during a pregnancy? (Multiple, unprompted)	0 = Don't know 1 = Vaginal bleeding in early or late pregnancy 2 = Anaemia 3 = Elevated blood pressure 4 = Fever during pregnancy or labour 5 = Abdominal pain in early pregnancy 6 = Abdominal pain in later pregnancy 7 = Difficulty in breathing 8 = Loss of foetal movements 9 = Pre-labour rupture of membranes 10 = Other(specify)_____	
5.12	Did you ever go for postnatal care visits after your most recent live birth?	0 = Not yet delivered 1 = No 2 = Yes	If no, skip to Q 5.15
5.13	How many postnatal care visits did you have?	_____ times	
5.14	Where did you go for your last postnatal care visit?	0 = Not yet delivered 1 = National hospital (PP) 2 = Provincial hospital (PH) 3 = District hospital (RH) 4 = Health centre or health post 5 = Military hospital 6 = Other public facility (specify): _____ 7 = Private hospital 8 = Private clinic/cabinet 9 = NGO facility…….. 10 = Other private medical facility 11 = Garment factory infirmary 12 = Your home 13 = Other home 14 = Other place (specify): _____	
5.15	Can you name any danger signs of neonatal distress? (Multiple, unprompted)	0 = Don't know 1 = Abnormal body temperature 2 = Jaundice 3 = Lethargy 4 = Feeding difficulty 5 = Vomiting and/or abdominal distension 6 = Bleeding and/or pale 7 = Umbilicus red and swollen, draining pus, or foul smelling 8 = Eyes red, swollen, or draining pus 9 = Convulsion 10 = Other	
5.16	Did anyone talk to you about your contraception choices within 24 hours after your most recent live birth?	0 = Not yet delivered 1 = No 2 = Yes	If No, skip to Section 6.

5.17	Which methods did they talk to you about? (Multiple, unprompted) 1 = Female sterilisation 2 = Male sterilisation 3 = IUD 4 = Injectable 5 = Implant 6 = Daily pills 7 = Monthly pills 8 = Condom (male) 9 = Female condom 10 = Emergency contraception 11 = Lactational amenorrhea method 12 = Rhythm method 13 = Withdrawal 14 = Abstinence 15 = Other method (specify_____)	**Yes No** 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	
Section 6. Abortion and post-abortion care			
6.1	Do you know whether abortions are legal or illegal in Cambodia?	1 = Legal 2 = Illegal 3 = Don't know	
6.2	Do you know where women can access safe abortion services?	0 = Don't know 1 = Trained public health provider 2 = Trained private health provider 3 = NGO clinic (Specify)_____ 4 = Pharmacy 5 = TBA 6 = Other (Specify)_____	
6.3	Have you ever had an induced abortion?	1 = Yes 2 = No	If No, skip to Section 7
6.4	If yes, how many times?	____ times	
6.5	How was the last abortion induced? (Multiple)	1 = Vacuum aspiration 2 = Medical abortion pill 3 = Traditional method 4 = Self-aborted 5 = Don't know 6 = Other (Specify) _____	
6.6	Where did you go to access your most recent induced abortion? (One answer)	1 = National hospital (PP) 2 = Provincial hospital (PH) 3 = District hospital (RH) 4 = Health centre or health post 5 = Military hospital 6 = Other public facility (specify): _____ 7 = Private hospital 8 = Private clinic/cabinet	

		9 = Other private medical facility 10 = NGO facility……. 11 = Garment factory infirmary 12 = Pharmacy/drug store 13 = Your home 14 = Other home 15 = Other place (specify): _____	
6.7	Did anyone discuss your contraception choices with you within 28 days after you had the abortion?	1 = Yes 2 = No	If no, skip to Section 7
6.8	Which methods did they talk to you about? (Multiple, unprompted) 1 = Female sterilisation 2 = Male sterilisation 3 = IUD 4 = Injectable 5 = Implant 6 = Daily pills 7 = Monthly pills 8 = Condom (male) 9 = Female condom 10 = Emergency Contraception 11 = Lactational amenorrhea method 12 = Rhythm method 13 = Withdrawal 14 = Abstinence 15 = Other method (specify_____)	**Yes No** 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	
6.9	Did you start to use any contraceptive method within 28 days of the last abortion that you had?	1 = No 2 = Yes	
6.10	Which method did you start to use? (One answer)	1 = Female sterilisation 2 = Male sterilisation 3 = IUD 4 = Injectable 5 = Implant 6 = Daily pills 7 = Monthly pills 8 = Condom (male) 9 = Female condom 10 = Emergency Contraception 11 = Lactational amenorrhea method 12 = Rhythm method 13 = Withdrawal 14 = Abstinence 15 = Other method (specify_____)	

Section 7. RMNH self-efficacy			
Now I am going to ask you some questions about how confident or sure you are that you could use family planning if wanted to do so. Even if you do not want to use family planning right now, try to imagine sometime in the future when you might wish to use it. How sure are you that you could:			
7.1	Bring up the topic of family planning with your husband (or partner)?	0 = No answer 1 = Not at all sure 2 = Somewhat unsure 3 = Neither sure nor unsure 4 = Somewhat sure 5 = Completely sure	
7.2	Tell your husband (or partner) that you wanted to use family planning?	0 = No answer 1 = Not at all sure 2 = Somewhat unsure 3 = Neither sure nor unsure 4 = Somewhat sure 5 = Completely sure	
7.3	Use family planning?	0 = No answer 1 = Not at all sure 2 = Somewhat unsure 3 = Neither sure nor unsure 4 = Somewhat sure 5 = Completely sure	
7.4	Use family planning, even if your husband (or partner) did not want to?	0 = No answer 1 = Not at all sure 2 = Somewhat unsure 3 = Neither sure nor unsure 4 = Somewhat sure 5 = Completely sure	
Now I am going to ask you some questions about whether you feel you can refuse to have sex in certain situations. Your answers will be kept completely secret and you don't have to answer questions if you don't want to do so. How sure are you that you could refuse to have sex with your husband (or partner):			
7.5	When you don't want to, but he does?	0 = No answer 1 = Not at all sure 2 = Somewhat unsure 3 = Neither sure nor unsure 4 = Somewhat sure 5 = Completely sure	
7.6	When you are tired?	0 = No answer 1 = Not at all sure 2 = Somewhat unsure 3 = Neither sure nor unsure 4 = Somewhat sure 5 = Completely sure	
7.7	When he gets angry with you if you don't want to?	0 = No answer 1 = Not at all sure 2 = Somewhat unsure 3 = Neither sure nor unsure 4 = Somewhat sure 5 = Completely sure	

7.8	When he threatens to hurt you if you don't want to?	0 = No answer 1 = Not at all sure 2 = Somewhat unsure 3 = Neither sure nor unsure 4 = Somewhat sure 5 = Completely sure	
7.9	When he threatens to have sex with other women if you don't want to?	0 = No answer 1 = Not at all sure 2 = Somewhat unsure 3 = Neither sure nor unsure 4 = Somewhat sure 5 = Completely sure	

Thank you for your time participating in the interview