Breastfeeding rates and behaviours amongst Australian Defence Force women returning from Maternity Leave

By
(Squadron Leader)
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Abstract:

A mother’s employment status is an important factor influencing the duration of breastfeeding, and supporting breastfeeding mothers in the workplace is important in meeting Australian National Health and Medical Research Council (NHMRC) breastfeeding recommendations.

Maternal employment rates have increased rapidly in recent years and accordingly the Australian Defence Force (ADF) has opened up many of its roles to women. Providing a supportive environment for breastfeeding mothers returning to work can be challenging in any workplace, however the military environment provides additional unique challenges. Little is known about breastfeeding behaviours of ADF women.

The objectives of this study included benchmarking the rates of breastfeeding amongst a cohort of ADF women in comparison with Australian population norms, identification of the current ADF policy environment and identification of the barriers and enablers to breastfeeding within this population.

In September 2008, 400 ADF women who had taken Maternity Leave in the Financial Year 2006/2007 were sent a breastfeeding survey, of which 152 (38%) were returned. Ninety-seven percent of women surveyed initiated breastfeeding. The breastfeeding rate at 3 months was 84%, 71% at 6 months and 25% at 12 months.
The median duration of feeding was 8 months with an average length of Maternity Leave of 8.4 months. Women who returned to work part time had a longer median duration of breastfeeding (10 months) compared to those who returned full time (7 months), and 41% of women continued to breastfeed upon returning to work.

Of the difficulties faced by the participants, 63% said there was a lack of appropriate facilities for breastfeeding or breast milk expression and storage in the ADF environment, with several women commenting they had to express breast milk in the toilets. Fifty-four percent of women said their job was too busy or their time sufficiently restricted that their ability to breastfeed or express breast milk at work was hindered. Unique to the military environment, women identified physical fitness testing requirements (36%) and absence requirements or separation from their child (27%) as barriers to continuing to breastfeed.

The major recommendation from this study is the drafting of a policy to specifically address breastfeeding and lactation breaks in the ADF context. The policy is recommended to provide a commitment to the minimum goal of meeting NHMRC breastfeeding recommendations, and to address provision of appropriate time and facilities, incorporating a risk analysis of occupational hygiene issues for mothers and infants, and a reference to Individual Readiness, Fitness Testing and Medical Employment Classification policies.

**Keywords:** breastfeeding, military, women, policy
Originality statement:

This dissertation has not been submitted for credit for any other degree of part thereof.

Signed

Date

Kelley M Stewart

Name

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<th>Description</th>
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<tr>
<td>ABA</td>
<td>Australian Breastfeeding Association</td>
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<tr>
<td>ADF</td>
<td>Australian Defence Force</td>
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<tr>
<td>APS</td>
<td>Australian Public Service</td>
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<td>ARA</td>
<td>Australian Regular Army</td>
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<tr>
<td>BFA</td>
<td>Basic Fitness Assessment (Army)</td>
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<td>CO</td>
<td>Commanding Officer</td>
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<td>EBM</td>
<td>Expressed Breast Milk</td>
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<td>FY</td>
<td>Financial Year</td>
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<tr>
<td>ILO</td>
<td>International Labour Organization</td>
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<tr>
<td>IR</td>
<td>Individual Readiness</td>
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<tr>
<td>LRC</td>
<td>Lactation Resource Centre</td>
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<tr>
<td>MATL</td>
<td>Maternity Leave</td>
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<td>MEC</td>
<td>Medical Employment Classification</td>
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<td>MECR</td>
<td>Medical Employment Classification Review</td>
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<tr>
<td>NHMRC</td>
<td>National Health and Medical Research Council</td>
</tr>
<tr>
<td>NZ</td>
<td>New Zealand</td>
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<tr>
<td>PFT</td>
<td>Physical Fitness Test</td>
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<tr>
<td>PT</td>
<td>Physical Training</td>
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<tr>
<td>PMKeyS</td>
<td>Personnel Management Key Solution</td>
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<tr>
<td>RAAF</td>
<td>Royal Australian Air Force</td>
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<tr>
<td>RAN</td>
<td>Royal Australian Navy</td>
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<tr>
<td>WHO</td>
<td>World Health Organisation</td>
</tr>
<tr>
<td>US</td>
<td>United States (of America)</td>
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<td>UK</td>
<td>United Kingdom</td>
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1. Introduction

Breastfeeding is the normal and most appropriate method for feeding infants and is closely related to immediate and long term health outcomes. Exclusive breastfeeding to the age of six months gives the best nutritional start to infants and is now recommended by a number of authorities.

Babies who are not breastfed are more than twice as likely to be hospitalized in their first two years (Day, 2006). Evidence suggests the health advantages to infants of breastfeeding include reduced incidence and duration of diarrhoeal illness, protection against respiratory infection, reduced prevalence of asthma and a reduced occurrence of otitis media and recurrent otitis media (NHMRC, 2003). Consequently breastfeeding is associated with fewer visits to the doctor for the baby and less requirement for taking of carer’s leave.

Providing breast milk to her child may also help the mother feel closer and less anxious about separation from her child making her workplace efforts more productive. Positive impacts on maternal health include significant reduction of the risk of pre-menopausal breast cancer, reduced risk of ovarian and endometrial cancers, improved bone mineralisation leading to decreased risk of osteoporosis (NHMRC, 2003), protection against rheumatoid arthritis, protection against type 2 diabetes and emotional benefits (House of Representatives 2007). It may also assist in promoting the mother’s recovery
from pregnancy and childbirth by aiding the contraction of the uterus and by delaying menstruation hence delaying the return of fertility (Day, 2006) and may also assist in accelerated pregnancy weight loss (House of Representatives 2007).

The World Health Organisation (WHO) has a global public health recommendation that infants be exclusively breastfed for the first six months of life (WHO, 2002, WHO, 2008), thereafter with complementary breast feeding up to two years of age and beyond (WHO, 2003).

The Australian National Health and Medical Research Council (NHMRC) has set objectives of a breast feeding initiation rate in excess of 90%, and 80% of infants being breastfed at the age of six months (NHMRC, 2003). They further refer to the WHO recommendations that mothers then continue breastfeeding until 12 months of age (WHO, 2003) — stating that breastfeeding beyond six months is of continuing value if both mother and infant wish. Population based Australian data on NHMRC guidelines have been published (Gabriel et al., 2005, Population Health Division, 2008).

The reasons why women do not breastfeed for the recommended period are complex and multifaceted. Some of the key reasons for differences in breastfeeding duration include the influence and support of the spouse and family (Scott et al., 1997, Payne and James, 2008), difficulties breastfeeding, and returning to the paid workforce (Hawkins et al., 2007).
Returning to work makes meeting the WHO and NHMRC guidelines more challenging. These organisations and others like the Australian Breastfeeding Association recommend that mothers should be able to continue breastfeeding after they return to paid employment, and a number of them also provide guidance in how this can be accomplished. Recommendations include flexible work schedules, availability of maternity leave, childcare facilities on site, paid lactation breaks, private areas for breast milk expression and implementing maternity protection legislation (Commonwealth of Australia, 2000, Day, 2006, NHMRC, 2003, WHO, 2003).

Women of child-bearing age make up a high proportion of the workforce (House of Representatives 2007) and studies have shown that returning to work is a major reason for early weaning (Commonwealth of Australia, 2000, Duckett, 1992, Visness and Kennedy, 1997). Queensland Health identified that one in five mothers reported returning to work as a reason for breastfeeding cessation (Gabriel et al., 2005).

Evidence is that breastfeeding rates are maximised when a mother has a supportive partner, consistent advice from health professionals, understanding that infant formula is not nutritionally equivalent to breast milk, good role models, community and workplace support and supportive cultural attitudes (Minchin, 1998). By addressing workplace breastfeeding policies, it follows that cultural change will be supported as will the development of role models within an organisation.
Australian Defence Force (ADF) mothers face challenges unique to military service such as possible separations from their infant when returning to active duty. They are entitled to up to 12 months Maternity Leave, however a number of these women choose, for reasons which may range from financial necessity to career advancement, to return to work in some capacity within that first 12 months and therefore may be subject to active duty requirements.

Knowledge about breastfeeding behaviours among ADF women who return to work after having a baby has not been available. The barriers and enablers to breastfeeding in the Australian military context have neither been documented nor examined previously. Some studies have been conducted on US active service women and a comparison of the breastfeeding rates and behaviours of Australian ADF personnel could present an opportunity for best practice solutions to meet global breastfeeding recommendations.

This study aims to contribute to the knowledge by benchmarking breastfeeding behaviours of a group of ADF women who had returned from various lengths of paid and unpaid Maternity Leave and to identifying barriers and enablers for breast feeding in the Australian military environment. The participants of this study were the currently serving women (of the ADF) who took Maternity Leave in the 06/07 Financial Year and returned their surveys. This information collected in this study could inform Defence policy on breastfeeding.
2. Literature review

2.1. Breastfeeding in the Military environment

The literature for breastfeeding rates, behaviours, barriers and enablers was researched, as it related to the military context, in both Medline (from 1998-2008 using MESH subject headings: “breastfeeding”, “military personnel”) and PubMed; and via searches through attendance at the Australian Breastfeeding Association’s (ABA) Lactation Resource Centre (LRC). The LRC, however, had a limited search capacity as they do not catalogue their articles with the keyword “military”. To help minimise the effect of publication bias, broad Internet searches were also conducted using the Google search engine using keywords: “breastfeeding” and “military”.

The Medline search revealed only three peer-reviewed articles which examined breastfeeding barriers or enablers in a military population (Bell and Ritchie, 2003a, Bell and Ritchie, 2003b, Stevens and Janke, 2003).

A small number of papers and articles (Master’s theses and similar) were identified which related to breastfeeding in the military context, however only those which did not need to be purchased, could be downloaded from the internet or photocopied at the LRC were accepted for this study.
Generally studies available were from the USA and were based on populations within their military hospitals. These hospitals also treat civilian spouses and family members and therefore most of these studies are not specific to military women, and were excluded.

Studies and articles which specifically focused on military women (or at least statistically separated military and civilian women) were accepted (Fitzhugh, 2005, Haas et al., 2006, Stevens and Janke, 2003, Bell and Ritchie, 2003a, Bell and Ritchie, 2003b). There was no literature found regarding breastfeeding in the ADF or Australian military context.

Bell and Richie (Bell and Ritchie, 2003a) summarise their review of two interesting Master’s theses including Doyle (Doyle, 1999) and the since published Stevens and Janke (Stevens and Janke, 2003) as follows:

“…small numbers of military women identified key barriers such as early return to work, conflicting loyalties, non-supportive supervisors, lack of adequate facilities, temporary duty (absences), deployment and conflict between the roles of soldier and mother as contributing to the problem.”

Stevens and Janke’s study was extremely small, a qualitative study of nine women of a US Midwestern Air Force Base (Stevens and Janke, 2003) and has been quite extensively referenced in the identified literature. Although the rank spread is fair, the job classifications were not evenly spread, and the outcomes should not be considered
representative of all the women who have breastfed in the US military, particularly in the other three Service arms (i.e. Navy, Army and Marine Corps) as individual Service culture can be very different.

Fitzhugh’s Master’s project (Fitzhugh, 2005) was identified through an abstract which was listed in the Journal of Human Lactation (21(4), 2005) and obtained for review from the author. Fitzhugh interviewed 44 active duty US Navy and Marine Corp women. Although these women initiate breastfeeding at rates comparable or higher than the US national average, most of these servicewomen have weaned by 8 weeks. Similar to Bell’s summary above, the main barriers identified by these women were deployment, absence requirements, and working rotating shifts.

2.2. Breastfeeding and returning to work

A second, broader search was completed at the LRC in November 2008 focussing on breastfeeding and returning to work and other general themes which arose from the returned surveys, such as exercise whilst breastfeeding and low milk supply.

Supporting the literature on military personnel, the general population have similar barriers to breastfeeding and returning to work. “Occupational reasons” and perceived incompatibility of breastfeeding and returning to work full time are frequently cited barriers and some of the most common causes for breastfeeding cessation internationally
(Visness and Kennedy, 1997, Hawkins et al., 2007). Further, UK mothers returning to employment within 4 months of the birth were less likely to initiate breastfeeding (69%) compared to those who returned later; 75% at 5-6 months, 80% at 7 months or greater (Hawkins et al., 2007).

Hawkins also found that women employed part time are more likely to breastfeed for at least 4 months than mothers employed full time. The earlier they return to employment, the less likely they are to breastfeed for at least 4 months (Hawkins et al., 2007).

A recent Australian study (Cooklin et al., 2008) supports the international evidence by having reviewed the Longitudinal Survey of Australian Children data (FAHCSIA, 2008) – i.e. a large representative cohort of Australian infants. They confirmed that maternal employment in the first 6 months of life contributes to premature cessation of breastfeeding after controlling for known risk factors of breastfeeding cessation.

Nonetheless, Australian women have said that resuming work is not the main reason for discontinuing breastfeeding, coming fourth after problems producing adequate milk, feeling it was time to stop, and other breastfeeding problems (Australian Bureau of Statistics, 2003). Just 8% of mothers gave returning to work as the main reason, however returning to work may indirectly impact on the first three reasons.

A recent national UK internet survey of women’s experiences of breastfeeding and working (Wallace et al., 2008) was conducted via an online link posted on a UK
mothering website. The survey found that for most women (85.5%, n=253/296), the most important factor in making a decision about returning to work after having a baby was having flexible hours so they could fit in with childcare; 51.4% stated that having breaks for expressing and storing breast milk was important. 87.7% thought that their employer should provide facilities for expressing and storing breast milk and information on how breastfeeding can be managed after returning to work (NHMRC, 2003).

Breastfeeding is now becoming a labour-force issue internationally. The 2000 General Conference of the International Labour Organization (ILO) conferred (in article 10) that a woman shall be provided with the right to one or more daily breaks or a daily reduction of hours of work to breastfeed her child, counted as working time and remunerated accordingly (International Labour Organization, 2000). This was further supported by the WHO (WHO Secretariat, 2001) whereby paragraph 18 of their global strategy recommends that employers should ensure that breastfeeding breaks are available for women in paid employment once their paid maternity leave is over. NHMRC also recommends encouraging support in the community and workplace for flexible work schedules, ‘part-time’ breastfeeding, and the use of expressed milk.

Breastfeeding is also being recognised as an industrial relations issue in Australia. In 2008, the Australian Council of Trade Unions (ACTU – among others) provided a submission to the Federal Government (Gough, 2008) for the Productivity Commission’s inquiry into paid maternity leave (Commonwealth of Australia, 2008b), in which they advocated paid breastfeeding breaks. The Victorian Government has also included
lactation breaks and facilities for nursing mothers in its Work and Family Balance Manual (Industrial Relations Victoria, 2007) as a guide for employers.

As in New Zealand (Payne and James, 2008), there are no legislated breaks for Australian women in paid employment to breastfeed, thus these women must express or breastfeed during tea or meal breaks. The pressure to fit in their lactation breaks into scheduled work breaks can mean the woman feels a sense of isolation rather than socialisation which would occur for most other employees (Payne and James, 2008).

Various other barriers have been studied in the literature, such as other employees’ attitudes (Suyes et al., 2008), unsupportive family or supervisors, the absence of appropriate space for breastfeeding or milk expression, time (Payne and James, 2008), role overload, maternal guilt from inability of meeting the goals of both work and mothering and commitment to breastfeeding (Stewart-Glenn, 2008) all impacted on breastfeeding outcomes.

A US survey was conducted on the attitudes of other employees towards services for lactating mothers (Suyes et al., 2008). Of the 4,069 employees within the company chosen, only 407 completed the online survey (10% response rate) and 72% of the respondents were female (n=293) where female employees accounted for 46% of the workforce. Of these female respondents 69% (n=202) reported as having breastfed an infant. Limitations including probable response bias aside, the study provides that
encouraging continued breastfeeding will not engender exclusively negative attitudes in other employees.

Other important factors are partner and family support. Studies by Scott and colleagues found that women were more likely to initiate breastfeeding if they perceived paternal support (9 times more likely) (Scott et al., 2001) and if their partner expressed a definite preference for breastfeeding (10 times more likely) (Scott et al., 1997).

Education levels were also found to affect breastfeeding rates and duration. Various studies, including Australian population studies (Gabriel et al., 2005, Population Health Division, 2008) have found a significant association between tertiary qualifications and increased initiation and duration of breastfeeding.

3. Comparative Australian Population-based Breastfeeding Data

Breastfeeding statistics and definitions vary between Australian States and Territories because there is no national monitoring system for collecting and disseminating information about breastfeeding practices in Australia (Webb et al., 2001). Webb et al recommended a number of indicators in their report to assist the adequate assessment and comparison of breastfeeding rates nationally. A Federal submission by the ABA recently confirmed that these recommendations have still not been adopted nationally and data that is collected still does not accurately assess the exclusivity of breastfeeding (Australian Breastfeeding Association, 2008).
The recommended breastfeeding indicators which will be analysed in this dissertation are:

1. Percent ever breastfed (Indicator 1)
2. Prevalence of breastfeeding during the first 12 months (Indicator 2)
3. Median duration of Breastfeeding (Indicator 3)

For comparison, Australian population-based data was sought which met the following criteria:

- used the recommended breastfeeding indicators, and
- was based on the NHMRC breastfeeding guidelines.

Two data sets met these criteria published by both the Queensland and the New South Wales Health Departments (Gabriel et al., 2005, Population Health Division, 2008).

Another Australian data source was identified which may have met this criterion, i.e. the Growing Up in Australia: Longitudinal Study of Australian Children (FAHCSIA, 2008), however access to this data incurs a cost, so it was not examined.

The Australian Bureau of Statistics (ABS) National Health Survey last reported breastfeeding data from 2001 (Australian Bureau of Statistics, 2003), but the information presented has not been fully aligned with the recommended national indicators (Hector et al., 2005), so was not examined for comparison.
4. Defence Policy Review

Copies of all relevant ADF policies, Defence Instructions and Health Directives were obtained pertaining to Medical Employment Classification, Physical Fitness Testing, Pregnancy, Individual Readiness, Equity and Employment of Women in the ADF. There are no ADF policies specifically related to breastfeeding, and only one policy was identified which mentions breastfeeding.

FitzHugh (FitzHugh, 2005) identifies that, in 2005, only the US Navy and the Marine Corps have policies that address breastfeeding. However in 2006 the US Air Force published guidance on breastfeeding which was amended again in 2007. These policies have been considered alongside their deployment deferrals available to women returning from the birth of a child.

The US Air Force offers a four-month deployment deferral after the birth of a child and now also has a lactation support policy (United States Air Force, 2007). In Chapter 4.15 the policy recommends that nursing mothers be allowed 15-30 minutes every 3-4 hours to pump breast milk in a private and clean space.

The US Marine Corps has a six-month deployment deferral and the lactation support policy (United States Marine Corps, 2004) explains that the time required for lactation
breaks varies and that at a minimum nursing Servicewomen are provided a clean, secluded space with access to running water and which is not a toilet space.

The US Army increased their deployment deferral to six-months in 2008 but has no identified lactation policy.

The US Navy has a 12-month non-deployment period and provides a lactation support policy (United States Navy, 2007). Chapter 2 of the policy requires that Commanding Officers develop a written policy to delineate support for nursing Service women which is to “ensure that the work environment supports and respects Service members who engage in healthy behaviours such as breast milk expression”, and to prohibit harassment and discrimination of breastfeeding Servicewomen.

There is also an active US organisation called the Breastfeeding Coalition of the Uniformed Services (BCUS/“because”) that envisions a healthy uniformed service community by working collaboratively to protect, promote and support breastfeeding.

There was no evidence of policy development which addressed lactation support in the British Armed Forces.

The ADF’s only source of organisational breastfeeding support is the Australian Breastfeeding Association and their Breastfeeding Friendly Workplace Initiative (noting
that the Department of Defence is not currently an ABA accredited Breastfeeding Friendly Workplace).

The ADF has no method of identifying either existing or prior breastfeeding rates amongst its women, other than the local Defence Pharmacist who would have annotated the woman’s breastfeeding status (if known) on their local pharmacy’s dispensing program/database to alert for drug contraindications during the breastfeeding period.

4.1. Women in the ADF and the Application of the Sex Discrimination Act 1984

Women are now permitted to be employed in most positions within the ADF. The Employment of Women in the ADF Policy (Department of Defence, 1994) states it has made:

“..significant advances in the employment of women. …since 1990, the ADF has not relied upon the exemptions embodied under the Sex Discrimination Act 1984 when employing women in combat related positions and from 1992 a considerable number of combat positions have also become open to women.”

This policy outlines that women cannot compete for employment which involves “Direct Combat Duties”.

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In October 2002, the Australian Government amended the Sex Discrimination Act 1984 to explicitly recognise breastfeeding as a potential ground for unlawful discrimination. A number of Australian States have enacted their own laws to protect the rights of breastfeeding women in areas such as work. However, as indicated in Employment of Women policy, under Section 43 of the Act (Commonwealth of Australia, 1984), Defence has an exemption regarding sex discrimination and employment of women in combat and combat-related duties.

Therefore, breastfeeding in Australia is a right, unless you’re in the ADF and employed in combat or combat-related duties. It would seem that if a woman can prove her role is not combat or combat-related, she maintains a right to breastfeed her child, however this remains untested in the courts. There is no Australian law to say the child has the right to access its mother’s milk.

4.2. Application of ADF Pregnancy Policies

The Health Directive 235 Management of Pregnant Members of the ADF (Department of Defence, 2002) focuses on the administrative management and employment of, and entitlements for, pregnant ADF women. Annex B to this policy specifically addresses the associated employment restrictions and occupational hazards for these women. This annex is 14 pages long and delves into various working conditions and physical, chemical
and biological agents which are potentially hazardous to the unborn child. It does not mention breastfeeding or the risk to the breastfed infant of such exposures.

The Employment of Women policy (Department of Defence, 1994) also acknowledges the occupational hygiene risk pregnant women may face, and it states (at paragraph 6):

“When initiating posting action, cognizance must also be taken of employment categories that may have the potential for exposure to embryo toxic substances”.

This policy thereby acknowledges the risk of adverse health risks to the unborn child of a mother’s occupational hygiene exposures during pregnancy should these exposures be unidentified and unmanaged. Yet no such risk has formally been identified or addressed by the ADF for the breastfed infant through consumption of tainted breast milk.

Although no evidence of lactation support policies was found within the British Armed Forces, the issue of maternal exposure to workplace toxins was first documented by the British Army in 1995 (Croft, 1995) where a survey conducted of the potential risks in the workplace to British Army servicewomen who are pregnant, or who breastfeed, identified a total of 30 major workplace hazards. Guidelines were drafted and distributed to medical officers in all three of the British Armed Services, including a recommendation to restrict these women from duties within indoor firing ranges and working with pesticides.
A US article by Bell and Richie (Bell and Ritchie, 2003b) acknowledge the risks of a mother’s exposure to potentially hazardous agents are increased for women in the military and the difficulty in developing appropriate policy. They consider a more robust risk analysis and a cost benefit analysis of implementing such a policy should be considered before restricting all lactating women from such roles. Nonetheless, since the publication of Bell and Richie’s article, a US Navy policy (United States Navy, 2007) now directs Commanding Officer’s to address occupational exposures to identify environmental and occupational hazards that may impact Service women with nursing infants.

There are a number of ADF policy areas which may impact on breastfeeding rates and behaviours in the workplace. These policies include issues such as Individual Readiness (for deployment), physical fitness testing requirements, Occupational Health and Safety, and Equity and Diversity. The possible physical and mental health issues faced by the breastfeeding mother, such as abrupt weaning through separation (for Service reasons) from their breastfed infant, are not addressed.

4.3. Medical Employment Classification and Physical Fitness Testing

In accordance with the Health Directive on Pregnancy (Department of Defence, 2002), when an ADF woman “considers she is pregnant” she is to report to her local Defence Health Service facility to “confirm” the pregnancy. A Medical Employment
Classification (MEC) Review is required by 12 weeks gestation and members are then classified MEC 3, Temporarily Medically Unfit, for up to 12 months. Breastfeeding is not presently considered a medical condition within the MEC system. Nor is there any specific guidance on breastfeeding relating to immunisation required by military personnel.

In accordance with MEC 3 policy, a member must have their MEC reviewed after a maximum of 12 months, noting that a MEC 3 extension can be considered by a MEC review board. Upon return to work from Maternity Leave, women have their MEC 3 reviewed by their Medical Officer who would normally say they are fit for duty, returned to a MEC 1 (or 2) and then must meet their Single Service fitness testing requirements.

Annex B to the Army Physical Conditioning Assessment System policy (Department of Defence, 2007) states that prior to resumption of duty after Maternity Leave, the member is to undergo a MEC review and then be placed on a reconditioning program, and have 12 months from the birth or 90 days after returning to duty (whichever is the latter) to pass their Basic Fitness Assessment.

Both Air Force and Navy women currently must pass their Physical Fitness Test within 90 days of returning to work. (Department of Defence, 2003, Department of Defence, 2005b), but planned amendments are likely to align the Air Force policy with Army and include the latter of 90 days or 12 months from the birth also.
Therefore it is possible, with current Air Force and Navy policy, that a woman could return to work full time within 2 months following the birth of that child, and be required to pass the appropriate fitness test within three months or face disciplinary action. She would also therefore be considered medically fit to fulfil any operational commitments whilst still exclusively feeding a child less than 6 months of age. The medical issues of abrupt weaning, both physical and psychological, have not been considered systematically.

Even though the fitness policies do not actually address breastfeeding as a barrier to achieving the elements of the fitness tests, heavier and larger breasts can make most elements of the testing more difficult (i.e. running, sit ups, push ups, chin ups, flexed-arm hang).

### 4.4. Individual Readiness (IR)

Air Force Individual Readiness (IR) policy (Department of Defence, 2000) requires that after returning to work following a pregnancy, Air Force women must indicate their availability for deployment, using the standard form, from a date not less than 6 months from the date of the birth of the child. Army policy (Department of Defence, 2006c) says women have 6 months from the birth or up to 90 days from returning to work (whichever is the latter) to re-qualify, with a possible additional waiver for extension of time for passing the Army Basic Fitness Assessment. Annex D to the Navy IR Policy (Department
of Defence, 2005c) which is the only ADF policy to mention breastfeeding, states that breastfeeding for less than 12 months is “beyond the member’s control”, but anything greater than 12 months is within the member’s control for determining non-compliance with the IR standard.

IR ‘component waivers’ can be sought from a member’s Commanding Officer under paragraph 11 of the Tri-Service IR policy (Department of Defence, 2005a). Under this policy a member’s availability to deploy can be waived for “temporary reasons beyond their control” (noting the Navy policy considers breastfeeding up to 12 months as beyond the member’s control). This option has been used successfully (for at least one Air Force member in 2005) for the purpose of breastfeeding up to 12 months after the birth of a child, but is unlikely to be a common avenue understood or known by either many new mothers or their Commanding Officer.

4.5. Department of Defence – other policy

The Department of Defence employs both military (i.e. ADF) and civilian (Australian Public Service or APS) personnel, and Federal legislation generally applies to the whole of Defence unless exemptions are specifically sought for issues of Australian security.

The Director-General Career Management Policy released a Defgram in 2000 (Commodore Gates, 2000) advising all personnel of the Federal Government’s
“Balancing Breastfeeding and Work” Information Kit (Commonwealth of Australia, 2000). The contact officer for this Defgram was within the Defence Equity Organisation which is a whole-of-Department organisation and this Defgram does not distinguish between Defence’s civilian and military personnel, neither does it reference any Defence policy.

The new Occupational Health and Safety Code of Practice 2008 (Commonwealth of Australia, 2008a) applies to the Department of Defence and although not a mandatory legal obligation, it provides a certain standards which should be met for best practice. The Code provides criteria for exclusion from inorganic lead-risk jobs; advising that pregnant and breastfeeding employees should be excluded from working in lead-risk jobs due to the risk on the unborn child and breastfed infant. The Code also states that workplaces with more than 200 employees should provide a first aid room, and that this room may be used for other situations such as breastfeeding.

In 2005 the Corporate Services and Infrastructure Group (one of the non-military Defence organisations at that time) released an internal memo to their First Aid attendants (Department of Defence, 2005d) alerting them to the Balancing Breastfeeding and Work publication and advising First Aid Attendants that requests to utilize First Aid Rooms for the purpose of lactation breaks may happen and should be dealt with sensitively and positively.

Civilian personnel within the Department of Defence, have a principle within section F28 of their current employees agreement, the 2006-2009 Defence Collective Agreement
(Department of Defence, 2006b), which states Defence’s commitment to nursing mothers’ rooms for breastfeeding. This Agreement however does not cover ADF employees but the provision of these lactation facilities would also be available to the military personnel working in a shared environment.

Similar to many of the family-friendly policies enjoyed by the civilian personnel in Defence, the ADF has introduced various flexible working policies for military personnel such as Part Time and/or Job Sharing (“Part Time Leave Without Pay”), working from home arrangements, and 12 month maternity leave entitlements with an increase from 12 to 14 weeks paid leave in 2006, with half-pay options (Department of Defence, 2006a).
5. Aims and objectives

The overall goal of this dissertation was to collect baseline information that can be used to develop recommendations for the development of a breastfeeding policy or policies for ADF women.

The objectives of the project are to:

- Benchmark the rates of breastfeeding amongst a cohort of ADF women who returned to work after a period of Maternity leave during the 06/07 Financial Year; in comparison with Australian population behaviours;
- Identify the proportion of women who returned to work prior to 12 months after the birth of their baby and continued to breastfeed;
- Identify enablers and barriers to extended breastfeeding;
- Identify the current policy environment and determine issues that an ADF breastfeeding policy could address.

This study was approved by the Australian Defence Human Research Ethics Committee and by the University of Queensland’s School of Population Health (see Appendices 1 and 2).
6. Methodology

6.1. Survey methodology

A cross-sectional survey was conducted to examine breastfeeding behaviours of ADF women who return to work following Maternity Leave.

The sample frame for selecting the participants was through the Defence personnel information management computer system, PMKeyS, based on women’s Leave history. Selecting women through this sample frame was considered to be the most effective and statistically valid method to select women who have given birth. Alternative methods such as advertising through Service newspapers and asking for volunteers would provide a convenience sample and introduce greater selection bias.

Due to privacy concerns, Defence Workforce Information required that the Single Service Personnel Agencies request the email addresses of these women and distribute the questionnaire to the participants on the researcher’s behalf.

On 16 September 2008, one questionnaire was emailed to each of the eligible women via the Single Service Personnel Agencies. Surveys were requested to be returned by 8 Oct 08 (window of 22 days including 16 business days) by either email or post. The
researcher was provided no contact details for the study population and accordingly was unable to follow up nil returns.

6.2. The study population

The study participants were selected as having taken Maternity Leave during the FY06/07 because the women who took such leave in the selected time period would have babies who were a minimum of 12 months old by the end of July 08, and their entitlement to 12 months maternity leave would have lapsed.

Women eligible for selection into the sample met the following inclusion criteria:

- Took Maternity Leave during FY06/07 as indicated on PMKeyS.
- Returned to work, in any capacity, following that period of Maternity Leave.
- Contactable via email from details available on PMKeyS within the study timeframe.

After 12 months of qualifying service ADF women are entitled 12 months’ Maternity Leave (MATL) of which 14 weeks can be taken on full pay, or they can choose to double some or all of that time by taking their leave at half pay. Women can take any other leave entitlements (including Leave Without Pay) to make up the full 12 months if they wish (Department of Defence, 2006a).
In FY 06/07, PMKeyS data identified there were 16,345 women employed in the ADF (15.2% of the ADF). The proportion of women in the three Services was 17.8% for both Navy (n=4,090) and Air Force (n=4,123), and 13.3% in the Army (n=8,132).

According to PMKeyS data the number of women who took MATL for the FY 06/07 was 689 (Navy 216, Army 231, and Air Force 242), which is only 4.2% of the total female population.

A total of 400 surveys were emailed directly to the sample population by the Single Service Agencies on 16 Sep 08 (Navy 130, Army 85 and Air Force 185), which is 58.1% of the women who took MATL (Navy 60.2%, Army 36.8%, and Air Force 76.4%) in that year.

This leaves 289 women who could not be sent a questionnaire during the survey period via an email address listed in PMKeyS (Navy 86, Army 146 and Air Force 57). This number would include natural attrition rates, with a possible increase due to mothers taking more leave or resigning during or after their Maternity Leave.
6.3. Survey measures

Specific questions relevant to the ADF population were incorporated, however most of the breastfeeding questions were taken directly from Queensland Health’s standardised questionnaire (Gabriel et al., 2005). The reasons for this were twofold,

1. To enable benchmarking to Australian population-based data which had been based on the NHMRC guidelines (NHMRC, 2003) and used the recommended breastfeeding indicators (Webb et al., 2001), and

2. Question wording was rigorously debated and agreed upon by a group of researchers (epidemiologists and nutritionists) (identified through personal communication with the former Director of Queensland Health’s Epidemiology Services Unit Dr. C. McClintock).

The addition of space for comments provided for some qualitative data to capture the ‘lived experience’ of these women, rather than just relying on the quantitative data gathered in the survey.

To assess the extent of breastfeeding among the participants, questions established whether the child had ‘ever been fed’ any breast milk and whether the child was ‘still being fed’ any breast milk at the time of survey completion. If the child had been
weaned, the mother was asked how old the child was when he/she was last fed breast milk. These data were used to calculate Indicators 1-3.

In order to explore whether some factors were predictors of breastfeeding initiation and duration, respondents were asked questions about their decision concerning feeding method and their experience (or expected experience) of breastfeeding upon return to work. Respondents who had ever breastfed were asked questions about their experience of breastfeeding generally and about how returning to work impacted on their experience. If they had ceased breastfeeding, they were asked about their reasons for stopping.

To establish the extent to which breastfeeding practices were related to social, demographic or military characteristics, a range of information was collected including the respondents age, rank, employment category/specialisation. The child’s date of birth and age upon the mother’s return to work were also collected.

6.4. Statistical analyses

Analysis began with examining the frequency distributions of all the variables, summarised as means (or median where applicable), percentages and rates. Means were calculated for continuous age variables. New variables were created for analysis purposes from existing variables to measure specific outcomes. Associations between categorical variables were tested using simple measures (i.e. bivariate tests of associations between
categorical variables were conducted using chi-square analyses). Where possible, the results have been compared with population norms.

In analysis of demographic data, the age of the mother was taken as of the date of survey completion, not age at the time of birth of the child. Rank was analysed by both specific rank level as indicated but also grouped as Officer and Enlisted personnel. Participants were asked to annotate their job type or employment category/specialisation. For analysis, these were grouped into 7 of the broad job groupings as listed on the Defence Jobs website (www.defencejobs.gov.au):

1. Aviation
2. Logistics, Hospitality and Support
3. Health Care and Science
4. Business and Administration
5. Engineering
6. Communications and Education
7. Combat and Security
8. Other (incl. Chaplains, Musicians)

Statistical analyses were conducted using SPSS v 16.0
6.5. Points for consideration when interpreting results

The data was not weighted (to minimise any bias in response representation) because, due to privacy, there was no way to identify if the sample surveyed was different from the study population.

The survey was conducted via email. Assuming the email address details were correct, a small but unknown proportion of the target population therefore would have been excluded from selection because they could not access their email due to various Service or private reasons.

The survey distribution timing occurred around the school holidays in all States and Territories (except Tasmania). As the sample population are parents, it was important to ensure a few days were available on either end of the time period to ensure that participants from all States would have time to respond.

The comparison of the study population to the Queensland and New South Wales population data (Gabriel et al., 2005, Population Health Division, 2008) must take into account that the study population had all returned to work, whereas the comparison populations were not analysed by work status and would therefore include women who had not returned to work postpartum.
7. Results

7.1. The participants

A total of 400 surveys were emailed to the eligible sample population (i.e. women with contact details available) on 16 September 2008 and a total of 152 completed surveys were received by 22 October 2008, providing a response rate of 38.0%. 71% of responses (n=108/152) were completed within the first three days (see Table 1).

Army obtained the highest response rate of 55.3%, compared to only a quarter of Navy surveys being returned. Air Force had the greatest number both sent out and returned (see Table 1).

Table 1. Survey returns: distribution and response by Service

<table>
<thead>
<tr>
<th></th>
<th>Surveys completed (n)</th>
<th>Proportion of total (%)</th>
<th>Surveys sent (n)</th>
<th>Response rate percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navy</td>
<td>34</td>
<td>22.4</td>
<td>130</td>
<td>25.2</td>
</tr>
<tr>
<td>Army</td>
<td>47</td>
<td>30.9</td>
<td>85</td>
<td>55.3</td>
</tr>
<tr>
<td>Air Force</td>
<td>71</td>
<td>46.7</td>
<td>185</td>
<td>38.4</td>
</tr>
<tr>
<td>Total</td>
<td>152</td>
<td>100.0</td>
<td>400</td>
<td>38.0</td>
</tr>
</tbody>
</table>
These 400 women make up more than half (58.1%) of the women who took Maternity Leave (MATL) in FY 06/07, suggesting that most ADF women return to work following their MATL entitlements. More than three quarters of the Air Force women who took MATL were sent a survey (76.4%), compared to 60.2% of Navy women and only 36.8% of Army women. This suggests that Army women are less likely to return to work following Maternity Leave than women in the Air Force or Navy.

The mean age of the women was 32 years ± 5 years standard deviation (range=17 to 44), distributions being similar across the three Services (data not shown). The mothers were most commonly aged between 30-39 (63.8%) with only one aged under 18 years (see Table 2).

**Table 2. Age distribution of participants**

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;18 years</td>
<td>1</td>
<td>0.01</td>
</tr>
<tr>
<td>18-29 years</td>
<td>39</td>
<td>25.7</td>
</tr>
<tr>
<td>30-39 years</td>
<td>97</td>
<td>63.8</td>
</tr>
<tr>
<td>40 years and over</td>
<td>14</td>
<td>9.2</td>
</tr>
<tr>
<td>Total</td>
<td>151</td>
<td>99.3</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>152</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Participation by rank was not evenly distributed, noting that there were no participants in the Senior Officer ranks above Lieutenant Colonel (equivalent) (see Figure 1).

![Bar chart showing distribution of participant's rank](image)

**Figure 1. Distribution of participant's rank**
(Refer to Appendix 3 for rank abbreviations and insignia)

The mean age of the women by rank increased with higher rank (see Figure 2) as expected in a time-related promotion system.
Figure 2. Mean participant age according to rank
(Refer to Appendix 3 for rank abbreviations and insignia)

The ranks were further grouped into Officers (n=62) and Enlisted (n=90) personnel, with the mean age being 34 and 31 respectively.

Participants were categorised into eight employment groups, with the highest frequency being ‘Business and Admin’ at 20.4% (n=31) (see Table 3).
Table 3. Participants according to Employment

<table>
<thead>
<tr>
<th>Employment Group</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aviation</td>
<td>10</td>
<td>6.6</td>
</tr>
<tr>
<td>Logistics &amp; Support</td>
<td>28</td>
<td>18.4</td>
</tr>
<tr>
<td>Health Care &amp; Science</td>
<td>26</td>
<td>17.1</td>
</tr>
<tr>
<td>Business &amp; Admin</td>
<td>31</td>
<td>20.4</td>
</tr>
<tr>
<td>Engineering</td>
<td>15</td>
<td>9.9</td>
</tr>
<tr>
<td>Comms &amp; Education</td>
<td>12</td>
<td>7.9</td>
</tr>
<tr>
<td>Combat &amp; Security</td>
<td>27</td>
<td>17.8</td>
</tr>
<tr>
<td>other</td>
<td>3</td>
<td>2.0</td>
</tr>
<tr>
<td>Total</td>
<td>152</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The largest proportion of Enlisted women was in the ‘Business and Admin’ group (n=31). Of the 31 participants all were Enlisted, and 29 (93.5%) were Clerks. The largest proportion of Officers was in the ‘Health Care and Science’ group. Seventy-five percent of this employment group were Officers and of these 60% were Nurses (n=12).

The employment category most represented in Navy was the ‘Combat and Security’ group with 47.1%. The distribution of employment categories was more evenly spread for the other two Services, with the largest groups being 25.5% of Army women from the ‘Logistics, Hospitality and Support’ group and 25.4% of Air Force women from the ‘Business and Admin’ group.
The participants had a mean of 112 months (9.3 years) Service upon commencement of this period of Maternity leave (range = 16 to 261 months or 1.3 to 21.8 years), noting that ADF women are not entitled to Maternity Leave until they have completed 12 months Service (Department of Defence, 2006a). Neither the woman’s parity nor other periods of Maternity Leave taken were assessed.

The majority of women (65.8%, n=100) returned to work full time (Navy 67.6%, Army 71.7% and Air Force 62.0%); the child’s mean age (upon return to work) was 8.4 months [Navy 8.9 months, Army 7.6 months and Air Force 8.7 months].

Across employment groups return to full time work ranged from 53.8% (Health Care and Science group) to 83.3% (Communication and Education). Of the largest employment groups (Business and Administration; Logistics, Hospitality and Support; Combat and Security; and Health Care and Science) return to full time work ranged from 53.8% (Health Care and Science) to 81.5% (Logistics, Hospitality and Support) (see Table 16 at Appendix 4).
7.2. Breastfeeding Initiation

7.2.1. Percentage ever Breastfed - Indicator 1

This indicator includes all children who have ever consumed breast milk. It is a measure of the proportion of mothers who attempted to follow the current NHMRC advice and is further described by Webb and colleagues (Webb et al., 2001).

The proportion of women who had ‘ever breastfed’ their child was 96.7% (n=147/152) which compares favourably against NHMRC recommendations of 90% and the Queensland and NSW Health Department reports of 91.8% and 91.1% respectively (Gabriel et al., 2005, Population Health Division, 2008).

7.2.2. Breastfeeding Intent

The vast majority (96.7%) of the participants had decided whether or not they were going to breastfeed before the child was born. Of those 147 women, only three had decided to formula feed, 77.6% (n=118) had intended to breastfeed (only) and 17.1% (n=26) had decided to start breastfeeding but to change to formula at some stage (see Table 4).
Table 4. Distribution of prenatal feeding decisions

<table>
<thead>
<tr>
<th>Prenatal Decision</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>breastfeed</td>
<td>118</td>
<td>77.6</td>
</tr>
<tr>
<td>formula feed</td>
<td>3</td>
<td>2.0</td>
</tr>
<tr>
<td>start breastfeed but change to formula</td>
<td>26</td>
<td>17.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>147</strong></td>
<td><strong>96.7</strong></td>
</tr>
<tr>
<td>No decision prior to birth</td>
<td>5</td>
<td>3.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>152</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Prior to the child’s birth, 86.2% of Officers planned to breastfeed (inclusive of breastfeed only and commence breastfeed but change to formula) compared to Enlisted women with 77.0%. Only Enlisted women (n=3) had decided they would formula feed their child.

The Air Force had the highest proportion of women who wanted to exclusively breastfeed (86.8%), followed by the Navy (77.4%), whereas the Army had the highest proportion of women who wanted to start breastfeeding but change to formula (26.1%). The three Enlisted women who chose to formula feed were Navy women (see Figure 3).
Figure 3. Prenatal feeding decision according to Service

Although not statistically significant, the women in this study who chose to formula feed were younger (mean age of 29), compared to those who had chosen to breastfeed at all (mean age of 32).

7.2.3. Reasons for breastfeeding

Participants who had ever breastfed their children were asked to comment on the main reasons why they chose to breastfeed their child. The criteria were taken from the
Queensland study (Gabriel et al., 2005) but rather than allow just three answers (as initiated by the women being interviewed) the participants in this study were provided these criteria and asked to select all answers which applied to them, and were given the option of choosing ‘Other’ and specifying their reason.

Nearly all women (who had ‘ever breastfed’) cited ‘breast milk better for baby’ (95.2%), and ‘bonding with baby’ (72.1%) as reasons for breastfeeding. Sixty four percent considered breastfeeding was better for the mother (see Table 5), so saw that they were doing something beneficial for their own health.

Table 5. Reason for breastfeeding among 'ever breastfed'

<table>
<thead>
<tr>
<th>Reason</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast milk better for baby</td>
<td>140</td>
</tr>
<tr>
<td>Breast feeding better for mum</td>
<td>94</td>
</tr>
<tr>
<td>Breastfeeding cheaper</td>
<td>83</td>
</tr>
<tr>
<td>More convenient</td>
<td>91</td>
</tr>
<tr>
<td>It is the ‘right’/normal/natural thing to do</td>
<td>99</td>
</tr>
<tr>
<td>Child’s father wanted you to breastfeed</td>
<td>24</td>
</tr>
<tr>
<td>Family and friends advised breastfeeding</td>
<td>17</td>
</tr>
<tr>
<td>Hospital staff pressured me into it</td>
<td>5</td>
</tr>
<tr>
<td>Bonding with baby</td>
<td>106</td>
</tr>
<tr>
<td>Don’t know</td>
<td>0</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>6</td>
</tr>
</tbody>
</table>

(Note: multiple responses per participant)
The only ‘Other’ reasons which could not be re-categorised into the above groups were:

“Unsuccessful attempt to breastfeed my first child and I wanted to experience it”

“Wanted to give it another try after having issues with first baby”

Of the three women who decided before their child was born that they would formula feed, two cited previous problems with breastfeeding.

The reasons cited for the only child never fed breast milk by a mother who had decided before the birth to breastfeed, were medical advice and the need to return to work.

The reason given by another participant whom had not yet made a decision on whether she wanted to breastfeed prior to the birth and whose child had received no breast milk was that the child was premature and tube fed for first two weeks and could not breastfeed.

7.3. Duration of breastfeeding

The NHMRC has set an objective of 80% of infants being breastfed at 6 months of age (NHMRC, 2003) with exclusive breastfeeding for 4 to 6 months. Prevalence of
breastfeeding at 1, 3, 6, 9 and 12 months and beyond was identified, and predictors for breastfeeding at 6 and 12 months were analysed.

7.3.1. Prevalence of breastfeeding during the first 12 months - Indicator 2

Breastfeeding prevalence was compared with the NHMRC recommendations and the results of the Queensland and NSW population-based studies (Gabriel et al., 2005, Population Health Division, 2008) (see Table 6).

Table 6. Breastfeeding prevalence during first 12 months

<table>
<thead>
<tr>
<th>Still breastfeeding at baby’s age:</th>
<th>Frequency</th>
<th>Percent</th>
<th>QLD data</th>
<th>NSW data</th>
<th>NHMRC recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever breastfed (&lt;1 month)</td>
<td>147</td>
<td>96.7</td>
<td>91.8</td>
<td>91.1</td>
<td>More than 90%</td>
</tr>
<tr>
<td>1 month</td>
<td>138</td>
<td>93.9</td>
<td>78.8</td>
<td>80.2</td>
<td></td>
</tr>
<tr>
<td>3 months</td>
<td>124</td>
<td>84.4</td>
<td>69.1</td>
<td>68.1</td>
<td></td>
</tr>
<tr>
<td>6 months</td>
<td>104</td>
<td>70.7</td>
<td>57.0</td>
<td>54.5</td>
<td>More than 80%</td>
</tr>
<tr>
<td>9 months</td>
<td>68</td>
<td>46.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 months</td>
<td>37</td>
<td>25.2</td>
<td>31.9</td>
<td>27.8</td>
<td></td>
</tr>
<tr>
<td>Still breastfeeding at time of survey</td>
<td>4</td>
<td>2.7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Although the results exceed the NHMRC recommendations of ‘ever breastfed’, after 3 months the prevalence drops below the NHMRC recommendation of 80% for between 4 and 6 months, with 71% of this study’s participants still feeding at 6 months. Even so,
breastfeeding prevalence was found to be comparatively higher than both the Queensland and the NSW population-based studies in breastfeeding rates up until 9 months of age.

7.3.2. Predictors of breastfeeding initiation

Officers were more likely to initiate breastfeeding (100%) compared to Enlisted women (94.4%).

This study also agreed with the Queensland findings that women who were older (>30 years) and had decided to breastfeed were more likely to initiate breastfeeding (see Table 7).

Table 7. Percentage of mothers who 'ever breastfed' by mother's characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>n</th>
<th>Frequency</th>
<th>Percent</th>
<th>Queensland percent</th>
<th>NSW percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total ever breastfed</td>
<td>152</td>
<td>147</td>
<td>96.7</td>
<td>91.8</td>
<td>91.1</td>
</tr>
<tr>
<td>Officers</td>
<td>62</td>
<td>62</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enlisted</td>
<td>90</td>
<td>85</td>
<td>94.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 18-29</td>
<td>39</td>
<td>36</td>
<td>92.3</td>
<td>88.7</td>
<td>(&lt;25 = 81.5)</td>
</tr>
<tr>
<td>Age 30-39</td>
<td>97</td>
<td>95</td>
<td>97.9</td>
<td>93.0</td>
<td>(25+ = 92.2)</td>
</tr>
<tr>
<td>Age 40+</td>
<td>14</td>
<td>14</td>
<td>100</td>
<td>92.8</td>
<td></td>
</tr>
<tr>
<td>Prenatal decision to breastfeed at all</td>
<td>142</td>
<td>142</td>
<td>100</td>
<td>98.7</td>
<td></td>
</tr>
<tr>
<td>Prenatal decision to formula feed</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>22.0</td>
<td></td>
</tr>
<tr>
<td>No prenatal feeding decision</td>
<td>7</td>
<td>6</td>
<td>85.8</td>
<td>84.1</td>
<td></td>
</tr>
</tbody>
</table>

- Missing data for one age.
7.3.3. Intention to breastfeed and practice

The NHMRC Dietary Guidelines recommended that 80% of infants be receiving breast milk at three and six months. Mothers were asked whether they had decided how to feed their baby before the birth. Eighty five percent of mothers (n=122) who had decided to breastfeed (at all) were still breastfeeding at 3 months, compared to 75.7% in the Queensland study. Two who had not made a decision were also breastfeeding at 3 months.

By 6 months, just over a quarter of the mothers who had intended to breastfeed (at all) had ceased (28.2%, n=40 of 142), but half of the mothers who were planning on switching to formula were still breastfeeding (n=12 of 25).

It was found that mothers who had intended to breastfeed their children, breastfed for 8.7 months (median duration). Mothers who had intended to switch to formula at some stage breastfed for a median of 5.6 months.

7.3.4. Predictors of breastfeeding to at least 6 months

Only three women returned to work before their children were 4 months old, and only 26 (17%) women had returned to work before their children had turned 6 months old.

Of the women who had made a decision to breastfeed or begin breastfeeding (i.e. breastfeed ‘at all’), 71.8% were still breastfeeding at 6 months (see Table 8). Half of the
women who had chosen to breastfeed initially but then change to formula had done so by
6 months, but almost two thirds (62.4%) of women who had chosen to (only) breastfeed
were still breastfeeding (data not shown).

The chi-squared test for independence indicated a significant association between the
mothers’ intent to breastfeed and breastfeeding to 6 months \( \chi^2 (n=147) = 16.0, \text{df}=2, \)
p=0.001]. This agrees with the Queensland study’s findings that intent prior to birth is a
good indicator of subsequent breastfeeding practice. Further statistical testing was not
conducted due to small numbers and inability to meet the minimum requirements for chi-
squared testing.

The following outcome was interesting, and although not statistically significant, Officers
had a higher rate of breastfeeding to 6 months than the Enlisted women (see Table 8).
The Chi-squared test for independence (with Yates Continuity Correction for a 2x2 table)
indicated no significant association between Officers and enlisted women and
breastfeeding to 6 months \( \chi^2 (n=104) = 3.3, \text{df}=1, \text{p}=0.71].

Supporting the trend in the Queensland study, the 30-39 age band comprised the highest
proportion of breastfeeders compared to other age groups (see Table 8) with the
proportion of mothers in the two younger age groups breastfeeding to at least 6 months
considerably higher than the Queensland study (see Table 8).
Table 8. Percentage of children breastfed to at least 6 months by mother's characteristics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Frequency</th>
<th>Percent</th>
<th>Queensland Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total breastfed at 6 months</td>
<td>147</td>
<td>104</td>
<td>70.7</td>
<td>55.4</td>
</tr>
<tr>
<td>Officers</td>
<td>62</td>
<td>48</td>
<td>77.4</td>
<td></td>
</tr>
<tr>
<td>Enlisted</td>
<td>85</td>
<td>56</td>
<td>65.9</td>
<td></td>
</tr>
<tr>
<td>Age 18-29</td>
<td>35</td>
<td>22</td>
<td>62.9</td>
<td>44.0</td>
</tr>
<tr>
<td>Age 30-39</td>
<td>95</td>
<td>73</td>
<td>76.8</td>
<td>60.3</td>
</tr>
<tr>
<td>Age 40+</td>
<td>14</td>
<td>8</td>
<td>57.1</td>
<td>68.5</td>
</tr>
<tr>
<td>Prenatal decision to breastfeed at all</td>
<td>142</td>
<td>102</td>
<td>71.8</td>
<td>65.2</td>
</tr>
<tr>
<td>Prenatal decision to formula feed</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>2.2</td>
</tr>
<tr>
<td>No prenatal feeding decision</td>
<td>7</td>
<td>2</td>
<td>28.6</td>
<td>23.2</td>
</tr>
</tbody>
</table>

- Missing data for one participant’s age

Further analysis was undertaken to compare groups within the Defence context. Navy women were least likely to continue feeding to 6 months. The group with the most women employed, Business and Admin, had the lowest breastfeeding proportion of 60% at 6 months (Enlisted women make up 93.5% of this group). The Aviation group had the highest proportion with 9 out of the 10 women still breastfeeding at 6 months (see Table 9).
Table 9. Percentage of women still breastfeeding at 6 months by Defence characteristics

<table>
<thead>
<tr>
<th>Service</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navy</td>
<td>18</td>
<td>58.1</td>
</tr>
<tr>
<td>Army</td>
<td>36</td>
<td>78.3</td>
</tr>
<tr>
<td>Air Force</td>
<td>50</td>
<td>71.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employment groups</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aviation</td>
<td>9</td>
<td>90.0</td>
</tr>
<tr>
<td>Logistics, Hospitality and Support</td>
<td>18</td>
<td>69.2</td>
</tr>
<tr>
<td>Health Care and Science</td>
<td>18</td>
<td>72.0</td>
</tr>
<tr>
<td>Business and Admin</td>
<td>18</td>
<td>60.0</td>
</tr>
<tr>
<td>Engineering</td>
<td>11</td>
<td>73.3</td>
</tr>
<tr>
<td>Communications and Education</td>
<td>10</td>
<td>83.3</td>
</tr>
<tr>
<td>Combat and Security</td>
<td>17</td>
<td>65.4</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>100</td>
</tr>
</tbody>
</table>

7.3.5. Predictors of breastfeeding to at least 12 months

WHO recommends children to be breastfed until 2 years and beyond (WHO, 2003), however only a quarter (n=37) of women in this study were still breastfeeding at 12 months, less than both the Queensland and NSW studies at the same age (see Table 10). A reason for this may be that 134 (88.2%) of the women had returned to work before their child reached 12 months with 108 women (71.1%) returning to work in the 6 months between their child reaching 6 to 12 months of age.
Three (of the 25) women who had made a prenatal decision to change to formula at some stage were still breastfeeding at 12 months.

Again Officers were more likely to be breastfeeding at 12 months, but the difference between Officers and Enlisted women had reduced from 12% at 6 months to only 4%. The Chi-squared test for independence (with Yates Continuity Correction for a 2.2 table) indicated no significant association between Officers and Enlisted women and breastfeeding to 12 months [$\chi^2 (n=37) = 0.293$, df=1, p=0.59].

Like the Queensland and NSW study, older women and those who made a prenatal decision to breastfeed were both more likely to continue breastfeeding until at least 12 months of age (see Table 10).
Table 10. Percentage of children still breastfed at 12 months by mother's characteristics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Frequency</th>
<th>Percent</th>
<th>Queensland percent</th>
<th>NSW Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total breastfed at 12 months</td>
<td>147</td>
<td>37</td>
<td>25.2</td>
<td>32.0</td>
<td>27.8</td>
</tr>
<tr>
<td>Officers</td>
<td>62</td>
<td>17</td>
<td>27.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enlisted</td>
<td>85</td>
<td>20</td>
<td>23.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 18-29</td>
<td>35</td>
<td>7</td>
<td>20.0</td>
<td>23.7</td>
<td>(&lt;25 = 14.6)</td>
</tr>
<tr>
<td>Age 30-39</td>
<td>95</td>
<td>24</td>
<td>25.3</td>
<td>32.8</td>
<td>(25+ = 29.7)</td>
</tr>
<tr>
<td>Age 40+</td>
<td>14</td>
<td>6</td>
<td>42.9</td>
<td>41.9</td>
<td></td>
</tr>
<tr>
<td>Prenatal decision to breastfeed at all</td>
<td>142</td>
<td>36</td>
<td>25.4</td>
<td>36.8</td>
<td></td>
</tr>
<tr>
<td>Prenatal decision to formula feed</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>No prenatal feeding decision</td>
<td>7</td>
<td>1</td>
<td>14.3</td>
<td>4.4</td>
<td></td>
</tr>
</tbody>
</table>

- Missing data for one participant’s age

Using the Defence characteristics, Air Force had the highest proportion of women still breastfeeding at 12 months (32.9%) but this was only half the rate identified at 6 months. The Army lost the lead of over three quarters still breastfeeding at 6 months, to less than a fifth at 12 months.

Being in the Health Care and Science group was a good indicator for feeding up to 1 year (Officers make up 61% of this group). The least likely groups were the Navy and those
employed in Communications and Education jobs (Enlisted make up 75% of this group) (see Table 11).

**Table 11. Percentage of women still breastfeeding at 12 months by Defence characteristics**

<table>
<thead>
<tr>
<th>Service</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navy</td>
<td>5</td>
<td>16.1</td>
</tr>
<tr>
<td>Army</td>
<td>9</td>
<td>19.6</td>
</tr>
<tr>
<td>Air Force</td>
<td>23</td>
<td>32.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employment groups</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aviation</td>
<td>2</td>
<td>20.0</td>
</tr>
<tr>
<td>Logistics, Hospitality and Support</td>
<td>6</td>
<td>23.1</td>
</tr>
<tr>
<td>Health Care and Science</td>
<td>8</td>
<td>32.0</td>
</tr>
<tr>
<td>Business and Admin</td>
<td>8</td>
<td>26.7</td>
</tr>
<tr>
<td>Engineering</td>
<td>4</td>
<td>26.7</td>
</tr>
<tr>
<td>Communications and Education</td>
<td>2</td>
<td>16.7</td>
</tr>
<tr>
<td>Combat and Security</td>
<td>7</td>
<td>26.9</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**7.3.6. Median duration of Breastfeeding - Indicator 3**

Indicator 3 is age in completed months at which 50% of children who were ever breastfed no longer received any breast milk (Webb et al., 2001). This indicator is useful for monitoring the effects of programs aimed at increasing the duration of breastfeeding.

The median duration of breastfeeding in this study was 8 months compared to 6 months in the Queensland survey. The shortest median duration was 6 months for the younger
mothers (<30 years) and Enlisted women. The longest median duration was 10 months for both women who returned to work part time and those in the Aviation employment group (see Table 12).

Table 12. Median duration of breastfeeding

<table>
<thead>
<tr>
<th>Return to work type</th>
<th>Median duration of breastfeeding (months)</th>
<th>Queensland result Median (months)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 to 29 years</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>30 to 39 years</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>More than 40 years</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Rank</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Officers</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Enlisted</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Navy</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Army</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Air Force</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Employment groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aviation</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Logistics, Hospitality and Support</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Health Care and Science</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Business and Admin</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Engineering</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Communications and Education</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Combat and Security</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>
7.4. Provision of breast milk upon return to work

The participants were asked if they provided milk to their child at work when they returned. If they did, they were asked how their child received that milk, and if they did not provide milk, had they wanted to.

Less than half the women continued to breastfeed upon returning to work (n=62, 42.2%). Of those, over a third (35.5%) breastfed only after hours, and 27.4% provided their milk via expressed breast milk (EBM) only. 37% were able to access their child to breast milk directly at least some of the time. One woman who had decided not to breastfeed upon return to work did provide her child EBM (see Figure 4).
Figure 4. Initial method by which children were fed breast milk upon mother's return to work

Nearly three quarters (72.1%) of the women who did not provide breast milk to their child (n=85) did not want to breastfeed when they returned to work, however 15.3% who wanted to, did not (see Figure 5). Their reasons for breastfeeding cessation and barriers to breastfeeding are described in 7.5 and 7.6 below.
Figure 5. Women who did not breastfeed upon return to work and their desire to have continued breastfeeding

7.5. Breastfeeding experience and cessation

A mother’s decision to cease breastfeeding may be influenced by a number of factors. Participants who had ‘ever breastfed’ were asked to comment on the main reasons why they stopped feeding their child breast milk. The number of women who had ever
breastfed and ceased breastfeeding that child was n=143. Only 4 women were still breastfeeding at the time of the survey.

The mean age of breastfeeding cessation was 7.9 months, with a minimum of 1 day and a maximum of 22 months (noting that 4 children were still being breastfed at the time of the survey and were included in this calculation). This is almost identical to the Queensland survey with a mean age of breastfeeding cessation at 7.8 months, with a range of 1 day and 3 years. However, the Queensland data involved a longer follow up period; so the mean would include a longer tail of a small number of women who breastfed up to 3 years and the mean is likely to be increased. If the mean in the Queensland data was restricted to 22 months (as with this data) the comparative mean may be lower.

Participants were asked about their reasons for breastfeeding cessation. The criteria used in this study were taken from the Queensland study (Gabriel et al., 2005) but rather than allow just three answers (as initiated by the women being interviewed) the participants in this study were provided these criteria and asked to select all answers which applied to them, and were given the option of choosing ‘Other’ and specifying their reason.

Returning to work was the most commonly cited reason for breastfeeding cessation (42.7%) with the second most common reason (28.0%) being that they had no milk or not enough milk. The Queensland survey found returning to work less of a reason to discontinue breastfeeding than the Defence population, but that the cited milk supply
problems were similar [29.6% QLD compared to the Defence population 28%] (see Table 13. Note that multiple responses were allowed in answering this study, whereas the Queensland study only allowed three responses).

Table 13. Reasons for breastfeeding cessation

<table>
<thead>
<tr>
<th>Reason</th>
<th>N</th>
<th>Percent</th>
<th>Queensland percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Returned to work</td>
<td>61</td>
<td>42.7</td>
<td>12.2</td>
</tr>
<tr>
<td>Child old enough to stop</td>
<td>34</td>
<td>23.8</td>
<td>16.3</td>
</tr>
<tr>
<td>Child self-weaned – prefers bottle/cup</td>
<td>33</td>
<td>23.1</td>
<td>15.6</td>
</tr>
<tr>
<td>Child teething</td>
<td>5</td>
<td>3.5</td>
<td>7.0</td>
</tr>
<tr>
<td>Sore/cracked nipples – painful breasts</td>
<td>9</td>
<td>6.3</td>
<td>13.1</td>
</tr>
<tr>
<td>Baby health reason (please specify)</td>
<td>7</td>
<td>4.9</td>
<td>8.9</td>
</tr>
<tr>
<td>Mother health reason (please specify)</td>
<td>12</td>
<td>8.4</td>
<td>7.0</td>
</tr>
<tr>
<td>(Mastitis) *</td>
<td>3</td>
<td>2.1</td>
<td>4.9</td>
</tr>
<tr>
<td>No milk / not enough milk</td>
<td>40</td>
<td>28.0</td>
<td>29.6</td>
</tr>
<tr>
<td>Don’t know</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>19</td>
<td>13.3</td>
<td></td>
</tr>
</tbody>
</table>

* Mastitis is a sub-category of ‘Mother health reason’
(Note: multiple responses per participant)

Similarly, the group of women who had wanted to breastfeed upon return to work, but did not, said returning to work was the main reason they stopped (n=10, 53.8%).
Seven women nominated baby health reasons which included two problems with reflux and problems with the child not gaining enough weight/not receiving enough milk.

Comments included:

“Baby has a deformed palate so physically unable to breastfeed. I was expressing up to this point”

“My daughter was diagnosed with reflux oesophagitis when she was 7 weeks old. Therefore she was losing weight and I was advised to supplement her breastfeeds with formula feeds. My supply was low because I was tired and my husband was away on course for 15 months”

The twelve women who nominated mother health reasons included three cases of mastitis, two cases of Post Natal Depression (PND), and others a need to take incompatible medication. Comments included:

“Suffered from PND. Worked with men that made me feel guilty for leaving work to go and visit my child and breastfeed. Work did not make it easy for me to return”
“Difficulty getting the baby to attach right from the beginning lead to the need to express which ultimately resulted in mastitis and the decision to cease breastfeeding being in both the best interests of the mother and child”

“Constant bouts of blocked ducts often leading to mastitis due to rushed feeding sessions”

“Recommence IVF”

Nineteen women provided ‘Other’ reasons for why they stopped breastfeeding. Common themes around returning to work included breast refusal after commencing formula during the day, lack of appropriate facilities for expressing, inability to maintain supply, lack of time to feed and/or express, feeling too tired to continuing feeding and/or expressing or forced separation from their child. Some women found that their child would refuse a bottle (of either formula or EBM) whilst attempting to alternate between the breast and bottle, so mothers had to cease offering the breast altogether. Comments included:

“2 weeks before returning to work we put her on formula during the day and a week later she refused to drink breast milk”

“Difficult to express at work (privacy, finding time) so milk dropped off. Would have until 12 months”
“Found it hard working full time and raising 2 older children on my own whilst husband at sea to do it all”

“Going away to play hockey for the ADF hockey team”

“Had to attend a course away from home for 5 weeks”

“I wanted to stop. Wanted to get back into fitness (large/heavy breasts and time to breast feed hindered this)”

“Stress related as I had to relocate the family due to posting”

“Too tired once I returned to work, getting up earlier and expressing was too much and time consuming”

“Was concerned about physical limitations if required to wean rapidly for deployment”

7.5.1. Returning to work and breastfeeding

The Queensland study’s participants were also surveyed about their return to work behaviours and they exhibited a more even distribution than this military sample. 70% of the military sample returned when the child was between 6-12 months of age, compared
to 29% in the general population (Gabriel et al., 2005) suggesting that, in contrast, the paid maternity leave entitlements of ADF women are quite generous (see Table 14).

Table 14. Percentage of working mothers who returned to work by age of child

<table>
<thead>
<tr>
<th>Age of Child</th>
<th>N</th>
<th>Percent</th>
<th>Queensland percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child &lt; 6 months old</td>
<td>27</td>
<td>17.8</td>
<td>35</td>
</tr>
<tr>
<td>Child aged 6 to 12 months</td>
<td>107</td>
<td>70.4</td>
<td>29</td>
</tr>
<tr>
<td>Child aged 12+ months</td>
<td>18</td>
<td>11.8</td>
<td>36</td>
</tr>
</tbody>
</table>

7.6. Defence workplace difficulties

All participants were asked, “If you had chosen, or if you chose to provide breast milk when you returned to work, what difficulties would you have faced / did you face?” and they were directed to select all that applied.

Nearly two thirds of women believed that there was (or would be) a lack of appropriate facilities for feeding/expressing and storing breast milk in the workplace. More than half believe that they faced (or would have faced) a job which was too busy or time restricted to be able to breastfeed or express (see Table 15).
Table 15. Difficulties faced (or expected) when providing breast milk upon return to work

<table>
<thead>
<tr>
<th>Difficulties:</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>20</td>
<td>13.2</td>
</tr>
<tr>
<td>An unsupportive supervisor/chain of command</td>
<td>21</td>
<td>13.8</td>
</tr>
<tr>
<td>An unsupportive workplace culture/peers</td>
<td>26</td>
<td>17.1</td>
</tr>
<tr>
<td>An unsupportive partner/spouse</td>
<td>2</td>
<td>1.3</td>
</tr>
<tr>
<td>Lack of appropriate facilities for feeding/expressing and storing of breast milk</td>
<td>96</td>
<td>63.2</td>
</tr>
<tr>
<td>Physical fitness requirements (e.g. Running)</td>
<td>55</td>
<td>36.2</td>
</tr>
<tr>
<td>Time restrictions/job too busy</td>
<td>80</td>
<td>52.6</td>
</tr>
<tr>
<td>Absence requirements or separation from infant due to active service (e.g. Deployment/training/courses/shiftwork)</td>
<td>41</td>
<td>27.0</td>
</tr>
<tr>
<td>Mother’s health reason (please specify)</td>
<td>6</td>
<td>3.9</td>
</tr>
<tr>
<td>Baby’s health reason (please specify)</td>
<td>2</td>
<td>1.3</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>16</td>
<td>10.5</td>
</tr>
</tbody>
</table>

Of the 20 people who said they faced (or would have expected to face) no problems upon return to work, only 6 of them actually breastfed when they returned, 5 of them saying returning to work was a main reason to stop, and these 20 women breastfed for the mean of 7 months..
Of the 13 women who wanted to breastfeed upon return to work, but did not, 10 anticipated lack of appropriate facilities (76.9%), 7 selected ‘time restrictions/job too busy’ (53.8%), and 6 identified physical fitness requirements as a barrier (46.2%) (data not shown).

The mother’s health issues were faced by six women who related to the sense of being overwhelmed (including stress, depression and exhaustion) and problems recommencing physical training. Comments included:

“I was informed by medical that I would have to complete my PFT (physical fitness test) even if I was breastfeeding and due to having very large breasts I couldn’t pass my PFT so I decided giving up breastfeeding was the only option”

“Because I was returning to physical training after c-section, looking after my baby alone….and working full time, I found it very stressful. On top of that my milk dried up for expressing and I had to stop expressing at work at 9 months…I found it quite sad to have to put my son on formula for day feeds”

“Non regular or nil opportunities to express milk which led to mastitis and general sickness”
Sixteen women commented about ‘Other’ difficulties faced which included the proximity to childcare facilities’, bottle refusal, unsure of rules or other people’s perceptions and the impracticality of trying to arrange feeding/expressing around work.

The following comments are illustrative of the range of views expressed:

“My child did not take the bottle as well as I’d hoped, so expressing into a bottle or giving her formula in a bottle was an issue, therefore, I would leave work twice a day during the work day to breastfeed her at home as we were lucky enough to have lived only 5 min away”

“Childcare facilities are often too far away from work to allow feeding during working hours”

“I think it would be very inconvenient not to mention time consuming and fairly impractical”

“Wasn't sure if we were entitled to leave to feed baby during working hours”

“Didn't feel comfortable with everyone knowing what I was doing”
“As (an) ATC (Air Traffic Controller) I cannot take breaks unless replaced at console. I asked for a break every 3 hours to express but this was not always possible. Expressing took me 30-40 mins”

7.7. Participants General Comments

Of the 152 participants in this study, over half the women (n=80, 52.3%) chose to leave comments at the end of the survey.

A large number of the comments mirrored the difficulties faced in the previous section, with the majority of comments (25%) being about inappropriate facilities for breastfeeding or expressing and storing breast milk. Eight women said they were forced to use a toilet space as an area to express milk for their baby.

Two women voiced their opinion that breastfeeding was inappropriate for the military environment and four others felt ‘punished’ by their supervisors for taking lactation breaks and had their breaks unrealistically time-limited. However eight women said they felt supported in their choice to continue providing breast milk to their infants upon return to work.

Five women commented about issues around childcare (e.g. proximity, access) being a problem for them.
The following comments are illustrative of the range of views expressed:

“I continued to breastfeed upon return to work and ended up having to express in the toilets. The facilities were inadequate including where to stow it upon expressing. Each time I needed to express I would be questioned about my whereabouts and asked ridiculous questions. I am the only woman in my workplace so it really felt that there was no support”

“I had a lot of trouble feeding when I returned to work as my workplace was not happy at all with me expressing during the day. I would only get to express during allocated tea breaks or lunch. There was also no place for me to express, I was expressing in the female toilets”

“My boss was initially supportive but became increasingly annoyed by my absences requiring me to log and pay back every ‘non-productive minute’. I did try to express milk at work but there was nowhere suitable and I wasn't allowed to store my breast milk in the fridge at work”

“There came a point where I was asked to leave the building if I wanted to express and could only be gone for a maximum of 10 minutes”

“I do not believe that breastfeeding would be the best thing for the Army environment”
"The military workplace/environment is inappropriate for such an intimate relationship, especially given the current Operational and Exercise tempo. It is hard enough balancing mother, wife and personal life with RAAF Officer, let alone add irregular feeds, leaking/sore nipples, and hungry child to the daily schedule. The ADF workplace needs to be supportive to its members but we need to be realistic to the limitations”

“I don't know of any mums that come back to work and breastfeed. This is a man's world......it was mentioned by my DO (Divisional Officer) that it doesn't help playing mummy and working part time.... Man (sic) don't like woman in their Navy and they certainly don't like them with kids”

“Worked with men that made me feel guilty for leaving work to go and visit my child to breastfeed”

“I had great support from my supervisor and peers at the time who I think is worth mentioning were all MALES”

“My workplace was extremely supportive of my decision to breastfeed and gave me opportunities to express milk during the day which I am grateful for. I think it is a positive for new mums to know that the ADF supports breastfeeding”
“I used to feed during lunch but received criticism from my chain of command who believed it was an ADF requirement to cease. I was advised that I wasn't fulfilling deployment requirements. A breastfeeding policy would have helped”

“Didn't ever think that breastfeeding after returning to work was an option”

“When I did attend the Day Care centre to feed my daughter, I was asked to hide away to feed her out of sight. Not my preference, as I enjoyed the contact and interaction with other people whilst on my breaks”

“I would not have been able to go to the daycare centre to breastfeed due to being called to a fire at any time, other people complain that they can't get there because it would eat into their lunch time and should be given extra breaks….. There was not enough staff in my section to cover for a breastfeeding mother”

“…the MECSR process does not identify the need for restrictions while breastfeeding, i.e. if I was breastfeeding and had to deploy then my risk of mastitis is greatly increased, to say nothing on the stress of a baby”

“One barrier to breastfeeding is that breastfeeding is not considered a reason for downgrading MEC/individual readiness. Women may therefore be pressured to deploy or be otherwise separated from their child for service reasons even though they prefer to keep breastfeeding”
“Due to breastfeeding I did not feel comfortable in completing a PFT or weapons test (due to comfort and leaking, especially when firing weapon from prone position, etc). I requested an extension to my MEC3 status and this was granted for a further 6 months post ceasing breastfeeding”

“I have also attempted to combine exercise and breastfeeding, especially running, but have not had a lot of success. There is not a lot of literature or guidance on ways this can be done successfully but guidance would be helpful for women in the ADF who are usually focussed on ensuring their AIRN (Army Individual Readiness Notice) status is maintained”

“I experienced a very mixed reaction at work from people - military questioned why there was a need and civilian were very supportive”

“I worked variable hours and was able to take my baby with me to two conferences in Brisbane. She attended (the on-base childcare centre at) Enoggera. The only issue was accommodation, as she could not stay in the Mess.

“I was able to take one 13 month old baby on a 2 week course and have him in my O's (Officers’) Mess room and still feed him before and after class. The PMC (President of the Mess Committee) was supportive of this arrangement”
These comments show the diversity of the ADF women’s breastfeeding experience when returning to work. Further they indicate that there is neither consistency nor policy guidance for Commanders.

8. Discussion

8.1. Assumptions and addressing possible confounding and bias

A number of assumptions were made about the participants in this survey. By virtue of this being a sample of working ADF mothers, with their wages set by rank levels, household income was not considered a relevant characteristic to study.

By virtue of being ADF members, all participants were required to pass quite stringent selection processes for employment including English language skills, literacy and physical ability. It was further assumed that most Officers would hold tertiary qualifications compared to the Enlisted population due to the face that entry for Officers is generally at the tertiary level.

Unlike other general population-based data regarding breastfeeding, all ADF women are entitled to full private obstetric care during their pregnancies and receive private hospital accommodation post-partum.
A number of other characteristics and personal history were not sought about the participants which may have affected the women’s breastfeeding experience, including:

- parity (i.e. if this is their first birth/pregnancy), or how many children they already have, or if this was a multiple birth (e.g. twins).
- previous breastfeeding experiences, within the ADF or otherwise.
- previous periods of ADF Maternity Leave taken.
- if returning to work part time, the number of days worked per week.
- Marital status or sole parenting.

Although not specifically researched for this study, there is some evidence that prior breastfeeding experience and parity does affect breastfeeding rates, in that first-time mothers (primiparae) are more likely to breastfeed (House of Representatives 2007). The breastfeeding initiation rates found in this study may have been increased if the number of primiparae was more than the multiparae, compared to the general population.

For women returning to work part time, the number of days could be anything less than the full time rate of 10 days per fortnight. We know that women employed part time are more likely to continue breastfeeding (Hawkins et al., 2007) but part time hours are not defined in these studies for comparison. Depending on the distribution of the respondents’ number part time days worked, there is a chance that the median duration of breastfeeding is skewed either way.
Being married (or in a relationship) is positively associated with a longer duration of breastfeeding (House of Representatives 2007). The divorce rate of ADF members was not investigated but as the ADF population is anecdotally at a great risk of marital breakdown, or separation due to Service reasons, then the results of this study are more likely to produce a shorter duration of breastfeeding. Some women did cite being separated from their spouse due to Service reasons being an issue for them (see para 7.5. Breastfeeding experience and cessation). Paternal support is associated with initiation of breastfeeding (see para 8.4.5. Partner’s wishes).

8.1.1 Selection Bias

The first objective of this study was to benchmark the rates of breastfeeding amongst a cohort of ADF women who returned to work after a period of Maternity leave during the 06/07 Financial Year; and compare to measured Australian population behaviours.

To address selection bias, all women who took Maternity Leave in the FY 06/07 were included. The sample of 400 women with contact details available was identified through PMKeyS, with the data requested by and available only to the Single Service Personnel Agencies. The data requested was system-limited, whereby the contact details may not have been correct for those women who are still within the Services, and even less likely to be correct for the women in the Reserve Forces. The limited time-frame for responses is likely to have excluded most Reserve personnel. Women who chose to resign from the
Service may have done so for breastfeeding reasons and were unlikely to be contactable. This may skew the results towards those committed to their military careers.

8.1.2. Response Bias

This study obtained a response rate of 38.0% and response bias is a potential issue. Completion of the questionnaire was voluntary, and the reasons for non-participation may be varied, including: refusal to participate, not getting around to it, or not receiving the questionnaire because they were deployed, away due to other Service commitments, on another period of Leave, or the email address obtained was incorrect or not monitored.

To reduce response bias, few strategies were available to maximise participation because the details of the sample were not available to send out reminders for nil response. Participants were, however, given the opportunity for anonymous response (if fear of reprisal existed), and were provided an opportunity to include comments or ‘vent’ where they may not previously have had the opportunity.

The proportion of respondents who had ever breastfed was 96.7%, higher than both the other reference populations (i.e. 91.8% and 91.1%) which could indicate a response bias in favour of those who had ever breastfed, or it could indicate a higher level of education (significantly linked to increased breastfeeding rates) amongst ADF personnel compared to the general population.
Suyes et al (Suyes et al., 2008) obtained a response rate of 10% in a US organisation-wide survey with female employees comprising 46%. They found the respondents to be 72% females with 69% of the respondents reported as having breastfed an infant. Similarly respondents in this survey, although all female, are likely to have had an interest in breastfeeding at work to have responded.

Breastfeeding interest may translate to a possible response bias where respondents are likely to be more passionate about breastfeeding, leading to overestimation of the indicators for initiation and duration.

8.1.3. Measurement Bias

Service culture and language, and the influence of the emotional aspects (e.g. guilt) linked to breastfeeding and returning to work, were identified as introducing possible measurement bias. To address the Service culture, subjective and ambiguous language in the tri-service environment was avoided. In addressing emotional aspects, participants were given the opportunity to provide comments, which also provided some qualitative data to capture the ‘lived experience’ of these women, rather than just relying on the quantitative data gathered in the survey. The use of leading questions and using subjective language was avoided to ensure answers in the questionnaire were not influenced.
This study compared several demographic characteristics to breastfeeding outcomes and while the analysis identifies potential trends related to rank, age, employment status and Service, it should be noted that all of these variables are interrelated. To identify the contribution of each of these factors multivariate analysis would be required which was beyond the scope of this project.

8.2. Objective 1 - Benchmarking of breastfeeding rates in the ADF

The mean age of the respondents was 32 years, and they had a mean of just over 9 years Service prior to commencement of this period of Maternity Leave. More than two thirds of the women returned to work full time an average of 8.4 months after the birth of their child. The population group with the most respondents was ‘Business and Administration’ with 20.4 %, all of whom were Enlisted women.

There were no participants ranked Colonel (equivalent) or higher which is likely to be a combination of the fact that very few women are at this Senior Officer level and either are unlikely to be having children because of their career or are likely to be at the upper end of (or past) child-bearing age.
8.2.1. Indicator 1 - percentage ever breastfed

Ninety-seven percent of respondents ‘ever breastfed’ their child, which is higher than the NHMRC recommendation of 90% breastfeeding initiation, which could be influenced by response bias.

The proportion of Officers who had prenatally planned to breastfeed (86.2%) was higher than Enlisted women (77.0%). The two most common reasons cited for wanting to breastfeed were ‘breast milk is better for baby’ (95.2%) and ‘bonding with baby’ (70.7%). Sixty-four percent considered breastfeeding was better for the mother, so saw that they were doing something beneficial for their own health.

8.2.2. Indicator 2 – prevalence of breastfeeding during the first 12 months.

The prevalence of breastfeeding at 3 months (84.4%) was much higher than the population studies, but dropped to 70.7% by 6 months, which was still greater than the population studies but did not meet the NHMRC recommendations for between 4-6 months (80%). Achieving close to recommendations is important for the Defence Forces and having a higher rate than the comparison populations may well be because of generous MATL policy.

By 12 months the breastfeeding rate was 25.2%, a level somewhat lower than the population benchmarks which is likely to be because the study population included only
women who returned to the workforce. Statistical comparisons were not possible as unit record data from the population studies were not available.

One hundred percent of mothers who had made a prenatal decision to breastfeed (at all) were still breastfeeding at 3 months, compared to 75.5% in the Queensland study, but by 6 months this had dropped to 71.8%.

Air Force had the highest proportion of breastfeeding to 12 months (32.9%), but even with the Navy’s Individual Readiness policy, Navy women were the least likely Service to still be breastfeeding (16.1%). The differing results between the three Services was not studied further, but the difference is expected to be related to the Service culture and the intersection with employment requirements and available job roles within each Service.

Army women were most likely to continue breastfeeding to 6 months (78.3%), which is noteworthy because Army had the highest response rate of 55.3%. This seems to be linked with the Army’s higher mean age of child upon return to work (7.6 months); the decrease to only 19% breastfeeding at 12 months could be because Army women were also most likely to return to work full time (71.7%).

Only a quarter of women were still breastfeeding at 12 months. Older women and those who had decided to breastfed were both more likely to continue breastfeeding until at least 12 months. Being in the Air Force or in the ‘Health Care and Science’ employment
group was also associated with breastfeeding to 12 months. The existence of the Navy IR policy’s reference to breastfeeding waivers still left Navy as the least likely Service for mothers to be breastfeeding at 12 months. This suggests that promotion of, and cultural support for, this policy is needed.

N.B. The Queensland study (Gabriel et al, 2005) stated that their results were analysed according to the methods specified in the Webb report (Webb et al., 2001) including survival analysis, data heaping and moving averages for population studies with participant children of various ages (birth to 4 years). Survival analysis was not applicable to this study as all the children were older than 12 months. The Queensland report, however, states (on p33) that no data smoothing techniques were used. It is unclear whether techniques of both data heaping and moving averages are included in this statement. If one or other of these techniques were used in the derivation of Indicator 2 (breastfeeding prevalence during the first 12 months) by Queensland Health, these ADF results will not be directly comparable.

8.2.3. Indicator 3 - Median duration of breastfeeding

The median duration of breastfeeding was 8 months. The longest median duration was 10 months for both women who returned to work part time, and those in the ‘Aviation’ employment group. Mothers who had prenatally intended on breastfeeding fed their child breast milk for 8.7 months (median duration). Mothers who had intended on
breastfeeding but switching to formula at some stage breast fed for 5.6 months (median duration).

The median duration of breastfeeding of 8 months is slightly less than the median age of child upon return to work of 8 and a half months. Three fifths of women did not breastfeed upon return to work, so it is not surprising to find that women chose to wean a couple of weeks before returning to work. This would also explain the 24% reduction in breastfeeding prevalence between 6-9 months.

8.3. Objective 2 - Identify the proportion of women who returned to work prior to 12 months after the birth of their baby and continued to breastfeed

Eighty-eight percent of the participants had returned to work before their child had reached 12 months of age, with 71.1% returning to work between 6-12 months of the birth. Only 42% of the respondents continued to breastfeed upon returning to work, with one third (35.5%) breastfeeding only after hours. Just over a quarter (27.4%) said they provided only expressed breast milk to their infant during the working day.

The capacity for women to provide breast milk to their children upon returning to work is dependent on a number of factors including the child’s age and dietary requirements, proximity to the child, workplace facilities and culture, the flexibility in the woman’s
employment and other competing interests. These issues are further discussed in 8.4 below.

8.4. Objective 3 - Identify enablers and barriers to extended breastfeeding

8.4.1. Officers versus Enlisted personnel

Military Officers enter at the ranks at the Junior Officer level, which is equivalent to the middle-management status, compared to Enlisted personnel who generally begin at the lowest level in the rank structure.

General recruitment selection processes for Officer Entry include a higher level of general cognitive ability than many Enlisted positions. Although not all Direct-Entry Officer positions require a Bachelor’s Degree, many of the entry methods into the military are based around tertiary qualifications, such as graduate-entry (e.g. Engineers, Nurses, Dentists); undergraduate sponsorship entry (i.e. students are sponsored to complete their degree then which includes a Return of Service Obligation); and through the Australian Defence Force Academy (3-4 years of Initial Officer Training combined with a Bachelor’s degree). Notwithstanding this, many Enlisted personnel also have tertiary qualifications and high levels of cognitive ability, however the recruitment selection process does not necessarily require these higher levels.

Australian population studies have found tertiary qualifications to be significantly linked to increased rates and duration of breastfeeding (Gabriel et al., 2005, Population Health
Division, 2008). Although not directly comparable, Officers were found to be more likely to intend and initiate breastfeeding, and to continue breastfeeding to 6 and 12 months.

Still it is unlikely that the increased likelihood of Officers holding tertiary qualifications is the only factor associated with increased breastfeeding rates. There are a number of other reasons why Officers could have higher rates than Enlisted women, and these would include:

1. Better placed (and able) to negotiate lactation breaks with their Chain of Command,
2. In more control of their work schedule to work around the need for lactation breaks, and
3. More likely to have access to private space (e.g. an office) in which to express (and possibly store) breast milk.

8.4.2. Occupational reasons – and the military workplace

“Occupational reasons” and perceived incompatibility of breastfeeding and returning to work full time are frequently cited barriers and among the most common causes for breastfeeding cessation internationally (Visness and Kennedy, 1997, Hawkins et al., 2007). In an Australian study, Cooklin and others also found that maternal employment in the first 6 months of life contributes to premature cessation of breastfeeding after controlling for known risk factors for breastfeeding cessation (Cooklin et al., 2008).
The ABS found that 8% of Australian women gave returning to work as a main reason for discontinuing breastfeeding, coming fourth after problems of producing adequate milk, feeling it was time to stop and other breastfeeding problems (Australian Bureau of Statistics, 2003), whereas 12.2% of the Queensland study sample said returning to work was a reason for cessation, which also came in (equal) fourth (Gabriel et al., 2005).

Key barriers to breastfeeding in a military workforce have been previously identified as including: early return to work, non-supportive supervisors, lack of adequate facilities, deployment or absence requirements and shift work (Bell and Ritchie, 2003a, Fitzhugh, 2005, Stevens and Janke, 2003).

This study found the most common reason (42.7%) for cessation of breastfeeding was participants citing ‘returning to work’. The prevalence of cessation was 11% higher (54%, n=7) in those respondents who had indicated they had wanted to breastfeed when returning to work, but did not.

The second most common reason for cessation was “no milk/not enough milk” at 28%.

Fifty-three percent of respondents believed that they experienced time restrictions or a job which was too busy to provide lactation break, which was almost identical to the percentage (54%) of women who had wanted to breastfeed upon return to work, but did not. Payne and James’ New Zealand study found that the women who continued to breastfeed after returning to work also felt pressured to fit their lactation breaks into
scheduled work breaks, and socialising with one’s colleagues was replaced with breaks in isolation (Payne and James, 2008). This theme also emerged in this study where many women commented about the pressure to fit their lactation breaks in around the other scheduled breaks, and some women commented on the sense of isolation rather than socialisation which would occur for most other employees.

Lactation breaks are, however, deemed a woman’s right under article 10 of the ILO’s 2000 Conference (International Labour Organization, 2000) and is now identified within various Australian Government industrial relations publications (Industrial Relations Victoria, 2007, Commonwealth of Australia, 2008b).

Thirty-six percent of the women identified that physical fitness requirements caused them some difficulties upon return to work (this proportion increased to 46% in women who did not breastfeed upon return to work but had wanted to). There is no policy guidance on how breastfeeding mothers can or should train to ensure they meet their minimum fitness testing requirements. The ABA’s Lactation Resource Centre has produced a ‘Hot Topic’ paper about exercise and breastfeeding (Mortensen, 2002), reviewing the literature regarding the safety of exercise during lactation. They report that the studies suggest that moderate exercise during lactation is not only safe for the infant but also beneficial for the mother. However they recognise that it is uncommon for women to exercise to maximal level, which may be the case for a military mother returning to full fitness following a pregnancy. Further they neither identify nor compare specific
components of the military physical fitness tests and how breastfeeding may impede the execution of these elements.

Twenty-seven percent of these women found that absence requirements or separation from their infant for Service reasons (including deployments, temporary duty, training and shift work) was a difficulty they faced. This is not surprising for a military population and supports the previous studies conducted in the US.

Mothers returning to work part time had a longer median duration of breastfeeding (10 months) than those who returned full time (7 months), which is supported by Hawkins who similarly also found that women employed part time are more likely to breastfeed for at least 4 months compared to mothers returning full time (Hawkins et al., 2007).

**8.4.3. Appropriate facilities**

Nearly two thirds of women (63%) believed there was a lack of appropriate facilities for feeding/expressing and storing breast milk in the military workplace (this proportion increased to 77% in women who did not breastfeed upon return to work but had wanted to). This was supported by 25% of women who provided written general comments about this topic. Eight women described having to express breast milk in the toilets. This is despite the Employees Agreement for the civilian workforce (DeCA) stating “Defence’s commitment of nursing mothers’ rooms for breastfeeding” (Department of Defence, 2006b), which suggests either the participants didn’t work alongside (or near)
civilian employees, or that this principle within the DeCA has not been realised for the Defence population.

8.4.4. Milk supply and lactation breaks

Milk supply was identified as a problem, with 28.0% of the respondents saying one of the reasons they stopped breastfeeding was because they had no milk or not enough milk; the Queensland survey found a similar proportion (29.6%).

Many women commented that they felt stressed or pressured by time restrictions and anxious about being interrupted whilst expressing. The lack of appropriate lactation facilities available, and the appropriate time given to express is likely to be linked to the number of participants who cited poor milk supply as reason to cease breastfeeding.

Breastfeeding or lactation breaks are now part of the industrial relations landscape, and provision of such a space is already supposedly part of the civilian Defence employees certified agreement. There is also a growing community expectation, being promoted by the ABA Breastfeeding Friendly Workplace Initiative, that appropriate facilities should be provided as a matter of course. Wallace’s study amongst UK women found that 87.7% of their respondents believed that an employer should provide facilities for expressing and storing breast milk and information on how breastfeeding can be managed after returning to work (Wallace et al., 2008).
The issue of low milk supply was featured in an ABA journal article (Duursma and Nigro, 2007) which highlighted that the mother’s perception of low milk supply is the most cited reason for premature weaning. The article explains that expressing is not as effective as a baby at milking the breast, and is time consuming. They also suggest that if expressing is needed long term, that a plan be developed to prevent a predictable drop in supply.

The return to work plan, suggested by Duursma and Nigro, would need to include provision of a private and clean space, and a decent amount of time (possibly more frequently than a baby would normally nurse) to ensure that women are able to achieve a let-down reflex and express a decent volume of milk. The let-down reflex can be encouraged by conscious relaxation techniques, warmth, deep breathing, positive thoughts, breast massage and possibly photos of the baby. It is also important to ensure that any sanctioned lactation breaks do not completely remove a member’s ability to socialise and or seek their own sustenance in other work breaks.

8.4.5. Partner’s wishes

Sixteen percent of women (who had ‘ever breastfed’) cited a reason for them choosing to breastfeed was because their partner/spouse wanted them to. Studies by Scott et al found that women were more likely to initiate breastfeeding if they perceived paternal support (9 times more likely) (Scott et al., 2001) and if their partner expressed a definite preference for breastfeeding (10 times more likely) (Scott et al., 1997). However, just
because only 16% of women (who had ‘ever breastfed’) cited their partner’s wishes/support as a main reason for them in choosing to breastfeed, does not mean the partner’s support was not important in them successfully continuing to breastfeed

8.4.6. Maternal age

Maternal age indicators identified in the Queensland study (Gabriel et al., 2005) were mirrored in this sample in that older mothers (>30 years) have higher rates of breastfeeding across most Indicators. Younger mothers (<30 years) were found to have the shortest median duration of breastfeeding (6 months); were the least likely to still be breastfeeding at 6 and 12 months; were less likely to initiate breastfeeding and more likely to choose to formula feed.

8.5. Objective 4 - Identify the current policy environment and determine issues that an ADF breast feeding policy could address.

The current Maternity Leave provisions (Department of Defence, 2006a) are generous by community standards and this is likely to have assisted the ADF to have a higher breastfeeding prevalence at 6 months (70.7%) than the comparison Queensland population (55.4%). However there are a number of issues for breastfeeding women returning to work at any stage which need to be addressed by policy.
Results indicate that there is a lack of consistency and policy guidance for Commanders with regard to breastfeeding. Noting that there may be various cultural differences between each of the three Services, the qualitative statements provided by over half of the respondents provide a picture which is far from a standard or consistent application of existing Individual Readiness, medical and fitness policies with regard to breastfeeding and lactation breaks. Even with the existence of the Navy IR policy’s reference to breastfeeding, the cultural reality is quite different.

Fifteen percent of respondents who wanted to breastfeed when they returned to work did not do so. Their reasons may provide Defence with some key areas on which to focus first. Of this particular group, just over half said returning to work was the main reason they stopped: a lack of appropriate facilities (77%) and physical fitness requirements (46%) were more frequently cited barriers for this group than was identified by the overall group (63% and 36% respectively). Their concerns regarding time restrictions were only 1% higher than the whole group (54%-53%)

With the median duration of MATL being 8 months in this study group, there would appear to be only limited potential for Defence intervention in order to meet NHMRC target of 80% for breastfeeding at 6 months (NHMRC, 2003). However almost 2 in 10 women surveyed (n=27) returned to work before their child was 6 month old which provides Defence an opportunity to assist these women.
In order to meet the WHO recommendations of breastfeeding until at least 12 months, recommended as being of value by the NHMRC, there are a number of areas in which Defence could improve their support of their lactating members. With almost 9 in 10 women surveyed returning to work before their children are 12 months old, and only 42% of women surveyed continuing to breastfeed upon return to work, a number of changes are needed if Defence wishes to assist mothers to meet the WHO guidelines.

The review of the current policy environment was conducted earlier in this document and a number of issues have been identified which could be included in policies which would support breastfeeding by women in the ADF.

9. Recommendations

For women returning to work in any capacity during their 12 months Maternity Leave entitlement, it is recommended that the ADF provide workplace support to continue breastfeeding until the child turns at least 12 months of age. This would allow the Department of Defence to offer women the opportunity to achieve NHMRC and WHO breastfeeding recommendations.

It is recommended that a formal Defence Instruction, Health Directive or policy be drafted to specifically address breastfeeding and lactation breaks in the ADF context. Such a policy would ease the transition for women returning to work from Maternity
Leave. It would also optimise recruitment and retention strategies, decrease the number of carers’ leave days taken by new mothers, and demonstrate a commitment to OH&S and equity and diversity principles in the workplace.

The Defence policy should identify and address the following:

1. Commitment to the minimum goal of meeting NHMRC breastfeeding recommendations (NHMRC, 2003) and to the ideal goal of meeting WHO guidelines by acknowledging the continuing value to baby and mother of breastfeeding to at least 12 months.

2. Provision of appropriate facilities for breastfeeding or the expression and storage of breast milk.

3. Lactation breaks to be paid breaks in accordance with Article 10 of the 2000 ILO Conference (International Labour Organization, 2000). These breaks should be on top of (or at least not exclusive of) an entitlement to some breaks for the woman’s own sustenance and perhaps socialisation.

4. A risk analysis of occupational hygiene issues for exposure to toxins, reviewing Croft’s paper on workplace toxins in the British Army (Croft, 1995), including the mothers’ health risks of mastitis through breast engorgement and/or forced weaning.

5. Reference to the Employment of Women in the ADF policies and the application of Defence exemptions under the Sex Discrimination Act 1984 on the right of a military woman to breastfeed.

6. Reference to Individual Readiness policies and their application.
7. Reference to the MEC policies and their application, including immunisation advice.

8. Reference to the Physical Fitness Testing policies and their application.

9. The policy will need to be widely promoted for cultural understanding and acceptance.

A further review of the following policies should be undertaken to ensure consistency across the ADF with regard to breastfeeding guidance or policy:

1. Medical Employment Classification policy, by identifying breastfeeding as a medical condition for MEC3 when necessary.

2. Individual Readiness policies, ensuring consistency of ‘component waivers’ and breastfeeding. Only the Navy Individual Readiness policy actually comments on breastfeeding.

3. Pregnancy Health Directive policy, to reference or include breastfeeding information.

4. Fitness Testing policies, ensuring consistency across the three Services regarding time limits for return from Maternity Leave and acknowledging difficulties which may be faced by breastfeeding mothers in completing some elements of the tests.

5. Defence Safety Manual (SAFETYMAN) for application to military and civilian (female) employees within the Department of Defence:

   a. Meeting the new OH&S Code of Practice with regard to lead workers
   b. Meeting the new OH&S Code of Practice with regard to First Aid Room availability for nursing mothers
c. Regarding occupational risks of mastitis for employees through breast engorgement and/or forced weaning.

d. Regarding occupational hygiene exposures to toxins through breast milk (this may require cross-referencing to any extant health policy on occupational hygiene assessments).

6. ADF Pay and Conditions Manual (PACMAN) to recognise a mother’s ‘right’ to lactation breaks

7. There is a place to add mention of Defence’s support for breastfeeding or provision of expressed breast milk within the Defence Childcare Program where the contracted Childcare service provider is required to support mothers in breastfeeding, and not just behind closed doors.

It is further recommended that the Department of Defence seek to become an ABA Accredited Breastfeeding Friendly Workplace, and to conduct follow up studies to review the implementation of any new policies or policy amendments and ascertain the cultural acceptance of these recommended changes.
10. References:

AUSTRALIAN BREASTFEEDING ASSOCIATION (2008) Submission by the Australian Breastfeeding Association to the Maternity Services Review.


DEPARTMENT OF DEFENCE (1994) Defence Instruction (General) PERS 32-1 Employment of Women in the ADF. 2nd ed.


DEPARTMENT OF DEFENCE (2005a) Defence Instructions (General) PERS 36-2 ADF policy on Individual Readiness. 3rd ed.
DEPARTMENT OF DEFENCE (2005b) Defence Instructions (Navy) PERS 31-38 Royal Australian Navy policy on physical fitness and instructions for the conduct of the RAN Physical Fitness Test. 5th ed.


Appendix 1. ADHREC Researcher’s Agreement.

RESEARCHER’S AGREEMENT

PROTOCOL 489/07 BREASTFEEDING RATES AND BEHAVIOURS AMONG WOMEN RETURNING TO WORK FOLLOWING MATERNITY LEAVE FROM THE AUSTRALIAN DEFENCE FORCE.

The Australian Defence Human Research Ethics Committee (ADHREC) requires your agreement to the following conditions in order to secure its endorsement of your project:

Please Initial

1. You must quote your ADHREC number and title of your protocol in all correspondence.
   “PROTOCOL 489/07 BREASTFEEDING RATES AND BEHAVIOURS AMONG WOMEN RETURNING TO WORK FOLLOWING MATERNITY LEAVE FROM THE AUSTRALIAN DEFENCE FORCE.”

2. If you do not commence data collection within twelve months of this approval, the protocol will need to be resubmitted.

3. The approval of your protocol is for a period of three years. If your research is to continue beyond the three-year approval time, an extension is to be sought in writing.

4. You are required to submit six-monthly progress reports, the first of which is due 17 March 2009.

5. The Committee requires confirmation that your project has begun, or notification that it has been delayed or abandoned.

6. The Committee requires that a copy of the ADHREC Guidelines for Volunteers be given to every participant when they are recruited for the protocol.

7. Committee approval must be sought before any modifications to the protocol are instituted.
8 The Committee **must** be informed of any deviations from the approved protocol and immediately informed of any protocol deviations with real or potential ethical implications.

9 The Committee **must** be informed immediately of unforeseen event that might affect the continued ethical acceptability of this project.

10 The Committee **must** be informed immediately of any untoward effects with respect to the medical, personal or administrative management of participants, or which may have ethical and / or publicity implications.

11 ADHREC gives it ethical approval subject to your explicit agreement to an *intention to publish*. Publication should be in a refereed journal or other source open to public audit. It would be appropriate to include in your submission for publication the phrase “Ethical clearance for this project was provided by the Australian Defence Human Research Ethics Committee”. Should a security classification make publish in an open source inappropriate, ADHREC is to be notified in writing.

12 ADHREC requires a comprehensive **Final Report** which details the conduct of the project and its findings. This report is to be submitted as soon as possible after the project has finished.

13 The ADHREC Secretariat requires that you provide notification of any change in your contact details. Point of Contact is the Executive Secretary at ADHREC@defence.gov.au.

**For Clinical Trials Only**

14 ADHREC requires that the nominal roll of participants, for the purpose of future tracing, is to be sent to the ADHREC Executive at the conclusion of the trial. This is to enable ADHREC to be able to access this roll should the need arise.

15 The Committee must be informed of any ‘adverse events’ and immediately informed of any ‘serious adverse events’ (SAE) which are considered by the Principal Investigator (PI) to be possibly drug related **within 72 hours of their occurrence**.

16 You must retain records of your volunteers’ details, any who withdraw, the reasons for that withdrawal (if known) and provide such on request.
I agree to abide by the conditions above:

Signature …..(original signed and boxes above initialled)...........

Surname…..STEWART...........................................

First Name…..KELLEY...........................................

Position/Rank …..SQNLDR (Reserve Staff Group)............................... 

Contact No Work home:……03 57821498.......Work Mobile…0412 466459........

Email.........kelley.stewart@westnet.com.au..................

Date..........18 Sep 08........................................

Executive Secretary
Australian Defence Human Research Ethics Committee
CP2-7-124
Department of Defence
CANBERRRA ACT 2600

Ph: 02 62663807
Fax: 02 62663933
E-mail: ADHREC@defence.gov.au
Appendix 2. University of Queensland Ethics Approval

School Of Population Health

Memorandum

To      Kelly Stewart
From    Peter Hill
Date    19 May 2008
Re      Ethics Approval KS 190508
CC      Jon Adams

Thank you for your application for ethical clearance for your MPH research project ‘Breastfeeding rates and behaviours among women returning to work following Maternity Leave from the Australian Defence Force.’

The Ethics Committee of the School of Population Health has reviewed the materials and ethics approval for your project has been granted.

Please note that the current contact phone number for the ethics officer (myself) is 07 33655432.

Peter Hill
Chair
School of Population Health Research Ethics Committee
Appendix 3. ADF Badges of rank

**Appendix 4.** Table of Employment Groups by Return to Work type

**Table 16. Cross tabulation of Employment Groups with Return to Work type**

<table>
<thead>
<tr>
<th>Employment Group</th>
<th>RTW type</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full Time</td>
<td>Part Time</td>
</tr>
<tr>
<td>Aviation</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within Empl Gp</td>
<td>60.0%</td>
<td>40.0%</td>
</tr>
<tr>
<td>% within RTW type</td>
<td>6.0%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Logistics &amp; Support</td>
<td>22</td>
<td>5</td>
</tr>
<tr>
<td>Count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within Empl Gp</td>
<td>81.5%</td>
<td>18.5%</td>
</tr>
<tr>
<td>% within RTW type</td>
<td>22.0%</td>
<td>11.4%</td>
</tr>
<tr>
<td>Health Care &amp; Science</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>Count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within Empl Gp</td>
<td>53.8%</td>
<td>38.5%</td>
</tr>
<tr>
<td>% within RTW type</td>
<td>14.0%</td>
<td>22.7%</td>
</tr>
<tr>
<td>Business &amp; Admin</td>
<td>22</td>
<td>8</td>
</tr>
<tr>
<td>Count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within Empl Gp</td>
<td>71.0%</td>
<td>25.8%</td>
</tr>
<tr>
<td>% within RTW type</td>
<td>22.0%</td>
<td>18.2%</td>
</tr>
<tr>
<td>Engineering</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>Count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within Empl Gp</td>
<td>60.0%</td>
<td>26.7%</td>
</tr>
<tr>
<td>% within RTW type</td>
<td>9.0%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Comms &amp; Education</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within Emp Gp</td>
<td>83.3%</td>
<td>16.7%</td>
</tr>
<tr>
<td>% within RTW type</td>
<td>10.0%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Combat &amp; Security</td>
<td>17</td>
<td>9</td>
</tr>
<tr>
<td>Count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within Empl Gp</td>
<td>63.0%</td>
<td>33.3%</td>
</tr>
<tr>
<td>% within RTW type</td>
<td>17.0%</td>
<td>20.5%</td>
</tr>
<tr>
<td>other</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within Empl Gp</td>
<td>.0%</td>
<td>66.7%</td>
</tr>
<tr>
<td>% within RTW type</td>
<td>.0%</td>
<td>4.5%</td>
</tr>
</tbody>
</table>
Appendix 5. ADF Breast Feeding Questionnaire

Introduction:

You have been selected to participate in this study as you are identified on PMKeyS as having taken paid Maternity Leave (MATL) during the Financial Year 2006/2007 (FY 06/07).

Instructions

Multiple choice questions
Please mark the box corresponding to your preferred answer with an X

For example
1. What Service did you return to following MATL?

   a. Navy       X
   b. Army
   c. Air Force

Short answer questions please type or write your response in the corresponding box

For example
2. What was your employment group/mustering/category on returning from MATL?

   Clerk

For example
3. Date of Birth?

   1   5   J   U   N   I   9   6   5
   D   D   M   M   M   Y   Y   Y   Y
Questions

Please note, the following questions relate to the period of MATL taken by you in FY 06/07 and the child/ren whose birth led to that period of MATL.

MATERNITY LEAVE HISTORY

1. What is the date today?

   
   
   
   D D M M M Y Y Y

2. What is your DOB?

   
   
   
   D D M M M Y Y Y

3. What is the date of birth of the baby/babies whose birth led to your MATL in FY06/07?

   
   
   
   D D M M M Y Y Y

4. When did you start MATL in FY06/07?

   
   
   
   D D M M M Y Y Y

5. When did you return to work following you MATL in FY06/07?

   
   
   
   D D M M M Y Y Y
6. What Service did you return to following MATL?

   a. Navy
   b. Army
   c. Air Force

7. What was your rank on returning from MATL?

   a. SMN/PTE/ACW
   b. AB/LCPL/LACW
   c. LS/CPL
   d. PO/SGT/SSGT
   e. CPO/WO1/FSGT
   f. WO/WO2/WOFF
   g. MIDN/OCDT/OFFCDT
   h. ASLT/2LT/PLTOFF
   i. SBLT/LT/FLGOFF
   j. LEUT/CAPT/FLTLT
   k. LCDR/MAJ/SQNLDR
   l. CDR/LTCOL/WGCDR
   m. CAPT/COL/GPCAPT (or higher)

8. What was your employment group/mustering/category on returning from MATL?

9. How many of years military service did you have at the commencement of this period of MATL?

   
<table>
<thead>
<tr>
<th>Years</th>
<th>Months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>
10. How old was your child when you returned to work after your period of paid or unpaid MATL? (please answer only one)

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<th></th>
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</thead>
<tbody>
<tr>
<td>a.</td>
<td>in days, or</td>
</tr>
<tr>
<td>b.</td>
<td>in weeks, or</td>
</tr>
<tr>
<td>c.</td>
<td>in months, or</td>
</tr>
<tr>
<td>d.</td>
<td>in years</td>
</tr>
<tr>
<td>e.</td>
<td>don’t know</td>
</tr>
</tbody>
</table>

11. When you initially returned to work, were you working..?  

<p>| | |</p>
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<tbody>
<tr>
<td>a.</td>
<td>full time</td>
</tr>
<tr>
<td>b.</td>
<td>part time (PTLWOP)</td>
</tr>
<tr>
<td>c.</td>
<td>other (please specify here)</td>
</tr>
</tbody>
</table>

**BREAST FEEDING IN GENERAL**

12. Had you decided whether you wanted to breast feed or formula feed your child before he/she was born?

<p>| | |</p>
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<tbody>
<tr>
<td>a.</td>
<td>Yes</td>
</tr>
<tr>
<td>b.</td>
<td>No</td>
</tr>
<tr>
<td>c.</td>
<td>Don’t know</td>
</tr>
</tbody>
</table>
13. If yes, what was your decision?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>a.</td>
<td>breast feed</td>
</tr>
<tr>
<td>b.</td>
<td>formula feed</td>
</tr>
<tr>
<td>c.</td>
<td>start breast feeding but change to formula feeding at some stage</td>
</tr>
<tr>
<td>d.</td>
<td>don’t know</td>
</tr>
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</table>

14. Has your child ever been fed any breastmilk or ever been put to the breast?

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<tbody>
<tr>
<td>a.</td>
<td>Yes (skip to Question 16)</td>
</tr>
<tr>
<td>b.</td>
<td>No (go to Question 15)</td>
</tr>
<tr>
<td>c.</td>
<td>Don’t know</td>
</tr>
</tbody>
</table>

15. If no, please comment on the main reasons why your child was formula fed (please select all that apply)

<p>| | |</p>
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>too busy to breast feed</td>
</tr>
<tr>
<td>b.</td>
<td>formula is just as good for baby</td>
</tr>
<tr>
<td>c.</td>
<td>bottle feeding easier</td>
</tr>
<tr>
<td>d.</td>
<td>don’t like breast feeding</td>
</tr>
<tr>
<td>e.</td>
<td>child’s father prefers bottle feeding</td>
</tr>
<tr>
<td>f.</td>
<td>friends/relatives advised bottle feeding</td>
</tr>
<tr>
<td>g.</td>
<td>needed to return to work</td>
</tr>
<tr>
<td>h.</td>
<td>previous problems with breast feeding</td>
</tr>
<tr>
<td>i.</td>
<td>medical advice</td>
</tr>
<tr>
<td>j.</td>
<td>Don’t know</td>
</tr>
<tr>
<td>k.</td>
<td>other (please specify here)</td>
</tr>
</tbody>
</table>

(please skip to Question 24)
16. If yes, please comment on the main reasons why you chose to feed your child breastmilk (please select all that apply)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>a.</td>
<td>breastmilk better for baby</td>
</tr>
<tr>
<td>b.</td>
<td>breast feeding better for mum</td>
</tr>
<tr>
<td>c.</td>
<td>breast feeding cheaper</td>
</tr>
<tr>
<td>d.</td>
<td>more convenient</td>
</tr>
<tr>
<td>e.</td>
<td>it is the 'right'/normal/natural thing to do</td>
</tr>
<tr>
<td>f.</td>
<td>child’s father wanted you to breast feed</td>
</tr>
<tr>
<td>g.</td>
<td>family and friends advised breast feeding</td>
</tr>
<tr>
<td>h.</td>
<td>hospital staff pressured me into it</td>
</tr>
<tr>
<td>i.</td>
<td>bonding with baby</td>
</tr>
<tr>
<td>j.</td>
<td>don’t know</td>
</tr>
<tr>
<td>k.</td>
<td>other (please specify here)</td>
</tr>
</tbody>
</table>

17. For how long did your baby have breastmilk only? (please answer only one)

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>a.</td>
<td>Never had breast milk only</td>
</tr>
<tr>
<td>b.</td>
<td>number of days, or</td>
</tr>
<tr>
<td>c.</td>
<td>number of weeks, or</td>
</tr>
<tr>
<td>d.</td>
<td>number of months, or</td>
</tr>
<tr>
<td>e.</td>
<td>don’t know</td>
</tr>
</tbody>
</table>

18. Is your child still being fed any breastmilk?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>a.</td>
<td>Yes (skip to Question 21)</td>
</tr>
<tr>
<td>b.</td>
<td>No</td>
</tr>
</tbody>
</table>
19. If no, how old was he/she when he/she was last fed breast milk? (please answer only one)

<p>| | |</p>
<table>
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<tbody>
<tr>
<td>a.</td>
<td>in days, or</td>
</tr>
<tr>
<td>b.</td>
<td>in weeks, or</td>
</tr>
<tr>
<td>c.</td>
<td>in months, or</td>
</tr>
<tr>
<td>d.</td>
<td>in years</td>
</tr>
<tr>
<td>e.</td>
<td>don’t know</td>
</tr>
</tbody>
</table>

20. Please comment on the main reasons why you stopped feeding your child breastmilk? (please select all that apply)

<p>| | |</p>
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>returned to work</td>
</tr>
<tr>
<td>b.</td>
<td>child old enough to stop</td>
</tr>
<tr>
<td>c.</td>
<td>child self-weaned – prefers bottle/cup</td>
</tr>
<tr>
<td>d.</td>
<td>child teething</td>
</tr>
<tr>
<td>e.</td>
<td>sore/cracked nipples – painful breasts</td>
</tr>
<tr>
<td>f.</td>
<td>baby health reason (please specify here)</td>
</tr>
<tr>
<td>g.</td>
<td>mother heath reason, including mastitis (please specify here)</td>
</tr>
<tr>
<td>h.</td>
<td>no milk or not enough milk</td>
</tr>
<tr>
<td>i.</td>
<td>don’t know</td>
</tr>
<tr>
<td>j.</td>
<td>other (please specify here)</td>
</tr>
</tbody>
</table>
**Breastfeeding After Return to Work**

21. Did you continue to feed your child breastmilk after you returned to work?

| a. Yes | b. No (skip to Question 23) |

22. If yes, when you initially returned to work, how did your child receive breastmilk during work hours? (please select one)

| a. directly from me | b. a bottle of expressed breastmilk |
| c. both directly from me, and a bottle of expressed milk | d. I only breastfed after work hours |

(please skip to Question 24)

23. If no, did you want to continue offering breast milk to your child when you returned to work?

| a. Yes | b. No | c. Don’t know |
24. **If you had chosen or if you chose to provide breast milk when you returned to work, what difficulties would you have faced/did you face?** (please select all that apply)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>none</td>
</tr>
<tr>
<td>b.</td>
<td>an unsupportive supervisor/chain of command</td>
</tr>
<tr>
<td>c.</td>
<td>an unsupportive workplace culture/peers</td>
</tr>
<tr>
<td>d.</td>
<td>an unsupportive parter/spouse</td>
</tr>
<tr>
<td>e.</td>
<td>lack of appropriate facilities for feeding/expressing and storing of breastmilk</td>
</tr>
<tr>
<td>f.</td>
<td>physical fitness requirements (eg. running)</td>
</tr>
<tr>
<td>g.</td>
<td>time restrictions/job too busy</td>
</tr>
<tr>
<td>h.</td>
<td>Absence requirements or separation from infant due to active service (eg. deployment/training courses/shift work)</td>
</tr>
<tr>
<td>i.</td>
<td>mother’s health reason (please specify here)</td>
</tr>
<tr>
<td>j.</td>
<td>baby’s health reason (please specify here)</td>
</tr>
<tr>
<td>k.</td>
<td>Other (please specify here)</td>
</tr>
</tbody>
</table>
Comments

25. Are there any other comments you would like to make?
   a. No thanks
   b. Yes (please describe here)

(Please attach further sheets if necessary).

If you would be happy in being further interviewed about your responses, please provide your contact details below. Further interviewing comments will remain anonymous.

Name: ____________________________

Telephone: ____________________________

Email: ____________________________

Thank you for participating in this study

PLEASE RETURN BY Fri 8 Oct 08 VIA EMAIL to kelley.stewart@uq.edu.au

Or if you would prefer to mail your response, please send to:

**ADF Breastfeeding Study**
Centre for Military and Veterans Health
Mayne Medical School
University of Queensland
Herston Road,
Herston, QLD, 4006
Appendix 6. Information for participants

INFORMATION AND CONSENT

ADHREC Protocol 489/07 - Breastfeeding rates and behaviours among women returning to work following Maternity Leave from the Australian Defence Force

Brief description of the Study. This study is aiming to benchmark breastfeeding rates and behaviours amongst ADF women returning from Maternity Leave. It is anticipated that the study will assist in identifying enablers and barriers to extended breastfeeding in the ADF and identify issues that an ADF breast feeding policy might address.

The study is being done as a component of the Master of Public Health (Defence) program through the Centre for Military and Veterans Health.

Your part in the Study.

• Participation in the study is entirely voluntary; there is no obligation to take part in the study, if you choose not to participate there will be no detriment to your career or future health care;
• You may withdraw at any time with no detriment to your career or to your future health care;
• You are requested to complete the attached consent form and questionnaire and return it to the Chief Investigator, Squadron Leader Kelley Stewart.
• Electronic responses are preferred (simply open the file, complete the name on the consent form and the questionnaire and email to kelley.stewart@uq.edu.au, or you may choose to print off the consent and questionnaire, complete and send a paper copy through service mail to:

ADF Breastfeeding Study
Centre for Military and Veterans Health
University of Queensland
Mayne Medical School Building
Herston Road
Herston, QLD, 4006

Should you have any questions or concerns they should be raised in the first instance by contacting Kelley via email or mobile phone: 0412 466459.

Risks of participation. It is recognised that some of the issues and questions raised in this questionnaire may produce stress to you as the responder. This may especially be the case if your particular pregnancy, birth or breastfeeding experience was a difficult one. In safe guarding your privacy it is not possible for the researchers to be aware of these issues in advance. Should you experience stress and need some assistance in dealing with issues raised in the questionnaire, you should in the first instance obtain support through your local health facility, the obstetrician who supervised your pregnancy, or a trusted midwife or Maternal Child Health Nurse (if applicable).. The Defence Help Line can also assist. Alternative support services are also outlined at the end of this information sheet.
On duty. Australian Defence Force members will be considered ‘on duty’ while completing the questionnaire.

Statement of Privacy. Under Privacy legislation the researchers are not entitled to have direct contact details unless you expressly consent. Consequently, the Directorate of Workforce Information (DWI) has contacted you to seek your consent to take part in the study. **Your responses however should be directed back to the researchers in order to ensure they remain anonymous.**

Only the Investigators and **not** The Department of Defence will have access to your individual responses. The Department of Defence will have access to the report of the findings of the study, but this report will not identify you in any way.

Your responses will be de-identified and anonymous. You may choose to identify yourself on the form in the spaces provided, however this is purely voluntary, and will allow the Investigators to clarify information and provide you feedback on the study progress and outcomes. Should you provide any personal data it will be used only for the purpose of this study and no other, without your express permission. Electronic (email) responses will be printed and de-identified on receipt (that is not associated with your name or email contact details).

Ethical concerns. Should you have any complaints or concerns about the manner in which this project is conducted, please do not hesitate to contact the Chief Investigator, Kelley Stewart, in person, or the Deputy Director of Research Centre for Military and Veterans Health, Lieutenant Colonel Peter Nasveld on p.nasveld@uq.edu.au or mobile: 0401696294.

Alternatively, you may prefer to contact the Australian Defence Human Research Ethics Committee at the following address:

- Executive Secretary
- Australian Defence Human Research Ethics Committee
- CP2–7–66
- Department of Defence
- CANBERRA ACT 2600
- Telephone: (02) 6266 3837
- Facsimile: (02) 6266 4982
- Email: ADHREC@defence.gov.au

This study also adheres to the Guidelines of the ethical review process of The University of Queensland. Whilst you are free to discuss your participation in this study with the investigator if you would like to speak to an officer of the University not involved in the study, you may contact the Ethics Officer on 07 3365 3924.
Appendix 7. Participant Consent form

ADHREC Protocol 489/07 - Breastfeeding rates and behaviours among women returning to work following Maternity Leave from the Australian Defence Force

CONSENT

I,............................................................................................................. give my consent to participate in the project mentioned above on the following basis:

I understand from the information provided the aims of this research project, how it will be conducted and my role in it.

I am cooperating in this project on condition that:
• the information I provide will be kept confidential
• the information will be used only for this project
• the research results will be made available to me at my request and any published reports of this study will preserve my anonymity.

I understand that:
• there is no obligation to take part in this study,
• if I choose not to participate there will be no detriment to my career or future health care
• I am free to withdraw at any time with no detriment to my career or future health care

I have read a copy of the information/consent sheet,

I have also been given a copy of ADHREC’s Guidelines for Volunteers.

____________________________________
Signature of Volunteer

____________________________________
Name in Full

____________________________________
Date:

NOTE: If submitted electronically, typing your name on this form will signify your consent.