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Quality of reproductive health services
at primary health centres
in an urban area of Iran
Emphasis on family planning

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ABSTRACT

**Background:** Detailed knowledge of the present situation is needed in order to design and implement quality improvement programmes to achieve the national goal of ‘planned and safe fertility for all’ in Iran. An understanding of the perspectives and views of clients and providers are also much needed. When this study was initiated there was a lack of studies on the quality of family planning and other primary reproductive health services in the country.

**Aim:** To describe and explore the quality of public primary reproductive health care services, especially family planning, in an urban area of Iran, in order to identify areas and measures for improvement.

**Methods:** Structured observations of 469 client-provider interactions and some clinical procedures at 34 health facilities, and exit interviews with 416 of the observed clients. Quality of services was assessed using pre-defined indicators (study I). In the qualitative studies (II, III), content analysis was performed on material from nine focus group discussions (FGDs) with 53 married women of reproductive age (study II) and four FGDs with 20 midwives or other family health providers at the facilities (study III). In study IV, an educational programme on family planning services was applied at a regular monthly meeting with half of the in-charges after random selection of the total of 74 family health units (intervention group). The other half constituted the control group. The educated in-charges were requested to carry out a similar kind of programme with all peers at their health facilities within one month. All in-charges received one self-administered questionnaire one month (follow-up I) and 27 months (follow-up II) after the education. Such tests were also performed by the peers at their workplace within one month after the in-charges’ tests.

**Findings:** The providers treated the clients respectfully in more than 80% of the consultations and discussed a return visit in 89%. Privacy was not assured in one-third of the cases. Over two-thirds of the clients were not encouraged to ask questions or raise concerns, and 54% were not satisfied with the amount of information given. The use of educational audio-visual and printed materials was very infrequent. Most new clients received their preferred contraceptive method, but were informed about neither other available methods, nor common side effects and warning symptoms related to the chosen method (study I).

The women in the FGDs appreciated the public services for being generally accessible, but important shortcomings were identified. A need for improved privacy, a wider choice of contraceptive methods and clear information about side effects were stressed. Marital counselling was raised as a major unmet need. The women’s sense of having the right to make autonomous reproductive health choices and to be treated with dignity and respect emerged as the main theme. A second, cross-cutting theme was their wish to get their husbands more strongly involved in family planning and sexual counselling (study II).
The most satisfying for the providers was working with clients. A dominant theme in all FGDs was the providers’ frustration about a number of factors, most of which were beyond their control. There were five categories of system and organisational barriers: multiplicity of tasks and incompatibility with the providers’ own basic training; suboptimal supervision and management; too little time for clients; lack of privacy and appropriate materials for education and counselling; and inadequate opportunities for continuing education (study III). The health centres and health posts located in low-income areas on average had the highest workload for family planning and the highest turnover of staff.

Knowledge (percent of maximal possible score) was significantly higher in the intervention group than in the control group, both at follow-up I (63%) and at follow-up II (57%); with a difference of 16 and 5 percentage units, respectively. Two of the nine reported items were performed at a significantly higher level among the non in-charges in the intervention group at follow-up II compared with the control group.

**Conclusions:** There is a gap between the national policy and the reality in the public primary health facilities with regard to the quality of reproductive health services. Multifaceted interventions are recommended to improve performance of the providers, and quality and responsiveness of the services to ensure women’s reproductive health needs and rights. Special attention should be paid to interactive communication, information given to clients, privacy and confidentiality. Interventions should also address needs-based in-service education, including on-site peer education, supportive supervision and management, provision of educational materials, simplifying record management, and appointing more staff in socio-economically deprived areas. Research is needed to identify the best ways to integrate the services without overloading and deskilling health workers and impairing their ability to deliver high quality services, as well as to find the most effective way of meeting the providers’ continuing educational needs.

**Keywords:** Family planning, Quality of health care, Personnel management, Public health administration, Attitudes of health personnel, Reproductive health, Client Perspectives, Iran
LIST OF PUBLICATIONS


II. Mohammad-Alizadeh S, Wahlstrom R, Vahidi R, Johansson A. Women’s perceptions of quality of family planning services in urban Iran. Submitted


IV. Mohammad-Alizadeh S, Vahidi R, Marions L, Wahlstrom R. Effect of a peer educational intervention on provider knowledge and reported performance in family planning services: a cluster randomized trial. Submitted
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<tr>
<td>AIDS</td>
<td>Acquired immunodeficiency syndrome</td>
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<tr>
<td>COC</td>
<td>Combined oral contraceptive</td>
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<td>DMPA</td>
<td>Depot medroxy-progesterone acetate</td>
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<td>ECP</td>
<td>Emergency contraceptive pill</td>
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<td>FGD</td>
<td>Focus group discussion</td>
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<td>GEM</td>
<td>Gender empowerment measure</td>
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<td>HIV</td>
<td>Human immunodeficiency virus</td>
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<tr>
<td>HDI</td>
<td>Human development index</td>
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<tr>
<td>HC</td>
<td>Health centre</td>
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<tr>
<td>HP</td>
<td>Health post</td>
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<tr>
<td>ICPD</td>
<td>International Conference for Population and Development</td>
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<td>IUD</td>
<td>Intra-uterine device</td>
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<td>IPPF</td>
<td>International Planned Parenthood</td>
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<tr>
<td>MDG</td>
<td>Millennium Development Goal</td>
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<td>MOHME</td>
<td>Ministry of Health and Medical Education in Iran</td>
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<tr>
<td>OC</td>
<td>Oral contraceptive</td>
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<td>PI</td>
<td>Principal investigator</td>
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<td>POP</td>
<td>Progestin-only pill</td>
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<td>RTI</td>
<td>Reproductive tract infection</td>
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<td>SRH</td>
<td>Sexual and reproductive health</td>
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<td>STI</td>
<td>Sexually transmitted infection</td>
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My background is midwifery. I graduated with a Bachelor degree from Tabriz University of Medical Sciences in 1983. From 1983 to 1993 I was working as a midwife in primary health centres and maternity hospitals in Ahar, Ahvaz, Ardabil and Tehran cities of Iran. In 1993, I got a Master degree in midwifery from Tehran University of Medical Sciences, focusing on education in maternal and child health. For my Master thesis, I interviewed about one thousand mothers with a small child on breastfeeding and family planning issues at community level in all areas of Tabriz.

Since 1993, I have worked as a lecturer and researcher at Tabriz University of Medical Sciences. I was later promoted to the post of deputy dean of research at the School of Nursing and Midwifery. Before starting my PhD education, I supervised ten midwifery students as main supervisor and nine as co-supervisor for their Master theses. The focus of most research I have done or supervised has been on women’s reproductive health and quality of health services.

Working at primary health centres and hospitals in different places, as well as my activities in education and research has given me a great opportunity to be closely involved with different groups of people in the community, especially women. I have understood how much they are suffering from reproductive health problems, both physically and psychologically. I was looking for an opportunity to be able to contribute to make safe and effective reproductive health for people. When I got the scholarship for PhD, I thought it was the best opportunity that I had always been looking for. I hope that this thesis and the competencies I have achieved during the PhD training can be used to contribute to secure people’s reproductive health and rights in the community.
1 BACKGROUND

1.1 SEXUAL AND REPRODUCTIVE HEALTH AND RIGHTS

Sexual and reproductive health (SRH) is unique compared to other fields of health. It is a key component of an equitable society and is fundamental to individuals, couples and families, and the social and economic development of communities and nations (1-3).

In 1968, choice in reproduction and couples’ right to determine freely and responsively the number and spacing of their children was explicitly recognized at the World Conference on Human Rights in Tehran, Iran (4). Since the late 1980s, there has been special focus on the concept of quality of care, and its importance in SRH services (5). In 1994, delegates from the governments of 179 countries at the International Conference on Population and Development (ICPD) in Cairo defined reproductive rights as human rights. They agreed on a 20-year programme of action to improve sexual and reproductive health, foster reproductive rights, stabilise the world’s population and make safe, affordable, and effective reproductive health care and services universally available no later than 2015 (6, 7). They also recognized that the most pressing international problems -poverty, hunger, disease, environmental degradation and political instability- can only be solved by securing women’s sexual and reproductive health and rights (8).

Despite the enthusiasm generated by the Cairo conference, family planning promotion has dropped steadily down from the list of international development priorities since 1994. The unlinking of family planning from economic development was partly a cause of this fall, and continuing fertility decline in many countries encouraged a belief that the issue was largely solved and that contraceptive use is widespread. New priorities arose that included human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS), population ageing, and international migration. Between 1995 and 2003, donor support for family planning commodities and service delivery fell from US$560 million to $460 million (9).

The central ICPD goal of ‘universal access to reproductive health’ was excluded from the 2000 Millennium Declaration and from the eight Millennium Development Goals (MDGs) formulated in 2001. However, this exclusion became recognised as a mistake since SRH is now regarded as essential for achievement of all MDGs (8, 10). The international community agrees that the MDGs will not be achieved without ensuring universal access to SRH and HIV prevention, treatment, care and support services (10, 11). At the World Summit in September 2005, governments re-committed themselves to achieving the universal access by 2015 (12).

Cairo definition of reproductive health and reproductive health care

“Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the...
capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last condition are the right of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice” (Paragraph 7.2) (13).

Reproductive health care is defined as “the constellation of methods, techniques and services that contribute to reproductive health and well-being by preventing and solving reproductive health problems” (Paragraph 7.2) (13).

1.2 CORE COMPONENTS OF A SEXUAL AND REPRODUCTIVE HEALTH PROGRAMME

A sexual and reproductive health programme has five major components: maternal and newborn health; family planning; prevention of unsafe abortion; management of reproductive tract infections (RTIs) and sexually transmitted infections (STIs), including HIV/AIDS; and promotion of sexual health (3, 14). The ICPD Programme of Action calls on countries to provide a full range of SRH services in an integrated manner in the context of the primary health care system (14).

1.2.1 Maternal and newborn health

Every year more than half a million women die in pregnancy, childbirth, or puerperium and 10-15 million experience injuries, infections, disease or disability that cause lifelong suffering. More than 99% of the deaths are in low- or middle-income countries (1). At the global level, maternal mortality has decreased at an average of 1% annually between 1990 and 2005. It is far below the 5.5% annual decline, which is necessary to achieve the fifth MDG concerning maternal mortality reduction (15). Based on 2008 countdown report, maternal mortality was high or very high (300 or more per 100,000 live births) in 56 of the 68 priority countries (16). An effective intra-partum care strategy should be an overwhelming priority which combined with effective antenatal care, postpartum care, family planning, and safe abortion can prevent most of the maternal mortalities and morbidities (17).

Annually there are about 3.3 million stillborn and four million newborn deaths mostly due to preventable causes (1) such as poor maternal health, inadequate care during pregnancy, inappropriate management of complications during pregnancy and delivery, poor hygiene during delivery and the first critical hours after birth, and lack of newborn care (18).

1.2.2 Family planning

International family planning, which took shape as a movement more than 50 years ago, was motivated at first by concerns about population growth (19). In low- and middle-income countries it began in the 1960s in response to large improvements in child survival, which in turn led to rapid population growth. Contraceptive prevalence rate has increased from 10% to about 61% during the past 40 years and fertility has decreased from six to about three births per woman. Contraceptive use in some of these countries is approaching the levels in high-income countries (9, 20).
In Asia, the main motive was to enhance prospects for socio-economic development by reducing population growth, and governments took the lead. The strategies used by some Asian programmes to achieve an effect on fertility were criticised as coercive and the quality of family planning services in many countries was deemed unsatisfactory (9). These concerns bore fruit at the ICPD. The recommendations of the ICPD replaced the hitherto dominant demographic-economic rationale for family planning programmes with a broader agenda of women’s empowerment and reproductive health and rights (9). Thus, family planning programmes should be focused on enabling women and couples to meet their own fertility aspirations (19).

Family planning is now defined as ‘the informed effort of couples or individuals to plan for and attain their desired number of children and to regulate the spacing and timing of giving birth(s)’ (21). Information and services for family planning allow individuals and couples to realize their right (22).

While current challenges to health throughout the world are many and serious, family planning promotion is unique among medical interventions in the breadth of its potential benefits and probably touches more lives than any other health issues. It is crucial to people’s wellbeing, particularly that of women, and fundamental to their empowerment and self-determination. It allows women to achieve higher levels of education and a better balance between family and work. When a woman can plan her family, she can plan the rest of her life (1, 22, 23).

**Unmet need for contraception**

A woman has an unmet need for contraception if she is married, in a consensual union, or never-married and sexually active; is able to become pregnant; does not want to have a child in the next two years or wants to stop childbearing; and is not using any method of contraception, either modern or traditional (19). An estimated 123 million women have such an unmet need for contraception (24). The level of unmet need among married women in low- and middle-income countries varies widely, between 5% and 40% (19).

An estimated 90% of deaths from unsafe abortions and 20% of obstetric mortality could be averted by rightful access to effective contraception (9). It is estimated that satisfying the unmet need for contraception in low- and middle-income countries would avert 52 million unintended pregnancies, 22 million induced abortions, 142 thousand maternal deaths and 1.4 million infant deaths each year (2).

Based on data from the Demographic and Health Surveys (DHS) conducted in 53 countries in Asia, Africa, and Latin America between 1995 and 2005, the most common reasons given by women for not using contraception were method-related concerns; side effects, health concerns and inconvenience. These concerns were also common reasons for the discontinuation of use among women with unmet need who had used family planning in the past. Significant proportions of the women gave exposure-related reasons for non-use. They believed they were not at risk of getting pregnant, most often either because they were breastfeeding or not having sex frequently. Constraints due to cost of and access to contraception, and opposition to...
contraceptive use were cited with relatively lower frequency among the women. Lack of knowledge about contraceptive options was quite uncommon (0-12% in different countries) and had improved since the late 1980s (19). Based on the DHS conducted in Iran in 2000, about 8% of married women had an unmet need of contraception. The most commonly reported reasons were not having regular sex, suspected pregnancy, secondary infertility, and breastfeeding. Opposition to family planning programmes by the woman herself or family members was mentioned in 5% of the cases (25).

**Failure to use a method consistently and correctly**

In some countries, the uptake of contraception is not the problem, rather it is the widespread failure to use a method consistently and correctly. In the United States, for example, half of all unintended pregnancies occur among contraceptive users. Of these, nine in ten result from inconsistent or incorrect use of the method, and only one in ten from method failure. In the UK, most of the pregnancies ending in abortion are the result of incorrect or inconsistent use, or use of less effective methods (2, 26). It is estimated that each year 27 million (about 35% of all) unintended pregnancies occur as a result of method failure (6 million) or ineffective use (21 million) (27). According to Iran’s DHS in 2000, 18.4% of all pregnancies had occurred whilst using a contraceptive method; 5.6% with pill, 2.4% with condom, 0.7% with other modern methods and 9.7% with traditional methods (25).

**1.2.3 Prevention of unsafe abortion**

The effectiveness of family planning programmes to prevent unintended pregnancies is the main effective factor determining the frequency of unsafe abortions (1). Many unintended pregnancies and induced abortions can be prevented by expanding and improving family planning services and choices, reaching out to communities and underserved population groups (27).

Each year, approximately 35 million of the pregnancies in low- and middle-income countries and seven million in high-income countries are voluntarily terminated. In 2003, the abortion rate was 29 per 1000 women aged 15-44 in low- and middle-income countries and 26 in high-income countries (28).

About 20 million of the induced abortions are performed outside national legal systems, often by unskilled providers or under unhygienic conditions, or both (27, 28). All but 3% of the unsafe abortions occur in low- and middle-income countries (3, 28). The number of women who attempt an unsafe abortion, risking their life and health, is 20–25% higher than the number who succeed (27).

Approximately one in four women having an unsafe abortion is likely to face severe complications, which can cause death, and will seek hospital care, putting heavy demand on scarce resources (27). Unsafe abortions kill an estimated 68,000 women every year, representing 13% of all pregnancy-related deaths (3). Of all deaths related to sexual and reproductive health, those from abortion are most likely to be underestimated and are arguably the most preventable (1). Other health consequences include RTIs (at least 20% of cases), infertility and chronic pelvic pain (29).
1.2.4 Management of reproductive tract infections and sexually transmitted infections

Sexually transmitted infections, including HIV, are the leading cause of healthy lives lost in many countries. The yearly number of newly acquired STIs is about one billion (more than one infection for every three adults aged 15–49 years), which is probably an underestimate (1). The World Health Organization (WHO) has identified unsafe sex as the second most important risk factor for disease, disability, or death in the poorest communities and the ninth in high-income countries (30). The widespread prevalence of STIs and RTIs generally is also a major cause of infertility (29). To be successful, control programmes for STI, including HIV/AIDS, should focus on the ICPD principles of educating and empowering women, securing their health and rights (8), and enhancing the quality of health care services and preventive measures for both women and men (1).

1.2.5 Promotion of sexual health

In the ICPD Programme of Action, reproductive health care was defined as including care for “sexual health, the purpose of which is the enhancement of life and personal relations, and not merely counselling and care related to reproduction and sexually transmitted diseases” (13). Sexual health requires a positive and respectful approach to sexuality and sexual relationships. The right to sexual information and the right to pleasure were emphasized as fundamental to sexual health (31).

The sexual behaviour data from 59 countries show that no universal trend towards earlier sexual intercourse has occurred in recent decades, but the shift towards later marriage in most countries has led to an increase in premarital sex. Condom use has increased in prevalence almost everywhere, but rates remain low in many low- and middle-income countries (32).

The sexuality of individuals and couples is largely determined by family and community values, and social norms. Personal factors, factors related to the quality and coverage of services and programmes, and societal factors, in combination, can increase or reduce an individual’s vulnerability to sexual and reproductive ill-health (29). Programmes that seek to reduce vulnerability and risks in sexual behaviour will therefore have to work with people’s beliefs, values and traditions to support an appropriate health-seeking behaviour and a more holistic view of sexuality throughout the life course (31). Thus, although individual behaviour change is central to improving sexual health, efforts are also needed to address the broader determinants of sexual behaviour, particularly those that relate to the social context (32).
1.3 QUALITY OF CARE

Quality of care must be at the centre of every discussion about better health. However, historically, the focus in low- and middle-income countries has been on the quantity rather than quality of health services. Access to the health care system is required to obtain the care that maintains or improves health, but simple access is not enough; the system’s capacities must also be applied skilfully (33).

Good quality requires the presence of trained personnel in well-equipped clinics where clients are treated courteously and provided with a variety of appropriate services. Therefore, quality refers both to the readiness or level of preparedness of facilities to offer services and the manner in which clients are cared for (34).

The Institute of Medicine in the United States defines quality of care as ‘the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge’ and identifies patient safety, effectiveness, patient centeredness, timeliness, efficiency and equity as the six main elements of quality (35).

Peabody and colleagues have defined quality of care as ‘optimizing material inputs and practitioner skill to produce health’ and have presented the following framework (figure 1-1) (33).

![Quality of Care Framework by Peabody et al. (33)](image)

Figure 1-1: Quality of Care Framework by Peabody et al. (33)
Structure refers to stable, material characteristics (infrastructure, tools, technology) and the resources of the organizations that provide care and the financing of care (levels of funding, staffing, payment schemes, incentives). Structural measures are the easiest to obtain. However, the evidence indicates only a weak link between such structural elements and better health outcomes in most cases (33).

Process is the interaction between provider and clients during which structural inputs from the health care system are transformed into health outcomes. Measurement of process is the preferred way to assess quality. Process aspects can be measured at every visit to a provider and are usually linked to health outcomes (33).

Outcomes can be measured in terms of health status, deaths, or disability-adjusted life years. Outcomes also include client satisfaction, client knowledge and client responsiveness to the health care system. Although good outcomes are the objective of all health actions, outcomes alone are not an efficient way to measure quality because adverse health outcomes are relatively rare and usually occur after a long time (33).

1.3.1 Quality of family planning services

Quality of services is currently a central concern in international discussion of family planning and reproductive health care (34). The main aims are to safeguard the rights of clients, attract additional clients and increase efficiency (36), which all can contribute towards reducing the number of unintended pregnancies (37).

According to WHO, high-quality family planning services mean that: “the client is given a sufficient amount of high-quality information about family planning so that an informed choice can be made; there is a broad choice of methods available to the client; methods are affordable for the client; the providers are technically competent; the interaction between the client and the provider is of high-quality (e.g. clients participate fully in decision-making about their method; providers are helpful, respectful, non-judgmental and supportive); there is good follow-up and continuity of care; family planning services are integrated, where appropriate, with other reproductive health services, such as the prevention and care of STIs, including HIV infection”(38).

EngenderHealth recommends that integrated SRH counselling should be used to improve clients’ overall health needs. Clients typically seek SRH services for one particular need or problem. However, they may have other needs or problems that contribute to their primary problem. By not addressing those needs, providers may miss key opportunities to improve clients’ overall health needs. This is particularly serious in SRH services, given the social stigma associated with many SRH problems and the embarrassment that many clients feel about discussing these issues (39).
1.3.2 Quality of care as human rights

Quality of care is also viewed in terms of human rights. In 1992, the International Planned Parenthood Federation (IPPF) outlined a clients’ “Bill of Rights” to focus on what clients should be able to demand from providers and, ultimately, from their governments (40). The rights listed include receiving information, access to services, and choice, as well as safety, the right to privacy, confidentiality, maintenance of dignity, comfort, continuity, and expression of opinion. Huezo and Diaz (1993) went a step further to argue that clients’ rights, in order to be viewed realistically, must be considered together with providers’ rights and needs. They outlined providers’ rights to receive training, supplies, guidance, backup, respect, encouragement, supervisory feedback, as well as their right to self-expression. The authors argued that the relationship between the rights of clients and providers must be considered when an effort is made to remove obstacles to offering good quality of care in family planning services (41). Many non-governmental organizations have adopted the human rights approach, and activists have begun rallying their governments to adopt a client-centred approach to service provision, based on a human rights platform (34).

The framework of clients’ rights and staff needs (figure 1-2) can guide any facility’s managers, supervisors, and staff in their efforts to improve quality. Acknowledging that clients have a right to expect certain things when they come for services is a powerful concept, one that has implications for staff behaviour and performance. Moreover, recognizing that service providers and other staff have needs that must be met, if they are to provide quality services, is a motivating force among staff and supervisors (5, 36). Therefore, supervisors and managers should use the needs of providers as a reference to improve the quality of services (42).

![Figure 1-2: A quality framework by EngenderHealth (36)](image)

**Clients’ rights for high-quality services**

Quality of care, including a client-centred approach to providing high-quality services is a clients’ right (43). The essence of a rights-based approach to SRH service delivery is helping individuals exercise the right to make and act on their own decisions about
their health and reproduction. Individuals need to know that they have such rights and will be supported in exercising them. The traditional ‘medical model’ of service delivery, which focuses on medical consideration without addressing clients’ personal circumstances and preferences, need to be transformed to more client-centred care (44).

**Information**

Clients have a right to accurate, appropriate, understandable, and unambiguous information related to reproductive health and sexuality, and to health overall. Information and materials for clients need to be available in all parts of the health care facility (36). To promote and sustain healthy behaviour, different types of information, education and communication channels with consistent messages should be combined. To choose the appropriate mix of channels, the communication team should consider which channels will best deliver the message to the intended audience within the available budget (45).

**Access to services**

Clients have a right to services that are affordable, are available at convenient times and places, are fully accessible with no physical barriers, and have no inappropriate eligibility requirements or social barriers, including discrimination based on sex, age, marital status, fertility, nationality or ethnicity, social class, religion, or sexual orientation (36).

**Informed choice**

Clients have a right to make a voluntary, well-considered decision that is based on options, information, and understanding. The informed choice process is a continuum that begins in the community, where people get information even before they come to a facility for services (36). It is the service provider’s responsibility either to confirm that a client has made an informed choice or to help the client reach an informed voluntarily choice (36, 46). Offering the broadest possible choice of methods is the best way to ensure satisfaction, increased acceptance, and increased prevalence of contraceptive use. Education and counselling, both before and at the time of method selection, can help clients address their specific problems and make informed and voluntary decisions (47).

**Safe services**

Clients have a right to safe services, which require skilled providers, attention to infection prevention, and appropriate and effective medical practices. Safe services also mean proper use of service-delivery guidelines, quality assurance mechanisms within the facility, counselling and instructions for clients, and recognition and management of complications and side effects (36). No contraceptive is both 100% effective and totally free of side effects. In practice, therefore, the choice of a family planning method always involves a trade-off between the desired level of protection against pregnancy and the client’s willingness to tolerate the risks and disadvantages associated with any particular method. The perceived disadvantages of certain
methods can be overcome, or at least alleviated, through appropriate counselling (47).

Privacy and confidentiality
Privacy is “the right and power to control the information (about oneself) that others possess” (48). Confidentiality is “the duty of those who receive private information not to disclose it without the patient’s consent” (48). Confidentiality is thus the mechanism through which the client’s right to privacy is protected (49). Clients have a right to privacy and confidentiality during the delivery of services, including during counselling, physical examinations, and clinical procedures, as well as in the staff’s handling of clients’ medical records and other personal information (36). The sensitive nature of reproductive health/family planning requires that clients' right to privacy and confidentiality are always ensured (46).

Dignity, comfort, and expression of opinion
All clients have the right to be treated with respect and consideration. Service providers need to ensure that clients are as comfortable as possible during consultations and procedures. Clients should be encouraged to express their views freely, even when their views differ from those of service providers (36, 46).

Continuity of care
All clients have a right to continuity of services, supplies, referrals, and follow-up necessary to maintaining their health (36).

The needs of health care staff
Facilitative supervision and management
Health care staff function best in a supportive work environment in which supervisors and managers encourage quality improvement and value staff. Such supervision enables staff to perform their tasks well and thus better meet the needs of their clients (36). Supervision, especially coupled with audit and feedback to staff, which is supportive, educational and consistent and helps to solve specific problems has been consistently found to improve the performance, job satisfaction and motivation of many types of staff (36, 42). However, if supervisory visits become sterile administrative events, or are seen as fault-finding and punitive, they have little or no positive effect and may have negative effects (42).

Information, training, and development
Health care staff need knowledge, skills, and ongoing training and professional development opportunities to remain up-to-date in their field and to continuously improve the quality of services they deliver (36, 42). Incentives, both financial and non-financial, should be used to sustain a workforce with the skills and experience to deliver required care (50). Programmes should link bonuses to the quality of service provision. Quantity-linked bonuses can have unintended consequences, such as leading to coercive behaviour or pressure tactics on the part of providers (51).
Supplies, equipment, and infrastructure

Health care staff need reliable, sufficient inventories of supplies, instruments, and working equipment, as well as the infrastructure necessary to ensure the uninterrupted delivery of high-quality services (36).

According to a worldwide poll of nearly 500 health care professionals in 98 countries conducted in 2007, a sufficient, well-trained, supervised and motivated staff was the most important element of success of family planning programmes (52-54). The other most important programme elements identified by the professionals were the following:

- Strong leadership and good management
- Communication and outreach strategies
- Supportive government policies
- Free or inexpensive services for poor
- Programmes guided by Research, and Monitoring and Evaluation
- Logistics systems and continuous supply of contraceptives
- Client-centred care
- Integration of services
- Mix of service delivery point (52-54).

Effects of improved quality of family planning services

Better quality has been claimed to improve health much more rapidly than can other drivers of health, such as economic growth, educational advancement, or new technology (33). Improving the quality of care, specifically the client-provider interaction, has potential benefits in terms of better client outcome, such as satisfaction, use and continuation of appropriate contraceptive methods, achievement of reproductive health goals, as well as successful birth spacing or limitation and improved reproductive health (43).

An informed client who has been given her method of choice is a satisfied client, who is more likely to adopt family planning, use the method effectively and continue with it, cope successfully with minor side effects, not believe myths or rumours and even work to counteract them among family and community, promote family planning and refer other clients (46, 55-57). It can result in achieving reproductive intentions and reduce abortion rates (58).

1.3.3 Interventions to improve quality of services

Quality improvement interventions not only may increase individual and social welfare but are also cost-effective in the long run (33). Interventions designed to improve quality of care range from the implementation of system-wide changes to those targeting specific areas for improvement (34).
Management tools to improve quality

Some management tools have been useful for enhancing problem-solving skills among health-care providers, for improving their job satisfaction and morale, and for empowering them to make decisions (34). Tools such as Continuous Quality Improvement (59), Performance Improvement (60) and Client-Oriented, Provider-Efficient services (COPE) (36, 61, 62) have been effectively used for improvement of both process and outcome indicators in reproductive health care.

COPE has been developed around a framework of the seven clients’ rights and the three staff needs described on page 8-10. The rationale is that the more these rights are honoured and these needs are met, the higher the quality of care. These rights and needs underlie the two following key assumptions.

1. Recipients of health care services are not passive patients waiting to be seen by experts. Instead, they are autonomous health care clients, who are responsible for making decisions about their own health care and have a right to high-quality health care.

2. Health care staff members desire to perform their duties well. However, if they lack administrative support and critical resources, they will not be able to deliver the high-quality services to which clients are entitled.

COPE is a process that helps health care staff to continuously improve the quality and efficiency of services provided at their facility and make services more responsive to clients’ needs. Through COPE, staff members develop a customer focus, learning to define quality in concrete terms by putting themselves in their clients’ shoes (36).

Targeted interventions to improve the quality

Interventions such as training of providers, training of supervisors and job aids have been used to improve quality of services.

One of providers’ main needs to perform well is to have up-to-date knowledge and skills. This is more essential today with rapid increases in knowledge and changing health care needs (63). Provider training can strengthen providers’ technical knowledge and interpersonal communication skills, both of which are essential for good performance. It can also help providers clarify their values and overcome biases (64). However, training alone is usually not enough to improve providers’ performance on the job and advance health outcomes (33, 64). Some newer techniques like targeted education, case-based learning, and interactive and multi-model teaching techniques have had some success (33).

Peer education is an interactive method of teaching or learning which is widely used for educating school and college students, in a variety of different forms (65-67). It has also been used for children (68), adolescents (69) and support groups, e.g. for people with HIV/AIDS or chronic conditions like diabetes (70-72). Many of the studies have shown that this method is as good as or even better than traditional education (65, 67-
However, there are very few studies on its effectiveness for in-service education (73, 74).

Moreover, supervisors should be able to meet the support and guidance needs of clinic staff. Therefore, supervisors should be trained to pay special attention to mentoring, coaching, training, team problem-solving and two-way communication between supervisor and service providers (42).

Use of evidence-based guidelines and tools can ensure high-quality and cost-effective care, and better health outcomes. WHO has developed two evidence-based family planning guidelines and two tools, which are proposed as four cornerstones of family planning guidance, to support the safe and effective provision and use of family planning methods (75).

The tools, ‘Decision-making tool for family planning clients and providers’ (76) and ‘Family Planning: A global handbook for providers’ (23) incorporate the guidance of the first two cornerstones; ‘Medical eligibility criteria for contraceptive use’ (77) and ‘Selected practice recommendations for contraceptive use’(78). WHO encourages policy-makers, family planning programme managers and the scientific community to use the documents as guidance in the preparation of country-specific guidelines for service delivery of contraceptives (77, 78).
1.4 IRAN

The Islamic Republic of Iran (see map page 29) is located in south-central Asia and has a population of 72 million, of which 99.4% are Muslims. It covers 1.648 million km², of which less than a quarter is arable land. It is the 18th largest country in the world and the fourth in Asia. The country has 30 provinces, 336 districts, 1012 cities and approximately 64,000 villages (79, 80). Iran is a middle-income country (81) with a gross national income of 3998 purchasing power parities (ppp) US dollars per capita in 2007, with under 6% of the population living on less than two dollars a day (82).

In 2006, Iran's human development index (HDI)\(^1\) value was 0.777 (84\(^{\text{th}}\) out of 179 countries), the gender-related development index (GDI)\(^2\) value was also 0.777 (93\(^{\text{rd}}\) out of 157 countries) and the gender empowerment measure (GEM)\(^3\) value was 0.345 (103\(^{\text{rd}}\) out of 108 countries) (83). Based on the MDG Monitor, Iran has achieved the goal of eradicating extreme poverty and hunger; is on track to achieve universal primary education, reduce child mortality and improve maternal health; and has the possibility to achieve the goals of promoting gender equality and empowering women, combating HIV/AIDS, malaria and other diseases, and ensuring environmental sustainability (84).

The concept of reproductive health encompasses the cultural and social context (85) and according to the framework presented by Peabody and others, many demographic, socio-economic and institutional and political factors can also impact the quality of care (33). In the following, such factors are described concerning changes that have occurred in recent decades, which may directly or indirectly affect SRH and quality of care.

**Education and employment**

The adult literacy rate improved from 65% in 1991 (86) to 84% in 2006 (83). The improvement was higher in women. Gender parity index (women to men) in primary, secondary, tertiary level education enrolment was 0.90, 0.75, 0.48 in 1991; whereas in 2005, it was 1.22, 0.94 and 1.09, respectively (87). However, female literacy as percentage of male is 88% (83).

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\(^1\) The human development index provides a composite measure of three dimensions of human development: living a long and healthy life (measured by life expectancy), being educated (measured by adult literacy and enrolment at the primary, secondary and tertiary level) and having a decent standard of living (measured by purchasing power parity, PPP, income) 83. United Nations Development Programme. 2008 Statistical Update, Iran (Islamic Republic of), The Human Development Index - going beyond income. [cited 2009 11 Jan]; Available from: http://hdrstats.undp.org/2008/countries/country_fact_sheets/cfy_fs_IRN.html.

\(^2\) The gender-related development index is the human development index adjusted downward for gender inequality and measures achievements in the same dimensions using the same indicators as the human development index 83. Ibid.

\(^3\) The gender empowerment measure reveals whether women take an active part in economic and political life. It tracks the share of seats in parliament held by women; of female legislators, senior officials and managers; and of female professional and technical workers- and the gender disparity in earned income, reflecting economic independence 83. Ibid.
The employment rate in women has increased. In 1991, the employment-to-population ratio for men and women, respectively, was 73% and 18%; and in 2005, 67% and 33%, (87). However, the unemployment rate is high, especially among women because of high increase in the number of women, especially highly educated women, who seek to gain employment. The youth (15-24 years old) unemployment rate was 32% for women and 20% for men in 2005 (87). The rate was 17% and 10%, respectively, for the total labour force (88).

Population and fertility change

The country’s population doubled from 33 to 66 million during 1975-1990 (89). There was a rapid decline in total fertility rate in 1990s (figure 1-4). While the total fertility rate is now at about replacement level (2.0), the annual growth is 1.2% (80) since the majority of the population is of reproductive age. Women aged 15-49 years constitute about 60% (highest percent ever) of the whole female population (figure 1-4). The median age is 24.0 years (80). The effect of this factor will gradually diminish as populations age (figure 1-3), but between now and 2050, it accounts for a projected increase in population of approximately 30 million people (89).

![Population pyramid of Iran, 1985](image1)

![Population pyramid of Iran, 2006](image2)

![Projected population pyramid of Iran, 2050](image3)

**Figure 1-3: Population pyramid of Iran in 1985, 2006 and 2050 (projected)**

Source: Data from United Nations Population Division (89) (the projected pyramid is based on medium variant of growth rate) and 2006 national census (90)

The urbanization rate has increased from 54% in 1976 to 68% in 2006. The mean size of families has decreased from 5.2 in 1991 to 4.0 in 2006 (80) due to factors such as the reduction in total fertility rate and decrease in percentage of extended families (from 6.4% in 1986 to 0.5% in 1996 (91)). There is a considerable rise in age at first marriage (from 17 years in 1976 to 23 years in 2006 for women, and from 23 to 26 for men) (25, 80); despite the minimum legal age for marriage being 15 for women and 18 for men (92), and despite government efforts to promote marriage as a basic Islamic value and provide a variety of incentives for the newly-wed (93).
Figure 1-4: Trend of two fertility indicators in Iran, the world, Sweden and Pakistan

Source: Data from United Nations Population division (89); data for period 2005-2010 and later is based on medium variant projection
1.4.1 The health care system in Iran

Over the last three decades, Iran has made remarkable progress in the health sector. The extensive system of a health care network, with its base in the communities and with easy access to basic preventive and curative services at its heart, has ensured provision of primary health care to the vast majority of the population. At present, 95% of the rural population enjoys health care services through the health houses staffed by community health workers (Behvarzes). The system greatly improved many of the main health indicators, especially in maternal and child health, and family planning (table 1-1) (79, 94, 95). As a result of the prioritization of rural areas and effective delivery of primary health care, health outcomes in rural areas of the country are now almost equal to those in urban areas, with indicators for infant and maternal mortality nearly identical (96).

Table 1-1: Basic health indicators for Iran∗

<table>
<thead>
<tr>
<th>General health indicators</th>
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<tbody>
<tr>
<td>Life expectancy at birth (years)</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td>61 (1990)†</td>
<td>65 (1990)</td>
</tr>
<tr>
<td>Total expenditure on health as % of gross domestic product</td>
<td>4.7 (1995)</td>
<td>7.8 (2005)</td>
</tr>
<tr>
<td>Physicians (per 10,000 population)</td>
<td>9 (2005)</td>
<td></td>
</tr>
<tr>
<td>Nursing and midwifery personnel (per 10,000 population)</td>
<td>16 (2005)</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Reproductive health indicators</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Population annual growth (%)</td>
<td>2.6 (1990)</td>
<td>1.2 (2006)</td>
</tr>
<tr>
<td>Antenatal care coverage (at least four visits, %) (97)</td>
<td>77 (2001)</td>
<td></td>
</tr>
<tr>
<td>Birth attended by skilled personnel (%)</td>
<td>97 (2005)</td>
<td></td>
</tr>
<tr>
<td>Maternal mortality ratio (per 100,000 live births) (Adjusted‡, 2005)</td>
<td>140 (95%CI: 95-190)</td>
<td></td>
</tr>
<tr>
<td>Infant mortality rate (per 1000 live births)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
</tbody>
</table>

* From WHO statistical information system (WHOSIS) (86), unless where indicated
† Figures in parentheses show year data was gathered unless it is explained
‡ Reported maternal mortality ratio by MOHME is 37 per 100,000 live births (97)
The primary health network of Iran (figure 1-5) is an integrated and stratified health care system. Health houses in rural areas, and health centres and health posts in urban areas are the first points of contact between the community members and the primary health care system. The health houses and health posts are supported by rural or urban health centres. The rural and urban health centres are administered by district health centres, one in each district or more than one in a few large districts (93).

The Universities of Medical Sciences, at least one in each province, play an important role both in medical education and in the provision of health services. The chancellors of the universities are the executive directors of the provincial health services and in charge of all district health centres and hospitals. They in turn report to the Ministry of Health and Medical Education (MOHME) in Tehran (93).

When a new programme is developed, health workers at the provincial level attend an initial meeting at the Ministry about programme goals, strategies, and activities, followed by regular updating workshops. Each level of the primary health care system then educates the next level under them in the organization (98).

As our study was performed at urban health posts and health centres, these types of facilities will be described in more detail.

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* The numbers are based on 2001 data; there were 16,278 Health houses and 1176 Health posts (93)
† Our study setting

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**Figure 1-5: Health care network in Iran**
Health posts usually only have a family health unit, staffed mainly by midwives and family health technicians. There are environmental health technicians in some and a general physician in a few of them. The staff working at the family health units are tasked with providing basic preventive services, including family planning, prenatal and postnatal health care, child health care, and immunization. Clients in need of other services are referred to the health centres (99).

The urban health centres are also staffed by administrative personnel and at least one general physician. Some of the centres, based on population density, cover one or more health posts. The main functions of urban health centres, in addition to what is done at the health posts, are the provision of services by general practitioner, dentistry services, supplementary health services for referred cases, and guidance and administration of the affiliated health posts (99).

The private health sector in Iran is primarily concentrated in urban areas and plays a major role in the provision of secondary and tertiary care. It also controls almost the whole pharmaceutical industry and drug distribution system and accounts for a large share of laboratory and diagnostic facilities. In 2002, the private sector controlled 7% of primary health care centres, 10% of hospital beds, 38% of medical laboratories, 28% of rehabilitation facilities and 91% of pharmacies (93).

1.4.2 Reproductive health care in Iran

Iran has made huge strides towards implementing the ICPD agenda in a manner that is consistent with its religious values (100). It started integrating family planning issues with maternal and child health based on its own understanding of Islamic rules prior to ICPD, but in a manner entirely consistent with the ICPD aims in terms of integration (101). The country has successfully met many of its commitments under the ICPD Programme of Action (102). The national health policy mandates the delivery of free and comprehensive health services for all through the primary health network (103).

In light of the young age structure of the Iranian population and the rising age at marriage, unmarried young people constitute a considerable proportion of the population at risk of unwanted pregnancy and STIs (104). Evidence suggests that the traditional values of total abstinence and of remaining chaste until marriage are losing their influence and that a growing proportion of young people are engaging in premarital sex (104-108). However, Iran’s public reproductive health programme has failed to address many needs of unmarried people (103, 104). If this group uses services at all, it will probably be within the private health sector. In a study in Tehran, 75% of males aged 15-18 who engaged in sex reported using condoms and 2% of their partners used the pills; 64% of them got the contraceptives from a pharmacy and 32% from friends (108). Lack of knowledge of and access to effective contraceptive and infection preventive methods exposes this group to great risks of unwanted pregnancy and STIs (104).
There have been some efforts to promote the knowledge of young people about SRH issues, with an emphasis on family planning. Pre-marital education is mandatory for engaged couples in order for them to obtain a marriage license. Each couple must attend a half-day course on family planning, safe motherhood and delivery, breastfeeding, thalassaemia, STIs including HIV/AIDS, and breast and cervical cancers (103, 109). In 2001, an educational programme of 17-34 hours on population issues and family planning for all college students was confirmed. Since then programmes of this kind are taught at most universities for female and male students separately (110).

Non-governmental organizations have limited activities in the field of SRH. The Iranian Family Planning Association affiliated to IPPF carries on some limited activities to educate the youth about reproductive health issues (101) and support people with HIV/AIDS (93). It has produced some age-appropriate materials for boys, girls and engaged couples. Information about sexual relationship and sexuality is only presented in materials for young couples who are engaged or married (103).

Maternal and newborn health

Although 97% of all births take place with skilled attendants, maternal mortality ratio in Iran is 140 per 100,000 live births (estimated using data from the census (15), while the reported ratio by MOHME is 37 (97, 111, 112)) and the neonatal mortality rate is 18 per 1000 live births (113). Analyses of information from national registering of maternal deaths indicate that about three-quarters of maternal deaths in the country occurred in hospitals and that medical errors (by physicians, midwives or nurses) resulted in approximately two-third of the maternal deaths in 2001 to 2004 (111, 112). Moreover, 83% of neonatal deaths occurred in hospitals. It may indicate that access is good, but that the problem lies in the quality of services (114).

Family planning

Iran was one of the first countries to establish a family planning programme as part of its development plan. In 1967, the government launched an active family planning programme through the Ministry of Health, and family planning became an integral part of maternal and child services nationwide. After the Iranian revolution in 1979, the new government adopted new social policies, including benefits such as allowances and food subsidies for larger families. During the eight-year war with Iraq from 1980 onwards, having a large population was considered an advantage. The 1986 census showed that the population was growing by more than 3% per year. After the war, having convinced many top policymakers of the importance of family planning, the Plan and Budget Organization and MOHME decided to launch a public campaign to convince other members of the policy elite and the general public of the need for a national population policy (115).

The late Ayatollah Khomeini’s declaration regarding the need for intervention in all areas of population and application of contraceptive methods put an end to the misconception that family planning and Islam are incompatible. Accordingly, policy-
makers were supported by religious leaders, thereby allowing the programme to be institutionalized throughout the country (109).

The family planning programme, officially inaugurated in December 1989, had three major goals: to encourage families to delay the first pregnancy and to space subsequent births, to discourage pregnancy in women younger than 18 and older than 35, and to limit family size to three children (115).

This programme was one of the most successful of its kind in the world and achieved its goals on the provision of birth control and the reduction of population growth (109, 116). The total fertility rate declined from 5.6 in 1990 to 2.0 in 2000 (figure 1-4) (109, 117). Iran’s efforts toward population stabilization have occurred without the kind of human rights’ abuses, like coerced sterilization, that have been seen in some Asian countries (103).

The mandatory premarital counselling, the affordable and reliable access to free family planning services and supplies through the country's extensive public health system, as well as, rising economic aspirations, increased levels of education and greater gender equity within husband-wife relationships have all contributed to the observed fertility decline (116).

According to the family planning effort programme index in 1999, which is calculated based on experts’ judgements on details of the programme, Iran was among the countries with a strong family planning effort. The total score was 71 percent of the maximum possible score; 70 for the component of policy, 62 for services, 68 for evaluation and 94 for method availability. The score was 47 in 1972, 11 in 1982, 57 in 1989, and 61 in 1994 (118).

As the population growth and too high fertility rates are no longer seen as pressing concerns, funding for the programme has remained unchanged for the last few years and has actually decreased in real terms (102).

The basic primary services are free of charge, including free supplies of all kinds of contraceptives. All the staff working at the family health units of the public facilities provide combined oral contraceptives (COCs), progestin-only pills (POPs), depot-medroxyprogesterone acetate (DMPA) and male condoms, and perform counselling and referrals for sterilization. However, only midwives insert and check Cu-Intrauterine devices (IUDs).

Based on Iran’s DHS in 2000, 56% of married women of reproductive age were using modern contraceptives; 55% in urban and 57% in rural areas. The most commonly used modern methods were the pill, female sterilization, IUD and condoms. The use of traditional methods, mainly withdrawal, was more prevalent in urban than rural areas (22% vs. 10%) (figure 1-6).
In 2004, the Iranian Ministry of Health and Medical Education published new national family planning guidelines in order to improve the quality of services offered. However, there are some discrepancies compared with the WHO guidelines; e.g. past ectopic pregnancy and nulliparous are mentioned as absolute contraindications to use IUD (120).

In a further effort to prevent unintended pregnancies, family planning clinics have recently begun to give their clients emergency contraceptive pills together with condoms, but no female barrier methods including female condoms are available at the facilities (104).

There are also many private clinics in the urban areas where health staff with different level of education, including obstetricians and gynaecologists, general practitioners, and midwives, provide some of the reproductive health services. People usually choose which clinic to go by following their own judgment based on some considerations like affordability and perceived quality of the services. Contraceptive supplies are also available without prescription at subsidized prices at pharmacies [IUD 10,000 Rials (€0.67), COC (21 pills) 1,800 Rials (€0.12), a package of 12 condoms 15,000 Rials (€1), DMPA 5,000 Rials (€0.33), POPs (28 pills) 4,000 Rials (€0.27), Levonorgestrol (Emergency method) 1,000 Rials (€0.07)].

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**Figure 1-6: Contraceptive prevalence by method**

Source: Data from United Nations Population Division (119) and Iran’s DHS (25); World data is for 2003, high-income countries 1999, low- and middle-income countries 2004, Iran 2000, Sweden 1996, China 2004. There was no disaggregated data for female/male sterilization in Sweden and what is shown in the graph is presumptive.
Despite the many successes in the family planning programme, it suffers from many problems, including a high and increasing rate of unintended pregnancies and a potential increase in the number of induced abortions (25, 101, 109). Iran’s DHS in 2000 showed that about 35% of pregnancies were unintended (16% unwanted and 19% mistimed) (121). Inadequate knowledge about contraceptive methods and the widespread use of withdrawal have been reported as the main reasons for the unintended pregnancies (104). Thus, there is still a long way to go before achieving the goal of planned and safe fertility for all (25).

**Abortion**

There is no reliable and accurate data on abortion in Iran. It is estimated that approximately 100,000 young women undergo abortion each year, most of them illicit or self-induced (103). Based on Iran’s DHS (2000) data using the residual method, it has been estimated that the total abortion rate for the country was 0.26 abortions per married woman (0.24 in East Azerbaijan), and that the annual general abortion rate was 7.5 abortions per 1000 married women aged 15–49 years (122).

The abortion law changed after the revolution in 1979. Abortion was permitted only to save the mother’s life and for a potentially seriously disabled child, if gestation was of less than four months’ duration. Obtaining consent of the husband was mandatory (123). Implementation of the β-thalassaemia screening for all prospective couples in 1997, recent advances in prenatal diagnosis of foetal malformations and special emphasis on ethics for the medical and religious professions resulted in the law being modified. In 1998, the government decided to permit abortion up to 16 weeks from the last menstrual period, if the foetus is known to be affected (98). However, almost half of the applications for legal abortion of an unhealthy foetus were rejected (124).

In 2005, the Iranian parliament ratified the Therapeutic Abortion Act. The Act permits therapeutic abortion after a definitive diagnosis by three experts and a confirmation by the legal medicine organisation. This decision may be based on foetal diseases leading to afflictions for the mother due to foetus malformation or retardation, or based upon life-threatening maternal diseases. Abortion may be carried out up to 120 days from the moment of conception with the woman’s consent (125).

Post-abortion care, even in the case of illegal abortions, is available in public and private hospitals as part of primary health care (115). Health care providers do not feel compelled to report illegal abortions to authorities and these cases are not prosecuted unless someone records a grievance (125).

**Sexually transmitted infections and sexual health**

In 2003, there were 700,000 reported cases of STIs in Iran (102). In 2007, the reported prevalence of HIV/AIDS in adults (general population of 15-49 years old) was 0.2% (0.3% in men and 0.1% in women) (113, 126, 127) and 19% among intravenous drug users (105). It was 0.1% in adults in 2001 (126). To achieve the MDG of combating HIV infections, it is urgently needed to implement more effective programmes to control this rapid rise in the incidence of STIs/HIV.
Some notable efforts have been accomplished. All socio-economic groups are provided preventive and treatment services for HIV/AIDS free of charge without any limitation. However, less than one third of people with HIV have been diagnosed (105). Based on data from 2006-7, only 0.9 per cent of facilities providing antenatal care was providing HIV testing and counselling. The estimated antiretroviral therapy coverage was 5% and estimated percentage of pregnant women living with HIV who received anti-retroviral medication for preventing mother-to-child transmission was 2% (126).

Some policymakers and key persons are very worry of the potential unpredicted and undesired effects of programmes targeting high-risk behaviour in the general population. Thus, access to factual information about sexuality and reproduction, and risk-reduction strategies through trusted channels, such as schools, is limited (105). There have been some efforts to improve public knowledge on prevention of risky behaviours. For example, many teachers are educated about HIV and there are some life-skill education programmes for students; about 90% of high school students were educated in 2007. However, none of the life skills education deals with HIV/AIDS (105). According to studies in 2007, only 24% of intravenous drug users and 8% of sex workers both correctly identified ways of preventing sexual transmission of HIV and rejected major misconceptions about HIV transmission. One third (33%) of intravenous drug users in Iran and 55% of sex workers in Tehran reported the use of a condom in their most recent sexual activity (105).

1.4.3 Studies on quality of primary reproductive health services in Iran

Studies published before starting our study

In 1998, a study of prenatal care services in an urban area of Ahar in East-Azerbaijan province was done using observation of client-provider interaction and some clinical procedures. Results showed that overall quality was good in 9%, moderate in 69% and poor in 22% of the cases. The quality was particularly low for clinical examinations, which were poor in 72% of cases (128).

Findings of a qualitative study in the primary health facilities in the city of Zahedan in 2000 using focus group discussions (FGDs) with clients and providers showed that clients were dissatisfied about education on contraceptive methods and their side effects. The providers were dissatisfied with their own services and managers’ behaviours towards staff. They mentioned factors such as high workload and multi-tasking as barriers to achieving high quality services (129).

Results of a study of child health care in the primary health facilities in Tehran in 2001-2 showed that the quality of services provided by 40% of staff was poor, 31% moderate and 29% good. About three quarter of referral and follow up services were provided at a moderate level, while 59% of growth assessment services were at a good
level. There was no correlation between in-service education and the quality of services (130).

An observational study was performed in the primary health facilities in Hamadan city in 2003. Results showed that less than 50% of the family planning clients were receiving service of a satisfactory quality. The areas of care where quality was worst included history taking, physical examination and counselling. Providers with higher education had lower performance levels compared to their less educated colleagues (131).

Studies published after starting our study
In 2003, a study in the capital cities of Kerman and Fars provinces was performed, using exit interviews with 909 married women receiving family planning services from 15 health centres. The highest percentage of dissatisfaction was reported on ‘privacy’. When an importance score was also included, ‘provision of sufficient information regarding other contraceptive methods’ and ‘unavailability of all methods’ were the areas where quality improvement should be focused (132).

Women's satisfaction with the reproductive health services was assessed in the city of Urmia using interviews with 600 married women aged 15-49 years in 2003. Overall 92% of the women were satisfied with the total reproductive health service; however 34% of the women were unsatisfied with their health care provider. Factors in need of improvement were: providing all modern contraceptive methods in the health centres; using educational materials (e.g. pamphlets and brochures) at reproductive health consultations; and improving information given to clients to ensure informed choice of family planning method (133).

In 2004, a study was performed in 15 urban health centres in Tehran using observations of 65 family planning care providers and interviews with 75 family planning clients. Mean score on counselling was 70 percent of optimal score, and mean satisfaction score of clients was 83 percent, while mean knowledge about their own family planning method was 59 percent (134).

In 2005, MOHME undertook a nation-wide evaluation of reproductive health programmes, including the family planning, maternal and child health programmes. Results showed that the performance was lower in urban areas for 12 out of 17 aspects of quality compared with rural areas (figure 1-7) (135).

In 2006, 396 provider-client interactions were observed during provision of family planning in urban primary health care facilities in a provincial capital in western Iran. Poor performance was observed notably in counselling and choice of method. long experience and low education of the providers and lower workload at the clinic had a positive association with higher quality of care (136).
1.5 RATIONALE FOR THE STUDY

The goal of Iran’s current national family planning programme is ‘planned and safe fertility for all’ (25) and one of its strategies is to improve the quality of the primary reproductive health services (109, 137). As more and more couples practise contraception, the quality of family planning services becomes increasingly important (37). In Iran, 56% of reproductive-age married women use modern contraceptives. However, more than one third of all pregnancies are unintended, and many of them occur whilst using the contraceptive methods (25). Moreover, as women of reproductive age constitute 58% of the whole female population (see figure 1-4 in page 16), providing sexual and reproductive health services with high quality to ensure their health and rights will highly benefit the whole community.

Furthermore, the national health policy mandates delivery of free and comprehensive health services for all through the primary health network (103). However, many people in need, including young unmarried people, do not use any services provided at the facilities (104, 108). Improving the quality of the services may remove many of the existing barriers and facilitate access to the services.
A starting point in formulating policies to achieve the national goals is an analysis of the current situation (138). Quality measurements are necessary to find weaknesses. We cannot know how to improve the quality of services until we have quality measures that are appropriate to show where the weaknesses are (139). Quality of clinical care is a critical measure of health system performance. Measuring and reporting on quality has proven to be a useful tool to improve quality (140).

For years, the medical community, especially in low- and middle-income countries, concentrated on measuring structural inputs, such as doctor-patient ratios or equipment counts (139). As it is shown in the quality framework by Peabody and others, such elements only remotely explained variation in outcomes. Instead, the process, what are actually done during encountering with clients, is the proximate determinant of health outcomes (33).

Moreover, for design and implementation of quality improvement programmes, a detailed understanding of the perspectives of clients and providers is needed (21, 141-144). According to WHO, to achieve the goal of ‘health for all’, citizens’ expectations about health care must be taken into account and their voice and choice decisively influence the way in which health services are designed and operate (145). Studies on clients’ perspective are needed to find out what they want, need and experience in health care (144). It can also generate an in-depth understanding of operational factors affecting service delivery as well as of the socio-cultural context of a programme (143). Understanding providers’ perspectives on constraints experienced in the delivery of reproductive health services, and recognizing the potential for improving the quality of care can facilitate the delivery of high-quality reproductive health care (21).

When this study was initiated there were only a very limited number of quantitative studies on quality of family planning (131) or other primary reproductive health services (128, 130) in the country, that had been published in national journals. However, only one of them (128) was known to the research team due to lack of a database for national journals at that time. The findings of that study on the quality of pre-natal care conducted in 1998 had shown many areas in need for improvement.

Research on clients’ and providers’ perspectives on quality of care has globally received little attention (21, 144, 146, 147) and there was only one published study in this area in Iran (129). Considering that most of the Iranian population lives in urban areas and urbanization is increasing (80), it is important to pay particular attention to these areas. Therefore, this thesis aimed to investigate the quality of the services in an urban setting to identify areas for improvement. Furthermore, we used some of the findings to develop and test an intervention using peer education to improve knowledge and skills among providers.
2 OBJECTIVES

General objective
To describe and explore the quality of public primary reproductive health care services, especially family planning, in an urban area of Iran, in order to identify areas and measures for improvement.

Specific objectives
1. To describe the quality of public family planning services in an urban area of Iran (study I);

2. To explore women’s perceptions and experiences of the quality of reproductive health care services with a focus on family planning services provided at urban public health facilities (study II);

3. To explore primary reproductive health providers’ views on their own roles and tasks in the present organization and perceived barriers to attaining high-quality services (study III);

4. To evaluate the feasibility and effectiveness of a peer educational intervention, based on a needs assessment design, on the providers’ knowledge and reported performance in family planning services (study IV).
3 METHODS

3.1 STUDY SETTING

The study was conducted in 2005-2006 at family health units at the public health facilities in Tabriz, the capital city of East Azerbaijan province (figure 3-2).

Figure 3-2: Map of Iran (148) and East Azerbaijan (149)
Tabriz, with a population of 1.4 million (90), is located in the northwest of Iran and is the fourth largest city of the country. Most of the socio-economic and health indicators in this city are about equal to the mean of the whole urban Iran (figure 3-3). In 1996, East Azerbaijan province ranked 13 on HDI and GDI, and 15 on GEM out of 26 provinces in Iran (150).

Based on the data from Iran’s census in 2006, there were 447 000 women aged 15-49 (63% of all female population, figure 3-3) in Tabriz, of which 66% were married, 31.5% never married, 1.5% without a spouse due to the death of their husbands, and 1% divorced (90). Based on Iran’s DHS (2000), in urban areas of East Azerbaijan, the mean age at first marriage for women was 20 and for men 26 years. Total fertility rate was 1.8. One third of all pregnancies were unintended (16% unwanted and 19% mistimed). About 55% of married women used modern contraceptives (contraceptive pills 19%, IUD 13%, female sterilization 13%, condoms 6%, DMPA 1.7%, male sterilization 0.9% and Norplant implant 0.5%) and 20% used a traditional method (figure 1-6). About two thirds of women using modern contraceptives were obtaining these from the public sector (25).

There is one district health centre which is responsible for the administration of the primary health care network in the city. In the study period, public primary reproductive health and child health services on the front-line were provided by about 240 female staff working at the family health units of 36 health centres and 40 health posts of the city. In addition to being responsible for maternal health, family planning and child health, the providers were also responsible for other services such as some school health care. About 64% of the providers were midwives (46% with four and another 18% with two years of university education), 24% had some other university health

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**Figure 3-3: Some socio-economic characteristics in Tabriz and urban area in the whole of Iran**

* in household; † among married women aged 15-45; ‡ of all female population

Source: Data from the 2006 national census/survey (90)
education (4%, four and 20%, two years), and 12% had no university education (mostly associate nurses). At each facility, one of the family health unit staff was in charge of the unit. The in-charges also provided services in the same way as the other staff.

There is a common record file for all eligible members of each household visiting the facilities. Each provider covers 300 to 800 households, keeps their record files, and provides all the services that the clients need during the same visit, or refers them to another provider at the same or other facilities. The providers were also responsible for vaccinations at about one third of the facilities, where there was no special staff member for that task.

There was at least one general physician at the health centres but none at the health posts (clients were referred to the health centres if necessary). One of the physicians also had the responsibility for management of the centre and dependent health post/s and did annual staff evaluations to identify the rate of individual annual salary increment. Technical supervision was mostly done by supervisors from the district health centre.

Two one-day meetings were carried out at the district health centre for the in-charges, one day for the in-charges of health centres and one day for the health posts’. In these meetings, the district health centre supervisors inform the in-charges about new guidelines or instructions.

Most of the providers’ continuous education was in the form of 1-3 days courses conducted at district health centres, while there were no organized educational meetings at the facility level among the providers. Most of family health providers working at the public health facilities in Tabriz were educated about the new guidelines (120) in one day meetings during April 2005.

### 3.2 OVERALL STUDY DESIGN

Quantitative (study I) and qualitative (study II, III) methods have been combined in this thesis to examine quality of the services and barriers to high quality (figure 3-1). In study I, we aimed to describe the quality of care using pre-defined process and outcome indicators. Guided by the findings of this study, we adopted a qualitative design using FGDs aiming to further explore the perceptions, experiences and expectations of the clients of quality of care (study II), and the barriers, as perceived by providers, to attain high-quality reproductive health services (study III). The providers’ views of their own roles and tasks in their present organisations were also explored (study III)

In study III, the providers emphasized need for up-to-date information and mentioned inadequacy of their continuous education as one of the barriers for high quality services. Considering various tasks of the providers, it seemed difficult to address all their educational needs by conventional methods alone. Participation in out-of-workplace training would also imply absence from work for a period of time, which could
impede the quality of the services. Using the regular monthly meetings for education of the in-charges and supporting them to disseminate the education to their peers at their workplaces seemed to be a suitable approach for addressing some of the providers’ educational needs. Thus, we decided to evaluate the feasibility and effectiveness of peer education at the workplace in all health centres and health posts (study IV).

Figure 3-1: Overview of the four studies
3.3 STUDY I

Participants
The study was carried out during three weeks beginning in mid-December 2005. Half of all the 36 health centres and 32 eligible health posts were randomly selected. A ‘Take-all-on-a-randomly-chosen-day’ strategy was used for the observations and interviews (151). At the selected facilities, 469 family planning client-provider interactions and some selected clinical procedures were observed, and 416 exit interviews were conducted with the previously observed clients, for two days at each facility (9-18 observations/interviews per facility). All providers and clients agreed to be observed. Fifty-three clients (11%) declined participation in the interview, due mainly to lack of time.

Measures
Two of the three parts of the assessment tool ‘Quick Investigation of Quality’ (QIQ) (151) were used for measuring quality after some modifications and confirmation of its content validity by five experts. These two parts are 1) a checklist for observation, and 2) a questionnaire for exit interviews with family planning clients. The dimensions measured were client-provider interaction, choice of method, information provision, provider performance in clinical procedures, client satisfaction and client knowledge. Four teams, each comprising one observer and one interviewer (other than the health facilities’ staff), performed data collection after three days of training.

Data analysis
Data analysis was done using Intercooled Stata 8 (Statasoft, Inc, Tulsa, USA). Chi square and Fisher exact tests were used to identify associations between some variables.

3.4 STUDY II, III

Participants
To select women for the FGDs, three health centres were purposively chosen, located in low (L)-, middle (M)- and high (H)-income areas in order to represent different socio-economic conditions. Altogether, 53 participants were selected (L 17, M 20, H 16) from lists of all married women of reproductive age, who were currently using or had previously used the services at the public health centres. The lists also contained information about the contraceptive method the women used in March 2005 and the source of supply (from public or private clinics or from pharmacies). The idea was to compose the groups homogenously with regard to the use of contraceptive methods (modern or traditional), and the source of supply. However, at the time of conducting the FGDs, many women had already changed their method and source of supply, and no systematic comparison could be made between the groups in this regard. The
principal investigator (PI) called the selected women by telephone and invited them to take part in the study.

Nine FGD sessions were conducted with clients, three in each area with 4-8 participants in each. The mean age of the participants was 33 years, ranging from 20 to 49 years. They had on average two children, with a range from zero to six. All except two of the participants were housewives. Six were illiterate, the majority had 7-12 years of education and six had a university education. The most common contraceptive methods used were IUDs, pills and coitus interruptus.

For FGD with the providers, registered staff members with more than one year of work experience at the family health units were selected purposively as participants from different facilities. For the selection, the PI attended two in-service education meetings conducted for about 100 providers from almost all family health units in Tabriz. After a brief explanation of general aim and method of the study, a brief questionnaire was distributed asking about personal characteristics and willingness to participate in the study. One of the eligible providers from each facility, who had expressed willingness to participate, was invited to take part in the study considering their age, years of services and educational level to have higher diversity.

A total of four FGDs were conducted (each with 4-6 participants), two with midwives and two with other family health providers, in a quiet and comfortable place other than their workplace. The age range among the participants (20 women) was 26 to 51 with a mean of 37 years. In the two groups of midwives, ten of the midwives had four years of university education, and two midwives had two years. In the two groups of other family health providers, one had four, five had two years and two had no university education (associate nurse).

Data collection

In these studies, we chose the method of FGD. Semi-structured guides were developed by the authors, tested in pilot FGDs and were utilized in the discussions. Probing was done according to the reflections presented by the participants, seeking to uncover diverging views as well as consensus in the group.

The discussions with the clients covered participants’ perceptions and experiences of the services. The discussions with the providers covered aspects related to the providers’ roles and tasks in the services, the perceived barriers to high-quality services, staff supervision and evaluation, and continuing education.

The PI acted as a moderator while an experienced midwife took notes. After each FGD, a preliminary analysis was performed by the PI and her colleague the same day. If certain issues were felt to be unclear or if new issues came up, these could be explored further in the following days’ FGDs thus building up the understanding of the topic, as is commonly done in qualitative research. All discussions with the clients were conducted in Azerbaijani (local language) and three of the discussions with the providers were conducted in Persian (formal national language) and one in Azerbaijani, based on the participants’ convenience. Each FGD lasted 90-150 minutes.
and was audio-taped. Each participant also answered a set of questions about their personal characteristics.

Data analysis
The recorded tapes were translated into Farsi and transcribed verbatim by the PI or the note-taker, and all were checked by the PI. All parts of the first two FGDs with each group (clients and providers) and relevant parts of the others were translated into English by the PI. One of the Iranian co-authors verified the accuracy of the translations. Qualitative content analysis was used for analyzing the data (152). The transcribed material was coded and similar codes were grouped into sub-categories under main categories. One major and one cross-cutting theme emerged from the analysis of the clients’ perceptions, and one major theme emerged from the analysis of the providers’ views. Primary coding was done by the PI and discussed between the co-authors to reach an agreement and allow for further analysis. The quotations used from the transcribed discussions are identified by their FGD number (for the clients’ groups representing different income areas: CL1-CL3 for the low-; CM1-CM3 for the middle- and CH1-CH3 for the high-income area; for the providers’ groups: midwives P1 and P2; other family health providers P3 and P4).

3.5 STUDY IV

Participants
All primary health facilities with more than one staff member working at their family health unit and all the family health staff members providing front-line family planning services at those facilities were eligible to participate in the study.

The study was done in three phases. In phase one, a self-administered questionnaire, used to determine educational needs of the providers, was filled in by 64 in-charges attending a regular monthly meeting. Based on the results of phase one, an educational programme was designed and the questionnaire was modified to be used for the follow-up tests.

In phase two, half of the 74 eligible facilities were assigned to the intervention group by simple randomization among each type of the facilities (HCs or HPs) separately. The educational programme included eight pages of written material and approximately two hours face-to-face discussion session with more emphasis on the weak points identified in the needs assessment. It was applied for the in-charges of the intervention facilities (for the HCs and HPs separately) during the following regular monthly meetings, where 34 in-charges attended. Then these in-charges were requested to carry out a similar kind of programme with their peers. Their task was to distribute the written materials and to arrange at least two hours peer discussion in one or more sessions on the content of the material at their workplace within one month.

In phase three, follow-up tests were performed by all the in-charges attending at the monthly meetings one (follow-up I) and 27 (follow-up II) months after the educational
programme. Such tests were also done by the peers at their workplace facilitated by the in-charges within one month after the in-charges’ tests.

Measures
The questionnaire used for the needs assessment consisted of four parts; part 1: 28 general knowledge items with ‘correct’, ‘incorrect’ and ‘don't know’ options; part 2: Questions related to eligibility for using COCs, DMPA and Cu-IUD in 12 conditions; part 3: five open-ended questions; and part 4: eight and four questions respectively on the provider’s own performance during IUD insertion and DMPA injection.

Based on results of the needs assessment, some modifications were made in the questionnaire to prepare it for the post-tests. The performance questions were excluded at follow-up I due to time limitation (only one month) for any change of performance. Therefore, the post-test questionnaire consisted of three parts; 19 items in part 1 (general knowledge), 22 questions in part 2 (eligibility of the methods), and five open ended questions (part 3). The questionnaires also include a question about the providers’ views on usefulness of the educational programme (only in follow-up I) and some questions on the characteristics of the providers. The same post-test questions plus the performance questions (with a few modifications) of the needs assessment questionnaire were used at follow-up II.

Data analysis
We calculated the proportion of correct responses (percent of maximal possible score) for each participant for each part of the questionnaire, assigning a score of 1 for each correct response and 0 for incorrect, ‘don’t know’ or no answer; considering the same value for all items or questions. The mean of the percentage scores in each of the three parts, giving weight 1 to parts 1 and 2, and 0.5 to part 3, was considered the total knowledge percentage score for each participant.

The performance items had five options (always, mostly, sometimes, seldom, never). We assigned a score of 1 for each ‘always’ or ‘mostly’ response in correct performance items and for ‘never’ or ‘seldom’ for incorrect performance items, and 0 for others with excluding unanswered ones which were less than 3% in both groups.

Using Intercooled Stata 9, Chi square was performed for comparing proportion of correct answers and appropriate reported performance in intervention and control groups. Multiple linear regressions were used for identifying effects of the intervention on the mean percentage scores of knowledge and also in comparisons between follow-up I and II. All tests were performed after defining facility as the unit of randomization.

3.6 A COMPLEMENTARY STUDY
In this study, we included the health facilities which were only operating under supervision of the district health centre. In total, 65 health centres and health posts in Tabriz were divided into three economic strata based on the independent views of two
persons who knew the location of the facilities and the economic condition of the areas. Where there was inconsistency between their views, another person’s assessment was asked for and decision was made based on two of the three persons’ consistence assessments.

Workload and turnover of the providers at each facility were calculated using the regular monthly service statistics reported by the providers to the district health centre and also records at the district health centre on the characteristics of the providers working at family health units of health centres and health posts in 2005 and 2007. Because at some of the facilities, especially health posts, vaccination was done by the same staff who provided other services like family planning, comparisons were done based on all staff working in family health units in the centres and posts including those who don’t provide family planning services like vaccinators. One-way ANOVA and Bonferroni were used for comparison of average workload and turnover among facilities located in the three different economic areas.

3.7 ETHICAL CONSIDERATION

Permission to undertake the study was obtained from the Ethics committees of MOHME, and Tabriz University of Medical Sciences and also from authorities at the district health centre and at the health facilities.

In study I, informed consent was obtained from all clients and providers before they were observed or interviewed. In study IV, the providers gave informed consent before answering the questionnaire or participating in the educational meetings. In the both studies, anonymity of participants was ensured. In study II and III, the selected women and providers were invited to participate at the FGDs after information on the overall aim of study. At the beginning of each FGD session, all participants were again informed about the study and of their right to refrain from participating. The participants were also informed that the discussions were to be audio-taped, but that their complete confidentiality was guaranteed. In study II, the women were very eager to get response to their questions. After the FGDs, the PI stayed to respond to their queries.
4 FINDINGS

4.1 STUDY I

Quality of public family planning services in an urban area of Iran

Client characteristics

All 416 interviewed clients were married women with a mean age of 29.4 (SD: 7.0) years. Only 5% were first time visitors to the facility for family planning services. Twenty three percent of the women reported that their last pregnancy was unwanted and among those, 21 (22%) had their pregnancies terminated. Midwives attended 62% of the clients. Table 4-1 summarizes other characteristics of the interviewees.

Table 4-1: Some characteristics of the clients (based on the exit interviews, n=416*)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>n (%)</th>
<th>Characteristics</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational level</td>
<td></td>
<td>Intention to have another child</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>34 (8.3)</td>
<td>Yes, in &lt;24 months</td>
<td>12 (3.0)</td>
</tr>
<tr>
<td>1-5 years</td>
<td>122 (29.6)</td>
<td>Yes, later</td>
<td>116 (28.4)</td>
</tr>
<tr>
<td>6 or higher</td>
<td>255 (62.1)</td>
<td>No</td>
<td>280 (68.6)</td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
<td>Main reason for the visit</td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>35 (8.5)</td>
<td>Re-supply / routine check-up</td>
<td>328 (80.0)</td>
</tr>
<tr>
<td>Unemployed</td>
<td>377 (91.5)</td>
<td>Discuss a problem about contraceptive method currently used</td>
<td>8 (2.0)</td>
</tr>
<tr>
<td>Number of living children</td>
<td></td>
<td>New Clients</td>
<td>74 (18.0)</td>
</tr>
<tr>
<td>0</td>
<td>3 (0.7)</td>
<td>Receive a contraceptive method for the first time ever</td>
<td>17 (4.1)</td>
</tr>
<tr>
<td>1</td>
<td>205 (49.5)</td>
<td>Switch or restart contraceptive method</td>
<td>49 (12.0)</td>
</tr>
<tr>
<td>2</td>
<td>143 (34.4)</td>
<td>Obtain counselling about a contraceptive method</td>
<td>8 (2.0)</td>
</tr>
<tr>
<td>3+</td>
<td>64 (15.6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>1.7 (1.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age of the last child (months)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-6</td>
<td>92 (22.3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7-24</td>
<td>141 (34.3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25+</td>
<td>179 (43.4)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 1-8 missing cases in some characteristics

4.1.1 Process indicators of quality

Provider-client interaction

To a great extent the providers treated the clients respectfully, used the client’s record and discussed a return visit. Privacy was not assured in one-third of the cases.
Over two-thirds of the clients were not encouraged to ask questions or to raise concerns (Figure 4-1).

A desire for additional children was discussed with 16 of the 83 new clients (19%), the husband’s opinion on contraceptive methods with 11 of them (13%), and AIDS/HIV with none. Only one client was assured of confidentiality and three were given pamphlets or brochures about contraceptive methods.

<table>
<thead>
<tr>
<th>Respectful treatment of clients</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greeted the client/Answered her greeting</td>
<td>81</td>
</tr>
<tr>
<td>Offered the client a seat</td>
<td>39</td>
</tr>
<tr>
<td>Did not blame the client</td>
<td>86</td>
</tr>
<tr>
<td>Had eye-contact with the client</td>
<td>92</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interactive communication</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asked open-ended questions</td>
<td>34</td>
</tr>
<tr>
<td>Encouraged the client to ask questions</td>
<td>28</td>
</tr>
<tr>
<td>Asked client her concerns with any method</td>
<td>23</td>
</tr>
<tr>
<td>Considered the client's privacy</td>
<td>68</td>
</tr>
<tr>
<td>No interruption by another person</td>
<td>88</td>
</tr>
<tr>
<td>Used the client’s record</td>
<td>90</td>
</tr>
<tr>
<td>Discussed return visit</td>
<td>89</td>
</tr>
</tbody>
</table>

**Figure 4-1: Provider performance during interaction with the clients** (based on the observations, n=469)

Exit interviews showed that most clients (79%) were not asked about their reproductive intentions before starting to use their current method. A return visit was discussed in almost all of the cases, and 40% were encouraged to return to the facility at any time if they had questions or problems. One-fourth of the clients who were applying a contraceptive method before the visit had the opportunity to discuss whether they had had any problems with the method.

**Choice of method**

The observations showed that of the 70 clients who requested to start or switch to a new contraceptive method, 61 (87%) had had a specific method in mind; 37 (62%) received the preferred method on that visit and 14 were asked about the reason for their choice. Common reasons for not providing the preferred method to the other 23 clients were contraindications (9 cases), and the need for women to be menstruating to have an IUD inserted (7 cases). Of the 291 clients who attended to obtain re-supplies, 93% received them as planned. Being out of stock was the most common reason for not providing a given contraceptive (15 cases). The results of the exit interviews in this area were concordant with the findings during the observations.
Information provision

The observations showed that most new oral contraceptive (OC) users were instructed by the provider on how to use them while condom users were not given instructions (Table 4-2). Of 35 new OC, DMPA, or IUD users, less than one-third were informed about at least one of the possible side effects and one-tenth were informed of at least one of the warning symptoms (symptoms for which medical advice must be sought) that could occur during use of the chosen method. There was a significant difference in the provision of information about side effects between the new IUD and OC users. Six of nine new IUD users were instructed with regard to at least one of its possible side effects compared with four of 24 new OC users (p=0.005).

Table 4-2: Number of correct instructions given by the providers on the chosen method to new clients (based on the observations)

<table>
<thead>
<tr>
<th>Items</th>
<th>n</th>
<th>Items</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oral contraceptives (n=24)</strong></td>
<td></td>
<td><strong>Condoms (n=22)</strong></td>
<td></td>
</tr>
<tr>
<td>Daily use</td>
<td>24</td>
<td>Do not reuse</td>
<td>12</td>
</tr>
<tr>
<td>Pill-free interval</td>
<td>21</td>
<td>Use each time</td>
<td>16</td>
</tr>
<tr>
<td>What to do in case of missing one pill</td>
<td>18</td>
<td>How to use condom</td>
<td>1</td>
</tr>
<tr>
<td>Common side effects (at least one)</td>
<td>4</td>
<td>How to use ECPs*</td>
<td>20</td>
</tr>
<tr>
<td>Return signs (at least one)</td>
<td>2</td>
<td>How to use lubricant with condom</td>
<td>0</td>
</tr>
</tbody>
</table>

*Combined emergency contraceptive pills

According to the interviews, 63% of the 268 clients, who had used a method less than 12 months, had received information about at least one other method, in addition to their currently used method, before starting its use. OCs had been mentioned in 61%, condoms in 38%, an IUD in 38% and DMPA in 19% of the cases, as available methods.

![Figure 4-2: Clients’ views on the quality of how the provider informed about the selected contraceptive method (n=268*)](image)

*Only the clients who had started using the method within the last 12 months preceding the survey
**n= 184, Condom users were excluded
The clients were also asked about the quality of the explanation concerning the chosen method. Most of them stated that there was no or only limited information about possible side effects, what to do in case of problems, and the inability of the method (except for condoms) to protect against STIs/AIDS (Figure 4-2).

**Provider performance in the clinical procedures**

Only 31 pelvic examinations for IUD control or removal, ten IUD insertions and five DMPA injections were observed. Some of the recommended clinical procedures like ‘cervix cleaning and uterus sounding before IUD insertion’, and ‘disposal of sharp objects in proper container’ were done in all cases. Performance in some other procedures such as ‘explaining speculum insertion procedure to the client’ (4 of 41) and ‘conducting bi-manual pelvic examination before IUD insertion’ (2 of 10) was low. Cleansing of the hands with alcohol was not used at all. Hands were washed before only one of 41 IUD procedures. Used instruments were not placed in a disinfectant solution in any of the 41 cases instead they were placed in an antiseptic solution in 31 cases.

### 4.1.2 Outcome indicators of quality

**Client satisfaction**

Figure 4-3 summarizes certain aspects of client satisfaction. Reported waiting time was less than 15 minutes in 66% and less than 30 minutes in 89% of the cases. Five percent of the clients did not believe that the information they shared about themselves with the provider would be kept confidential and 29% were uncertain about this. Forty five percent said that the amount of information received during the visit was ‘insufficient’. The proportion was significantly higher among continuing clients than among new clients (48% vs. 30%, p= 0.01).

<table>
<thead>
<tr>
<th>Area</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waiting time (not too long)</td>
<td>87</td>
</tr>
<tr>
<td>Provider politeness (good/very good)</td>
<td>89</td>
</tr>
<tr>
<td>Feeling comfortable to ask questions (yes)</td>
<td>83</td>
</tr>
<tr>
<td>Amount of information given (about right)</td>
<td>46</td>
</tr>
<tr>
<td>Confidentiality of the information shared with the provider (yes)</td>
<td>66</td>
</tr>
<tr>
<td>Privacy during counselling (yes)</td>
<td>54</td>
</tr>
<tr>
<td>Privacy during pelvic examination (yes)*</td>
<td>87</td>
</tr>
<tr>
<td>Cleanliness of examining couch (perfectly clean)*</td>
<td>70</td>
</tr>
<tr>
<td>Provider trying to understand the nature of her problem (yes)†</td>
<td>55</td>
</tr>
<tr>
<td>Satisfaction with the advice or treatment for the problem (yes)†</td>
<td>49</td>
</tr>
</tbody>
</table>

**Figure 4-3: Client satisfaction with different aspects (n=416)**

* among 46 clients who had a pelvic examination that day
† among 74 clients who had a problem with currently used contraceptive method
Client knowledge

The clients were asked questions about the contraceptive method(s) chosen that day, those currently used, and those used within the last 12 months preceding the survey. Among 203 COC users, all but one knew it should be taken daily, three out of four knew about the seven days pill-free interval and about the same proportion knew what to do in case of a missed pill. Among 80 POP users, all but one knew it should be taken daily at a certain time, 82% knew there was no pill-free interval and 11% answered correctly on what to do if one pill was taken with a delay of three hours or more. Among 69 women using a copper T380A IUD, 83% said that the strings of the device should be checked by health staff. Among 165 condom users, all but two knew that condoms should not be reused, 84% said combined ECPs (current method in the city at the study period) should be used if the condom was damaged and 64% of those knowledgeable clients knew how to use the pills.

4.2 STUDY II

Women’s perceptions of the quality of reproductive health services

The findings are presented under five main categories. Comments about public versus private services were made by women in all groups but no group comparison could be made. Instead we have collected opinions expressed about public/private services in the first category which mainly focused on access and safety. With the exception of this category, the group discussions mainly referred to the situation at public centres.

On the whole, the FGD participants conveyed that the family planning services were of better quality now compared with conditions in the past. However, they felt that there was still a lot of room for improvement. A major theme, emerging in all categories, was the women’s sense of having the right to make autonomous reproductive health choices and to be treated with dignity and respect. A second theme, cutting across several categories, centred on the women’s wish for their husbands to be more strongly involved in family planning and sexual counselling.

4.2.1 Comparing public and private services: a matter of safety and accessibility

In all three socio-economic settings, the participants appreciated the greater accessibility of the public services for women compared with that of the private services. The public services were cheaper (no or low cost), they were often close to the women’s homes, and the providers of the services were women.

“Public facilities are located so that everybody can attend them conveniently without needing their husbands to accompany them. Our husbands don’t say anything, even if we go there every day” (CH1).
Respondents mentioned as practical problems with the public facilities their opening hours (not suitable for most men and employed women) and long waiting times, when the providers were busy doing managerial work or attending to personal matters:

“After a long waiting time, when it is our turn, they say ‘we are writing records. Come back another day’. We had to go back [without getting the services] and we don’t have any intention to return again... They think we are housewives and don’t have any work to do” (CL2).

The public clinics were perceived by several participants as being more reliable than the private ones with regard to continuity and responsiveness to women’s needs:

“If a problem occurs for a woman at a private clinic, the provider can say ‘I don’t want to continue giving services to you’, but it isn’t so here; public health providers have to give us the services in any situation” (CM1).

However, in some groups there were doubts about the competence of public providers compared to private ones. Such complaints could be related to the management of side effects of contraceptive methods, which many women had experienced, or to the providers’ insistence on using a certain method rather than one that the woman preferred. Some women were uncertain of whether the side effects from the IUDs were due to their poor quality or to providers’ lack of knowledge and skill in handling them. Public providers were said to not always pay attention to reported, side effects of certain methods, even major ones like a severe headache from combined oral contraceptives (COCs) or severe menorrhagia from IUDs, or to exaggerate side effects of others like amenorrhea with depot medroxy-progesterone acetate (DMPA). This might result in a woman turning to a private clinic instead. For example, one woman had had heavy bleeding problems with an IUD from a public clinic but got help at a private clinic:

“I always had a problem with the IUD. After a year and a half, I went to a private office and the doctor said ‘the IUDs at the public centres are of low quality’... He inserted an IUD of higher quality for me and instructed me ‘only 10 days no intercourse’. I had little discomfort with that and used it for five years” (CL3).

However, sometimes the private clinics would also give information, which turned out to be wrong and have adverse consequences like unintended pregnancies.

“I had taken the pills for nine years. I had mood disturbances. The private clinician said ‘Don’t use it any more. You won’t get pregnant for one to one and a half years after stopping’. I got pregnant within a few months (CL2).

The routine at public facilities of only dispensing enough contraceptive pills for one cycle and a limited number of condoms per month was criticised by many participants as a waste of their time. This routine was sometimes a reason for women to get supplies from outside the public sector, mainly at private pharmacies.

More flexible opening hours and ease of obtaining contraceptives when they needed, as well as perceived higher quality of the IUDs made some women turn to the private
clinics or obtain the contraceptives directly from pharmacies. However, respondents mentioned several problems in the private sector such as high costs, inadequate privacy and lack of up-to-date information. There were no apparent differences between the groups (L, M and H) in this regard.

4.2.2 Expect respectful treatment and privacy

Asked what they expected from the services, the first thing mentioned in all groups was to be treated with respect and be made to feel welcome. A warm greeting from a provider could be enough. This often happened but there were exceptions. In a low-income area group one woman had an opposite experience:

**"She [the provider] shouted at me ‘why you are late for your child care control visit’…. It’s now about a year and a half since I came to this centre. I prefer to buy the pills from a pharmacy and not come here to be shouted at”** (CL2).

There were diverging views about the degree of privacy at the clinics. Some felt that it was satisfactory but for others the lack of privacy was at times discouraging. There was no clear pattern in this regard, but lack of privacy seemed to exist in all income areas. This could be due to space limitations where two or more providers had to share the same room or simply to providers’ carelessness:

**"Among all the people and from a distance of some metres, she asks me ‘what’s your problem?’ . Nobody can say ‘I have an [vaginal] infection’ in front of all the people... I want to tell this lady: ‘Go and sit in your room so that I can come to you and tell you my problems!’ With such behaviour from the provider I regret that I ever came to this clinic and I won’t return”** (CH2).

4.2.3 Want to make own contraceptive choices

Women in all groups stressed that they wanted to choose their contraceptive method themselves in agreement with their husbands and that they needed enough information to be able to choose the right method, use it safely and know when to seek help. Enough time, careful listening and encouragement to raise concerns and ask questions were described as necessary conditions to be able to choose the best contraceptive for one’s own need. Several groups were critical in this respect. They felt that they were not always listened to and that the providers made judgements too quickly, sometimes resulting in misunderstandings about contraceptive methods and their side effects.

**"If we have enough information about all of the methods, we can select better. They should tell us the advantages, disadvantages and side effects of each method so that everybody can select a suitable method considering her own situation and use it effectively”** (CM3).

There were also complaints that providers were sometimes biased in their advice about which contraceptive method to use. For example, some women in a low-income area were prescribed a permanent method without any alternatives offered:
“Although I had said I didn’t want it, she gave me a form and said ‘go for tubal ligation and bring me back the form’. I neither went for the tubal ligation, nor came back here again. Now I have been buying the supplies from pharmacies for two years” (CL1).

“I requested the injectables. She [the provider] shouted at me and said ‘I have told you to go for tubal ligation. I can’t give you the injectables.’ It’s now about one year since I have been getting the injectables from a private midwifery clinic” (CL2).

Other participants had not got any feedback at all from the providers on their method of choice.

“We come and say ‘give us the pills’. They give us the pills. We say ‘give us condoms’. They give us condoms. They give us what we want. They don’t give us any information about other available methods” (CL1).

Several groups emphasized the need for improving the services for IUDs and injectables.

### 4.2.4 Use of multiple methods and channels of communication

The main methods of education provided at the public centres were individual oral education of women. There were few, if any, pamphlets or other written materials available, no group education or use of audio-visual media. In this regard, groups reported no differences or only minor ones in terms of the socio-economic areas.

Most women were critical about the insufficient use of other channels of information and education. Printed materials and videos were considered very important, in particular to bring home to their husbands. Many women did not know of any available books to meet their needs. They were shy to buy books about family planning and sexual health from bookstores. Instead, they suggested, such books should be sold at the health centres.

Others, especially less educated women, were more comfortable with face-to-face education in groups where they could get immediate feedback. Group education was considered very useful for general issues and also for culturally sensitive and stigmatized issues, like sexual health and sexually transmitted infections, which people might feel shy to talk about in private. Such groups should be held separately for men and women.

“If a provider talks about this with me directly, I may feel shy. But when she talks to the group, I can tell myself that she doesn’t mean me but I can learn about those issues” (CH1).

Almost all participants considered that only educating the woman was not enough. Many women in all three socio-economic areas regretted that their husbands could not or would not come with them to the centres for family planning services. Stories were told of how women had tried to bring their husbands:
“He was saying ‘I can’t go for counselling in front of so many women.’... He came here but because of the crowding, he left again” (CH2).

Couple counselling was suggested as an important method, especially for women who did not feel comfortable to negotiate with their husbands on sexual and reproductive health issues. Most preferred a woman for couple counselling. Many considered peers as a very useful information channel:

“Female friends have current knowledge and experience and one feels at ease to ask, whereas with older people, like mothers, one may feel shy” (CH2).

“Words don’t stay stagnant. If I get information, I will share it with 10-15 persons who will tell 10-15 persons” (CM3).

4.2.5 Marital counselling - a big unmet need

The lack of holistic care to address all reproductive and sexual problems was mentioned in almost all the sessions, but was most intensely discussed in one group in a high-income area. In this group, sexual problems were raised spontaneously by several participants and perceived as a serious and common problem among married Iranian women of all ages, especially in early marriage and after the age of 40. A woman who was 30 years old and had been married for 10 years said:

“I had been living with my husband for six to seven months (after marriage) without having a sexual relationship ... It was a psycho-emotional problem... I always thought about these things as being very bad, ugly and awful. I think it caused me problems. I don’t want parents to tell their girls bad, bad, bad.... We put pressure on our girls, so that they get caught in the contradiction and always see these relations as bad, even after marrying their own husbands” (CH1).

Participants in this group complained about the lack of attention to women’s sexual problems in the Iranian society, and that health providers did not have enough knowledge and competence to deal with them.

“Even physicians think that women’s sexual problems aren’t important. Only sexual problems in men are considered important” (CH1).

Participants felt that many men did not understand women’s sexual problems, mostly due to lack of knowledge, and put pressure on their wives. Therefore, the lack of couple counselling at the public health centres was considered a major disadvantage:

“I think that couples’ sexual and psycho-emotional problems are a thousand times more important than family planning, especially for Iranian women, who have such great difficulties in this field. They can’t talk about such problems with their mothers or relatives. What place can be better than the health centres! But nothing has been done...I have never heard somebody say ‘I had such a problem; I went to the public health centre. They gave me good suggestions’” (CH1).
4.3 STUDY III

Barriers to high-quality primary reproductive health services

In response to the opening question 'how would you describe the ideal reproductive health service?' the unanimous opinion of the FGD participants was that good services can first and foremost be judged by the clients' views and the benefit they derive from the services. Seeing the clients satisfied, the providers felt pleased and knew they were doing a good job. They valued their co-workers' commitment to helping each other and expressed a sense of responsibility to improve the services. They appreciated the high-quality of supplies and up-to-date information within the public services, compared to the private.

However, the dominant theme emerging from all four FGDs was the providers' frustration about a number of factors which they felt decreased their productivity and prevented them from providing high-quality services, as expressed by two participants in one of the discussions:

"We try to give high-quality of services but we really can't." "At present, our productivity is only about thirty percent." (both from P1)

4.3.1 Multiplicity of tasks and incompatibility with the providers' basic training

A major issue was the providers' opinion that they were responsible for too many different tasks, which sometimes led them to neglect clients' needs. They were especially unsatisfied with their duty of providing school health care for which they felt unprepared and with insufficient competence. This was particularly true for the midwives. Having to spend a lot of time with the school services, and acquiring the necessary competence for this, took a lot of their time, which they would have preferred to spend with their clients.

They suggested that if one special person was assigned to the school health services, the quality would improve. The same suggestion was made with regard to vaccination, in order to ensure effectiveness and minimize vaccine wastage. They were also concerned that clients would become too dependent on a single multipurpose provider rather than benefiting from providers with different competencies. In their opinion, the allocation of tasks ought to be more specific and not distributed among all the providers.

Linked to the discontent with the multiplicity of tasks was a sense of not being assigned duties according to one's individual educational fields and levels. This discontent was particularly pronounced among midwives with higher education who expressed frustration over the discrepancy between their current duties and their own basic training. They felt that they were losing their skills. One midwife with a BSc
degree said:

    Our specialty isn't used at all. We aren't used as midwives…we have been forgotten as midwives… (P1)

They had also experienced instances where clients did not value their services very highly, and felt that if they could work in the area in which they had been trained, the clients would have a greater appreciate of their services.

    She (the client) accepts a private midwife’s prescription but she doesn’t accept ours. Our clients look at us as people with low education. (P2)

### 4.3.2 Suboptimal supervision and management

Competent supervision and management by both facility and district level managers was seen by all participants as a necessary condition for all staff to be able to provide high-quality services. According to the participants, good supervision and management basically meant giving support and guidance, considering both clients’ and providers’ needs, paying attention to the quality of the services provided, and trying to solve problems. However, many participants were very critical of the way in which supervision and management functions were carried out. They felt that many managers did not value their work according to its merit. Rather than giving support and guidance, the managers mainly highlighted negative aspects without considering the underlying causes of the problems. They also pointed out that some of the managers, instead of using the providers’ experiences, seemed to feel threatened by competent providers and treated them badly out of fear of losing their own position. Instead of considering promotion for good performance, these managers requested more work from them.

The providers explained that at the district health centre, there were specific supervisors for each work area such as maternal care, child care, family planning and school health. This meant that each facility and provider was supervised by five or six supervisors. They questioned why the supervisors had been specialised while they themselves were expected to cover all different areas:

    The tasks of supervisors, who have easy work, have been specialised, but we still have to provide services in various areas. (P1)

One effect of the supervisors’ specialisation was that many lacked a holistic view of the providers’ work. They also felt that supervisors should be selected among competent providers with enough field experience of their own:

    Because they [supervisors] themselves haven’t worked at the facilities, they don’t understand our problems. They dismiss problems that are very important for us and we always have to struggle with those problems. (P2)

FGD participants complained that the supervisors mainly dealt with paper work and considered the quantity of recorded services, rather than paying attention to the
quality. They also complained that the supervisors ignored their attempts to improve services:

They [the supervisors] should speak to clients to see if they are satisfied and ask them about the education they received from us. But they only inspect our notebooks and statistics. (P3)

All this combined to discourage providers, and some of them occasionally wrote incorrect records to appear to increase quantity.

The participants were critical of the current annual staff evaluation system, which implies that only a fixed number of staff members at each health centre and its dependent health post/s get extra salary increases each year. The evaluation criteria used were also criticised for including some irrelevant items, while paying little attention to important items such as clients’ views of provider performance. Many participants thought that the managers did not usually know the staff well and that favouritism sometimes occurred:

Such evaluation discourages the staff. Everybody who has been conscientious and has worked properly tells herself ‘I will work like her, the one who did nothing for clients but filled in her records well and has reported unrealistically high numbers and got high credit’. (P4)

The providers felt that they were not treated equally and usually received lower benefits than other staff members such as the supervisors and the administrative personnel. Therefore, they felt little motivation to perform well.

4.3.3 Too little time for clients

High workloads and staff shortages, especially at facilities in socio-economically deprived areas with a high population density, were mentioned by FGD participants as major barriers to high-quality services. Several reasons were given for the increased needs for services and education in the deprived areas, such as larger families, poorer people, unable to afford private clinics, and typically low educational levels. Therefore, staff working in deprived areas should not have to cover as many households as those working in more privileged areas. However, the opposite often seemed to be the case, with the result that providers in deprived areas were more overloaded and unable to meet clients’ needs.

A general complaint among the FGD participants was the large quantity of paper work:

We spend about 60% of our best time on writing whereas we could use it to provide services for clients. (P1)

Some of the registries were considered unnecessary and redundant. Lack of coordination between different parts of the clients’ records meant writing the same information in different parts of the clients’ files. Also, providers had to register every service given in several places: the client's file, different logbooks, and
reporting tables. For some providers, the excessive record writing was seen as a cause of neglecting clients, while others said that it led to careless report writing:

*Because I fear that I won’t be able to write my [clients’] files and they will pile up, I try to get rid of clients. (P3)*

*If I allocate all this time for record writing, I won’t have time for other work. I will give [for example] the pills to a client without even looking at her face. (P2)*

### 4.3.4 Lack of privacy and appropriate material for education and counselling

Two or more providers sharing one room at most of the facilities resulted in lack of privacy:

*She [the client] sees that if she talks about her problem, three of her neighbours who are there will hear or she may not trust the other staff who are in the room, she doesn’t want them to hear her problem. So, she doesn’t bring up many of her problems. (P1)*

Lack of suitable places for group education at some facilities and lack of appropriate audio-visual equipment and information, education and communication materials at almost all facilities were given as the main reasons why clients hardly received any group education, but only received verbal advice given to them individually by the providers.

Some participants brought up the need for counselling men alone or counselling couples on reproductive health issues, especially in the deprived areas, but they were not usually able to offer such services. Some stated that they would provide couple counselling if there was a private counselling room, while others said that they would not, especially about socially sensitive issues:

*We, as women, can’t talk to men on areas like condom use. Our culture doesn’t permit us. (P4)*

### 4.3.5 Inadequate opportunities for continuing education

Up-to-date information was seen by the participants as necessary for providing good services. There were complaints about the lack of certain training opportunities, while they also argued that courses were sometimes offered that were not really necessary. The courses were sometimes taken by some members of staff, especially high-level ones, just to get certificates leading to salary increases and other benefits. Furthermore, participants criticised the quality of many of these courses.

Discussing the implementation of new guidelines, the FGD participants strongly emphasised that all health providers should be trained, including physicians and midwives working in the private sector. However, in the current situation, most clinics are not informed about the new guidelines, and clients get confused due to inconsistencies in the instructions given by providers.
Effect of a peer educational intervention, based on a needs assessment design, on the providers’ knowledge and reported performance

The characteristics of the participants in the intervention and control groups were similar at both follow-ups. All in-charges (27 of 33 answered) and 89% (50 of 53 answered) of the non in-charges believed that such peer discussions were useful for their education to a high or very high degree.

The knowledge of the intervention group was significantly higher than that of the control group in regard to some of the knowledge items at both follow-ups. There were more significant differences at follow-up I than at follow-up II. At follow-up I, the percentages of correct answers to seven of the 19 items in the part 1 among non in-charges and to ten items among all providers in the intervention group were significantly higher than in the control group; while at follow-up II, the number of significantly different items was two and five, respectively.

At follow-up I, the percentage knowledge scores in part 1, 2 of the questionnaire, and in total in the intervention groups (both non in-charges and total) were significantly higher than in the control groups. At follow-up II, there were significant differences between the groups in part 1 and total, but no significant differences in part 2. The differences were not significant in part 3 at the both follow-ups (table 4-3).

Table 4-3: Comparison of mean of percentage unit of knowledge scores in intervention (I) and control (C) groups

<table>
<thead>
<tr>
<th>Knowledge parts of the questionnaire</th>
<th>Follow-up I</th>
<th>Follow-up II</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Non in-charges</td>
</tr>
<tr>
<td></td>
<td>I C I C</td>
<td>I C I C</td>
</tr>
<tr>
<td>Part 1: General (19 items)</td>
<td>75** 54</td>
<td>76** 56</td>
</tr>
<tr>
<td>Part 2: Eligibility for using the methods (22 questions)</td>
<td>67** 45</td>
<td>64** 48</td>
</tr>
<tr>
<td>Part 3: Five open-ended questions</td>
<td>38 35</td>
<td>39 32</td>
</tr>
<tr>
<td>Total</td>
<td>64** 46</td>
<td>63** 48</td>
</tr>
<tr>
<td>n</td>
<td>53 52</td>
<td>86 82</td>
</tr>
</tbody>
</table>

* adjusted by type of facility (centre or post), and age (continuous variable), degree (MSc/BSc in midwifery or others) of participants, and being in-charge or not (only for comparing all providers).
† p<0.05    ‡ p<0.01    ** p<0.001
At follow-up I, 26 of non in-charges (15 from the intervention and 11 from the control group) reported getting only the printed materials. There were no significant differences between this group and those with no education in any parts and total percentage score of the knowledge [mean difference of the total percentage score was 3 (95% CI: -6,11) percentage points].

At follow-up II compared with follow-up I, the percentage knowledge scores were significantly lower in part 1 [-12 (95% CI: -20, -3)] and in total [-7 (95% CI: -13, -1)] among the intervention group, but it was significantly higher in part 2 [8 (95% CI: 1, 14)] among the control groups. In other parts of knowledge questions, the differences were not significant.

Table 4-4: Percentage of correctly reported performance* in the intervention (I) and control (C) groups before and 27 months (follow-up II) after the intervention among non in-charges and all providers

<table>
<thead>
<tr>
<th>Items</th>
<th>Needs assessment</th>
<th>Follow-up II</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non in-charges</td>
<td>All providers</td>
</tr>
<tr>
<td></td>
<td>I C I C</td>
<td>I C I C</td>
</tr>
<tr>
<td><strong>IUD insertion</strong> (only for providers with at least five IUD insertion within recent one year)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Recommend to use ibuprofen or other analgesics 30 minutes before insertion</td>
<td>35 65 61 66 58</td>
<td></td>
</tr>
<tr>
<td>2. Hand washing with soap and water before wearing gloves</td>
<td>54 76 58 71 59</td>
<td></td>
</tr>
<tr>
<td>3. Bimanual pelvic examination</td>
<td>55 65 33 57 44</td>
<td></td>
</tr>
<tr>
<td>4. Using of tenaculum</td>
<td>82 97 78 93 84</td>
<td></td>
</tr>
<tr>
<td>5. Using a uterine sound</td>
<td>71 91 94 90 90</td>
<td></td>
</tr>
<tr>
<td>6. Inserting IUD with no-touch** method</td>
<td>--- 67 66 65 67</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n†† 46 34 36 55 62</td>
<td></td>
</tr>
<tr>
<td><strong>DMPA injection</strong> (only providers with at least five DMPA injection within recent one year)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Hand washing with soap and water before injection</td>
<td>42 59 45 55 44</td>
<td></td>
</tr>
<tr>
<td>8. Massage injection site (Incorrect)</td>
<td>88 94 90 93 90</td>
<td></td>
</tr>
<tr>
<td>9. Recapping needles after injection (Incorrect)</td>
<td>52 80 80 76 78</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n†† 58 51 51 80 81</td>
<td></td>
</tr>
</tbody>
</table>

* is done ‘always’ or ‘mostly’ in correct and ‘never’ or ‘seldom’ in incorrect items
† The needs assessment was done only for the in-charges
‡ p<0.05 compared with the control group
** This question was excluded from the needs assessment analysis due to un-clear of meaning of this method for some participants; it was explained in the follow-up questionnaire
†† IUD could only be inserted by the midwives
At follow-up II, the percentages of correctly reported provider performance were significantly higher on two of nine items in the intervention group compared to the control group among the non in-charges and none among all the providers. On two other items among the non in-charges and on five items among all the providers, the percentages in the intervention group were 8-18 percentage points higher than in the control group, but the differences were not statistically significant (table 4-4).

4.5 A COMPLEMENTARY STUDY

Table 4-5: Comparison of mean (standard deviation) of workload for family planning and turnover of staff in health centres and health posts located in different economic areas, Tabriz 2007

<table>
<thead>
<tr>
<th>Economic condition</th>
<th>No. of centres or posts</th>
<th>Workload per provider</th>
<th>% of turnover in the last two years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>17</td>
<td>178 (48)†‡</td>
<td>63 (30)†</td>
</tr>
<tr>
<td>Middle</td>
<td>29</td>
<td>124 (45)</td>
<td>49 (32)</td>
</tr>
<tr>
<td>High</td>
<td>19</td>
<td>106 (36)</td>
<td>32 (23)</td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
<td>133 (51)</td>
<td>48 (31)</td>
</tr>
</tbody>
</table>

F=14.28  P<0.0001  F=5.00  P=0.0097

Family planning workload calculated by: number (No.) of pills and condom packs distributed + 3* No. of DMPA injected + 12* No. of IUD inserted + 5* No. of male or female sterilizations referred in a month per provider.

Percentage of all new family health providers, including those who moved from other centres, per all family health providers at the health centre or post.

Low compared with High: †p<0.01
Low compared with Medium: ‡p<0.01
4.6 SUMMARY OF FINDINGS

- There was considerable variation in the measured dimensions of quality and many aspects could be improved.

- Accessibility for most women was high. However, there were needs to increase accessibility for men and employed women at convenient hours.

- The routine to dispense only one month supply for the pill and condom users was criticized by many women. They suggested that the supplies should be dispensed by the providers, based on each client’s wishes and individual needs.

- Privacy was not adequately ensured. Both space limitations and providers’ lack of attention to clients’ rights were found to be possible reasons.

- Almost no clients were explicitly ensured confidentiality. Many clients were not sure that what they said would be kept confidential, and some felt no such trust at all.

- The women expected to be treated with respect and to feel welcome. This often happened but there were some opposite experiences, especially in low-income areas.

- The women had a strong claim to make their own decisions about family planning based on correct and comprehensive information.

- Information provided to clients was inadequate to enable them to choose the most suitable method for their own situation, and use it safely and effectively. Furthermore, some cases of serious breach of clients’ right to informed and voluntary choice were reported by some women in the low-income area.

- Interactive communication between clients and providers was extremely inadequate. Most clients had a passive role during the consultations.

- Some contra-indications mentioned as reasons for not providing the method preferred by the client were not in accordance with either the WHO or national guidelines.

- Provision of information on how to use the selected method safely and effectively was inadequate.

- The information given about STIs and HIV was grossly inadequate.

- Although most of the necessary information was not provided to the clients, some of them expressed that they felt overloaded with information during individual counselling.

- The main method of education provided at the public facilities was individual oral education of women. Audiovisual educational materials, including printed ones, were not used sufficiently. Most women were critical about the insufficient use of other channels of information and education.
- There was a wish for education and counselling in groups, especially around issues that could be felt to be embarrassing to bring up individually.

- There was a need to improve IUD insertion procedure.

- Infection prevention procedures, such as hand-hygiene and decontamination of instruments, were not performed well in most cases.

- The women wanted their husbands to be more strongly involved in sexual and reproductive health services. Some barriers were mentioned to achieve this involvement.

- Need for sexual counselling for women and couples was strongly expressed by the women.

- For different reasons, some clients looked for alternatives in the private clinics or obtained contraceptives directly from pharmacies. Several problems in the private sector were mentioned, like inadequate privacy and lack of up-to-date information.

- The providers pointed out many interacting factors related to the system and organizational conditions affecting their performance. They felt frustrated as most of these factors were outside their control.

- Incompatibility of tasks with the providers’ basic training was mentioned by the providers, especially by the midwives, as a major barrier for improving quality.

- Spending most of their time doing paper work rather than with clients was a major barrier for the providers’ productivity and service quality. A high workload combined with staff shortages was especially reported by providers working in the deprived areas.

- The providers expressed dissatisfaction with various aspects of managerial and work conditions.

- One of the main sources of frustration for the providers was their experience of being overloaded with many different tasks, and, therefore, losing parts of their own specific competence and not being valued appropriately.

- The educational programme including peer discussions, using existing resources with no need for providers to take off from work, improved knowledge and some aspects of reported performance, and might be a useful complement to formal large group educational efforts.

- The health centres and health posts located in low-income areas on average had the highest workload for family planning and the highest turnover of staff.
5 DISCUSSION

5.1 FINDINGS

Three of the studies were partly based and analysed according to the quality framework presented by Peabody and colleagues (33), and the EngenderHealth framework on clients’ rights and providers’ needs (36) (see page 6-10). In the quantitative study (study I), mainly process elements of quality as proximate determinants of health outcome and two outcome indicators of quality, i.e., client knowledge and client satisfaction, were assessed. In the qualitative studies, both clients’ perceptions of quality and the responsiveness of the services (study II), and provider’s views on quality and barriers for improvement (study III), were explored. In these studies we also examined various aspects of socio-economic, policy, institutional, social and cultural factors, which may impact on quality.

5.1.1 Quality of the services (study I, II, III)

The main theme emerging from the analysis of the findings of FGDs with the women (study II) was their strong claims to make their own decisions based on correct and comprehensive information, and to be treated with dignity and respect in their contacts with health providers. The concept ‘sense of entitlement’ has been suggested to capture the women’s own perceptions of their needs and claims, whether in relation to husbands, health providers or the state (153), and seems to be an apt description of the women in our study. If they did not feel satisfied with the services at one centre, their common strategy was to choose another, often a private clinic.

The women appreciated the generally higher levels of accessibility and affordability and the higher sense of responsibility for follow-up at the public centres compared to the private ones. However, they had experienced several weaknesses in the quality of the public services. Our findings in the quantitative study (study I) also showed that there was considerable variation in the measured dimensions of quality. There were many aspects that could be improved. Provider performance was better and clients’ satisfaction was higher with regard to politeness, discussion of a return visit, and waiting time, than with regard to interactive communication, information given to clients, and privacy during counselling. Moreover, infection prevention procedures were not performed well in most cases.

Emerging evidence shows that the average quality of care given by groups of providers is an important determinant of overall community health status (33). Poor quality can obviate all the implied benefits of good access and effective treatment. It may lead clients to stop using services they really need (33, 36). At its best, poor quality is wasteful. At its worst, it causes actual harm (33). However, there is a lot of evidence that poor quality of care is common in many countries (139). It was shown in a study in 12 metropolitan areas of the United States that patients received only 55% of
recommended care (154). A recent review of 29 studies concerning quality of family planning services in the United States concluded that relations between clients and service facility staff were typically rated favourably, while communication, patient-centeredness and efficiency were rated more poorly (155). In a multi-centre study in China, Philippines, Mexico, El Salvador and India, the average quality of care was low (61%) and there was little difference in average quality scores between countries (140).

Privacy and confidentiality

Privacy was not adequately ensured (study I, II, III). Both space limitations and providers’ lack of attention to clients’ rights were found to be possible reasons. Almost no clients were explicitly ensured confidentiality (study I). Many clients were not sure that what they said would be kept confidential, and some felt no such trust at all. Ensuring these rights becomes even more important as the Iranian government plans to integrate HIV/AIDS education and counselling into the national primary health care curriculum (102).

Ensured privacy and confidentiality may help current clients feel freer to explain their real situation, and talk about their own and/or their partners’ beliefs and concerns about using the contraceptive methods. They may also reveal their potentially risky situation, thus helping providers to give safe and effective services considering each client’s special situation. This can also help to attract more new clients, who may have even greater needs for the public services than the current clients. Evidence shows that most married women who are at risk of STIs do not reveal their own situation. One example is that although antiretroviral therapy is free of charge in the country, it is estimated that only a few (2%) pregnant women living with HIV received anti-retroviral treatment for preventing mother-to-child transmission (126). Moreover, many women (and men) at high risk for unwanted pregnancies and STIs, e.g. unmarried people do not seek services from the public facilities (108).

Communication and information provision

Observation of client-provider interaction (study I) and FGDs with the women (II) showed that the interactive communication between clients and providers was extremely inadequate. Most clients had a passive role during the consultations. Providers did not offer clients explicit opportunities to express their own concerns and ask questions. It has been suggested that the information exchange during consultations should sharply focus on the client situation (156). Providers should create a two-way interaction with clients by listening attentively and encouraging clients to ask questions and express concerns and use information provided by the client to tailor the counselling session to the individual client's health and personal needs (157, 158).

Furthermore, both clients (study I, II) and providers (study III) expressed that the information provided to clients was inadequate to enable them to choose the most suitable method for their own situation and use it safely and effectively. The need for improvement of the provision of sufficient information to clients has also been shown in other studies carried out in Iran (129, 132, 133), and from other countries.
such as Indonesia (159) and Turkey (160). Given complete and balanced information, clients have proven themselves able to make good choices: they are not swayed by provider biases (161), and they can more accurately assess their own STI risks than physicians (162).

A serious breach of clients’ right to informed and voluntary choice was reported by some women in the FGDs in the low-income area, as they were more or less pushed to accept tubal ligation without being presented with alternatives. In addition, some contraindications mentioned as reasons for not providing the method preferred by the client (study I), were not in accordance with either WHO (77) or the national guidelines (120). Using the eligibility checklists for the methods may prevent the providers from refusing to provide the selected method to clients when they are safe for them.

Many clients had complaints about the lack of information about other available methods to ensure their informed choice; they were just informed about the method they asked for (study II). This was also observed in study I. WHO emphasizes that although new clients usually come for services with a method already in mind, which is usually the best choice for them, the client should still be given good information and help to think through choices within the broad range of methods that can be used safely (23).

It seems that the providers had a bias towards certain methods. OCs were discussed with clients more than other methods, whereas DMPA was rarely discussed. This may reflect a different attitude of the providers towards these methods or be related to the ease of providing OCs. A bias towards favouring sterilization has been observed in India (163), and towards OCs and DMPA in Ethiopia (164).

Once a client selects a method, providers have to instruct clients how to use the method safely and effectively (157). According to WHO, the clients should be given adequate information about the relative effectiveness of the method; how to use the method correctly; how it works; common side-effects; associated health risks and benefits; signs and symptoms that indicate that the client should return to the clinic; the speed of return to fertility after discontinuing method use; and how to protect against sexually transmitted infections (47).

Many OC users lacked sufficient knowledge of the pill-free interval and what to do in case of missing pill intake, especially POPs. Although OCs is the most frequently used family planning method in the study area, according to the national survey about one-third of the women who received their pills from public facilities did not use them correctly (25) and more than one-fourth of all unintended pregnancies occur whilst using this method (121).

Provision of information on how to use a condom was poor. In studies conducted in Tehran, Iran (134), and in Nepal (165) it was also shown that counsellors were reluctant or embarrassed to explain how to use condoms. Moreover, the condom users’ knowledge of how to use the combined ECPs was sub-optimal (54%), but still much
better than that in the national survey (12%) (25). This may indicate that the programme implemented for promotion of the ECPs (giving ECPs to condom users (104)) has had some effect.

It has been shown that the rate of discontinuation is higher among women who have not been adequately counselled about side effects (57, 166). However, most clients in our study were provided with no information or information that was inadequate about the side effects and warning symptoms of contraceptives. Similar findings were reported from other low- and middle-income countries like Pakistan (167), India (163), Botswana and Tanzania (168). IUD users were more often informed about side effects of the method than pill users (study I). Similarly, in India, 46% of IUD users were informed about side effects of the method as compared to only 23% of pill users (163).

The information given about STIs/HIV was grossly inadequate (study I). This problem is also encountered in many other countries, even those with a high prevalence of these diseases (164, 168). In Ethiopia, 3% of family planning clients were given information about HIV and other STIs (164). Not providing information on HIV may be related to the low prevalence of HIV/AIDS in the general population of Iran (0.1% in 2003 (102)) and the lack of specific guidelines. However, as HIV is on the rise in the country (reported rate was 0.2% in 2007), appropriate measures to control this problem should be considered. As most people at risk of STIs/HIV do not reveal their risk, providing all family planning clients with essential information about the prevention of STIs/HIV, such as the effect of contraceptive methods on the prevention of STIs may be an effective strategy to persuade high-risk people to use condoms without stigmatizing anyone. According to WHO, every family planning client needs to think about preventing STIs, including HIV, even people who assume they face no risk. A provider should discuss with clients in what situations a person is at increased risk of STIs, including HIV, and clients can think about whether these risky situations come up in their own lives. If so, they can consider dual protection strategies for preventing both pregnancy and STIs (23).

Audiovisual educational materials, including printed ones, should be used to help the client understand and remember key information (157, 158). However, similarly to authors of a study carried out in Tehran (134), we observed that almost no such materials were used. Since most clients were literate, using printed materials could have been beneficial. It may even be beneficial for illiterate women, as they mentioned in the FGDs that they can ask others to explain the materials to them, for mutual benefit. In an experimental study in Tabriz it was found that printed material had a remarkably positive effect on the mothers’ knowledge and practice in terms of newborn care (169).

Providers should avoid giving clients too much information during individual counselling since that may lead to confusion and forgetfulness (157, 158). Although most of the necessary information was not provided to the clients, some of them expressed that they felt overloaded with information during individual counselling. Using the balanced counselling strategy (43) developed by Population Council may
improve client-provider interaction in family planning counselling. This strategy includes using counselling cards with basic information about every family planning method and brochures on each of the methods for the client to take once a method is chosen. Its effectiveness has been shown in studies in Guatemala (170), Peru (171) and Mexico (43).

Clients in study II expressed a wish for education and counselling in group, especially around issues that could be felt to be embarrassing to bring up individually. Positive effects of group education on women’s practice in family planning (172, 173) and prenatal care (174) have been shown in studies in Iran. This may help providers to focus more on the specific needs of each client in individual counselling, needs which cannot possibly be addressed in group counselling. It has also been shown that providing consistent information through different channels has a cumulative and reinforcing effect (54).

Other studies from Iran report the same preference for and eagerness to receive information from a wider variety of channels (107, 175), reflecting the rapid social change taking place in Iran. The new generation is increasingly exposed to mass media and the outside world and the parental generation is seen as less important in transmitting knowledge and advice. Thus, it is necessary to provide valid, consistent, clear and comprehensive health information through multiple communication channels in order to address informational needs in the population. However, existing informational channels are usually not able to meet their educational needs. For example, in a recent study, based on an expert committee’s views, it was concluded that websites providing comprehensive reproductive health information are not easy to locate from Iran. The mean coverage of reproductive health information in Persian websites in all areas was much lower than the English websites, mean coverage of 25% vs. 49% in overall reproductive health topics, 23% vs. 56% in family planning (176).

**The amount of contraceptive supply provided in each visit**

The routine to dispense only enough contraceptive pills for one cycle and a limited number of condoms per month was criticised by many participants in our study as a waste of their time, similarly to what has been reported previously (177). The participants’ suggestion that contraceptive supplies should be dispensed by the providers based on each client’s wishes and individual needs, would decrease method discontinuation due to gaps in supply coverage, decrease providers’ workload and strengthen clients’ rights. WHO suggests giving even as much as a year’s supply (13 packs) at each visit and assuring every client that she is welcome back at any time, for example if she has problems, questions, or wants another method. According to WHO, an annual follow-up visit should be arranged for the pill users and if possible, a follow-up contact three months after starting taking pills may be useful (23, 178).
**Male involvement and marital counselling**

Although men's shared responsibility in sexual and reproductive health has been emphasized in the ICPD programme of action (179), research on male involvement from a range of different countries show that reproductive health services are often not tailored for men (180). An important theme emerging from the discussions with the women (study II) was their wish for their husbands to be more strongly involved in sexual and reproductive health matters. They mentioned some barriers to this involvement like lack of privacy and inconvenient working hours at the public facilities. Married women and men in Busher, Iran, also evoked cultural restrictions for male involvement, insufficient and unclear advocacy, inconvenient working hours of public health facilities for men, lack of a suitable place and lack of male counsellors (181). In a study in Shiraz in 2000, 83% of married men believed that special clinics with male providers are essential to providing family planning services for men. They wanted such clinics in order to get counselling (67%), examination (34%) and information on contraceptive methods (23%) (182).

The need for sexual counselling for women and couples was strongly expressed in FGDs with the women (study II). High prevalence of sexual problems has been shown in studies from Iran (183) and many other countries like Egypt and the United States (184, 185). In a population-based study in Iran, more than one third of women aged 20-60 years reported disorders in their sexual relations, although the majority had not sought any help from health professionals (183), similarly to findings in the United States (186). In a WHO report the sexual health of individuals, families and communities was said to be in crisis. Collective action was called for to help individuals and couples live happily and have healthy sexual lives. Countries were urged to adopt national strategies, raise awareness, and carry out interventions (prevention and care), evaluation and research to address the public health crisis related to sexual health (29). WHO further suggested that access to sexual health information, education and services should be provided in integration with other components in the context of the primary care system (14), but few national programmes have adequately addressed this issue (187).

Information about sexual behaviour is essential to inform preventive strategies and to correct myths in public perceptions of sexuality (32). Studies has shown that school-based sex education can improve awareness of risk and knowledge of risk reduction strategies, increase intentions to practice safer sex, and delay rather than hasten the onset of sexual activity (32). However, community values and fears about sexuality in young people tend to limit the availability of the basic information and education they need to understand and appreciate their changing bodies. Indeed education about sexuality is left to parents and families, who themselves also often lack such information, or do not feel comfortable communicating about sexuality. As a result, young people tend to enter into sexual relations without the necessary knowledge or skills to negotiate for their own sexual health and welfare (188).

Prior to marriage, Iranian women are expected to be chaste, uninterested in or even unaware of sex. Once married, they are expected to be seductive for their husband,
offering sex to fulfil their marital duty. Yet such a transition is apparently supposed to be made without enough instruction (189). Research is needed to show to what extent the national programmes, such as the pre-marital counselling and formal education for college students, meet the educational needs for couples and help to build “sexual relations [that] are safe, enjoyable and satisfying, free of coercion, discrimination and violence” (31).

Inadequate knowledge and embarrassment of providers to address sexual problems, as also reported from studies in Iran (175) and other countries (190), are major barriers. However, a recent study in Tehran indicated that such barriers can be reduced. A short training programme for health providers to give sexual education to married women at the centres improved the clients’ knowledge and understanding of sexual issues (189). We suggest that husbands should also be addressed in such education, either in couple counselling or in group education for men. The most suitable time is probably in the afternoon, when almost all the facilities are inactive, as mornings are usually not a suitable time for the men and most of the facilities have space constraints preventing them from adding such services in the mornings. The added human resource expenses can at least partially be ensured through fees-for-services paid by the clients or health insurance organizations.

Discussing the involvement of men in sexual and reproductive health, it is important to recognize that the interface between female autonomy and male involvement is complex. There is a delicate balance for women to maintain their own space to manoeuvre while involving their husbands when mutual decision-making and understanding of the couple is essential for mutual benefit, as exemplified by the expressed need for sexual counselling for couples.

Providers’ technical competency

As the number of observed procedures was low, especially with regard to IUD insertion and DMPA injection, we could not properly assess most of these. Hand hygiene was clearly insufficient. Although, worldwide, hand hygiene is the single most important and least expensive means of preventing health care-associated infections (191-193), adherence to recommended hand-washing practices remains unacceptably low (192). Lack of knowledge and of appropriate hand-hygiene guidelines and facilities may be the main reasons for the poor performance and are therefore areas to be targeted for improvement.

Instruments were mostly soaked in antiseptic solutions after use although such solutions should only be used on the skin and mucous membranes, never for decontaminating of instruments (192). For decontamination purposes, instruments should be soaked in 0.5% chlorine solution for 10 minutes (23). This may indicate a lack of providers’ knowledge in this area, rather than deficient compliance with the procedure.

Reported performance of the providers regarding IUD insertion was inadequate in some areas, e.g., hand washing and bimanual pelvic examination (study IV). Doubt about the providers’ competence on IUD insertion and management of side effects of
contraceptive methods was mentioned by women in several of the FGDs. The IUD is a long-term, reversible, highly effective method (194) which could meet the needs of many people, both those who want to end childbearing altogether and those who want to postpone childbearing for some years (195). It is a safe and suitable method for nearly all women which is underutilized in most countries worldwide, except in a few countries such as China (used by 45% of women of reproductive age), Egypt and Vietnam (119). Its wider use would reduce the unintended pregnancy rate more than wider use of most other methods (195, 196). Inadequate provision of this method has also been shown in previous studies in Tabriz in the same setting where discontinuation rates were relatively high (197).

Private clinics and pharmacies

For different reasons, like working hour constraints, limitations in the provision of contraceptive supplies or dissatisfaction with the public services, some clients look for alternatives in the private clinics or obtain contraceptives directly from pharmacies (study II). It seems that the policy of provision of the supplies from the pharmacies with no need for a prescription and with subsidized prices have met some clients’ needs for easy access to family planning supplies. This is a positive issue, especially for continuing clients who do not have any problem with their present method and as WHO also mentions (23), for them convenient access is key. However such delivery points, especially pharmacies, do not seem suitable places for new clients and ongoing clients who have problems or concerns with the method. Several problems in the private sector were mentioned, like inadequate privacy and information provision, and lack of up-to-date information (study II, III). A national survey showed that a lower percentage of clients who got their pills from the private sector used them correctly compared with those who got them from the public sector (25). As many people with high-risk for unwanted pregnancies and STIs, including unmarried people (108), get the reproductive health services like family planning supplies from the private sector, improving quality of the private services is very important. Training of private service providers, supervision of compliance with guidelines and distribution of educational materials at private clinics and pharmacies, as suggested by the participants, is important in order to improve contraceptive usage and enhance clients’ choices and rights.

5.1.2 Barriers to high-quality services and suggestions for their improvement (study II, III)

The providers pointed out many interacting factors related to the system and organisational conditions affecting their performance. They felt frustrated as most of these factors were beyond their control. In addition, the clients mentioned some specific barriers. Other studies have also shown that staff members are often frustrated at being unable to provide the kind of services, that they both would like to provide and know is needed (5, 36). Meeting the needs of providers is essential if they, in turn, are going to be able to satisfy the rights of the clients (42).
Multiplicity of tasks and incompatibility with the providers’ basic training

A major policy issue emerging from the discussion with the providers was health manpower planning in relation to the discrepancy between the providers’, especially midwives’, competence and the tasks assigned to them. They had experienced that they were given a multiplicity of tasks, some of which they had no proper education for. They also complained that they could not use their real competence to its full extent because they could not concentrate on those areas. This discrepancy and resulting dissatisfaction may at least partly explain the negative effect of higher education on the quality reported in other studies in a similar setting in Iran (131, 136). In the preliminary design of the country's primary health-care network, it was calculated that in urban areas, one midwife for midwifery-related works and three family health technicians for other family health work should be assigned for 12,500 people (198). At present, however, the number of midwives working at the family health units is much higher than the number of family health technicians, probably due to high numbers of graduated midwives. According to a recent national survey, 8,121 midwives and 1,686 family health technicians work at primary health-care level (93). The large number of qualified midwives may be considered an opportunity for improving the quality of certain services such as family planning, sexual health and maternal health by assigning these tasks to the qualified midwives and other tasks to the family health technicians.

A major drawback of many health policies is the insufficient consideration given to human resource issues. Many countries, rich and poor, have not yet included explicit human resource policies in their health policies. There is a need for more rational health workforce policies as a sine qua non for the successful implementation of health policies (199). Although the success of Iran in improving reproductive health has been recognised internationally (109, 116), WHO (200) highlights insufficient human resource planning and management as one of the important challenges for the Iranian health system.

Too little time for clients

The providers identified that spending most of their time doing paper work rather than with clients was a major barrier for their productivity and service quality. Also, in other recent qualitative studies from Iran, nurses said that they spent most of their working hours on documentation (201, 202). Simplification of the records and implementation of electronic health records may decrease the time that providers spend on paper work at the facilities, and facilitate transmission of information. Also, training of providers on efficient counselling may help. Research findings suggest that the amount of time spent with a client is less important than how sharply the information exchange focuses on the client situation (156).

A high workload combined with staff shortages was especially reported by providers working in the deprived areas. Furthermore, a breach of clients’ right to informed and voluntary choice, and respectful treatment was reported by some women in the FGDs in the low-income area (study II). The higher workload in the facilities located in low-income areas, higher turn-over and less experience of the providers working
in those settings (study III, complementary study) may have contributed to the poor performance of the staff. Negative effects on the quality, due to limited experience among providers, have also been shown in another study in Iran (136). One common shortcoming of health-care delivery, in high- and low-income countries alike, is that public spending on health services most often benefits the rich more than the poor (145). There are large income disparities in the urban population of Iran. Although the mean income in urban areas is 1.7 times that in rural areas, the proportion of urban to rural poor is almost the same (203). Therefore, because of greater health-care needs among the urban poor, it is necessary to differentiate urban services, e.g. by allocating a higher number of providers per person in deprived areas and incentives for the providers who work there.

Sub-optimal supervision and management

The findings indicate a strong need for individual staff members to feel valued by clients and managers and supported to develop in their roles. Providers work in a community of peers in which professional status, prestige, and recognition are often as valuable as material rewards. Non-monetary incentives, such as public recognition, administrative privileges, and awards from professional organizations, can promote improvements in quality (33).

The providers expressed dissatisfaction with various aspects of managerial and work conditions. It is similar to some other studies from Iran (129, 135, 204, 205) and other countries (142, 206). A recent national, integrated monitoring and evaluation system indicated that the staff satisfaction rate at urban health facilities in Iran was 48%, compared with 61% in rural areas (135). In a questionnaire survey conducted in Tabriz, 80% of midwives working in public health facilities reported job dissatisfaction, especially in terms of organisational aspects (204).

Staff satisfaction and productivity is linked, at least in part, to the type of human resource management and practices implemented (199). Providing a climate that satisfies staff needs is vital for organisational effectiveness (207). Managers should establish a climate for quality development (208). If health-care staff lack administrative support and critical resources, they will not be able to deliver the high-quality services to which clients are entitled (36). Clinical supervision is considered to be one of the vital support systems for effective, high-quality health services (63, 209). However, the providers in this study mentioned that many supervisors acted more as inspectors than as facilitators, paying more attention to paper work and less to service quality. Lack of effective management and supervision were also reported in the study of Iranian nurses’ views on nurse managers (201), and in studies from several other countries (210-212).

Integration of services

The ICPD programme of action calls on countries to provide a full range of sexual and reproductive health services in an integrated manner in the context of the primary health-care system (14). The rationale for integration is to increase the effectiveness and efficiency of the health system and to meet people’s needs for accessible,
acceptable, convenient, client-centred comprehensive care (14). Integration of health-care services should not result in the dilution of available resources, but in more effective use of resources (6).

In a Cochrane review from 2006, based on the few well-designed studies undertaken to investigate strategies to promote service integration, no clear evidence was found that integrating primary health-care services improves health services or people's health status in low- and middle-income countries (213). However, a more recent review demonstrated that bi-directional linkages between SRH and HIV-related policies and programmes can lead to a number of important public health, socio-economic and individual benefits, including improved quality of care and better understanding and protection of individuals’ rights (214).

Iran’s national policy is to integrate primary health-care services within the same unit and, to the extent possible, that it should be delivered by the same provider. A client coming to a family health unit should get all the services needed from one family health-care provider or, if necessary, be referred to the nearest referral level. However, some potential problems with such an integration were highlighted by the providers (study III). Although none of the new, national integrated programmes (Integrated Management of Childhood Illness, Integrated Management of Healthy Child, Integrated Management of Pregnancy and Child Birth and the services for HIV/AIDS and STIs) had been implemented in the study setting at the time of the FGDs yet, one of the main sources of frustration for the providers was their experience of being overloaded with many different tasks, and a feeling of losing their own specific competence, as also reported in another study from Iran (129).

Some scientists argue that service integration may have unintended and unwanted outcomes. The health workers may become overloaded or deskilled. Their ability and capacity to deliver specific technical services may be impaired, and the service may not achieve what it sets out to do, hence quality may decline and health outcomes may deteriorate (213, 215). Moreover, according to WHO, integration does not mean that all SRH or other services must be provided by one provider or even on one site, but it does require that health-care providers have the knowledge and skills to provide an appropriate basic package of services and to refer clients for other necessary services to another provider at the same or another site. For example, family planning providers must be able to respond (either by providing care directly or through referral) to other SRH needs of women, including care of RTIs and cervical cancer prevention and treatment, voluntary counselling and testing for HIV, as well as counselling on domestic abuse, nutrition and child care (14).

It seems that assigning some of the tasks that require special competencies to a single provider at each facility may help to decrease the multiplicity of tasks, increase specialisation and reduce the need for giving all providers in-service training in all service areas. This can be done while maintaining the objective of integrated care, through supporting individual providers to acquire a specialty in one area and offer
specialised services in that area, while providing normal routine care to their own regularly covered clients in other areas.

Implementing the new approach towards promoting IUD services which focuses on a smaller number of promising providers (195, 216) may improve quality of the IUD procedures and reduce multitasking. Evidence exists that a high-volume of care by individuals or institutions leads to better health outcomes (217, 218). Provider experience (learning) and practice (repetition) lead to fewer complications, less resource use, and better quality for a variety of procedures (33). Moreover, introducing job aids, such as the ‘decision-making tool for family planning clients and providers’, (76) or the ‘balanced counselling strategy’ (43) at the facilities, which reduce the need to memorize all the information may facilitate for the providers to deliver various services of high-quality. Effectiveness of the decision-making tool, both as a job aid for providers and a decision-making aid for clients, has been shown in studies in Mexico (219) and Nicaragua (220), and is now tested in pilot settings in Iran (personal communication, MOHME- Bureau of population and family health).

5.1.3 Effect of a peer educational intervention on provider knowledge and reported performance (study IV)

The total scores of provider knowledge in the intervention group were significantly higher than in the control group at both follow-ups at one and 27 months after the intervention, but the difference between the groups at follow-up II was less than at follow-up I. This may indicate a reduced effect of the intervention with time and a need to reinforce the education. Another possible reason for the outcome is high provider turnover, resulting in dilution of the effect. More than every third provider at the time of follow-up II was new compared to the situation at the time of the needs assessment. There was also some contamination between the groups, i.e., a few providers from the intervention facilities moved to the control group or the other way around. The other possible reason is that it could be the effect of other interventions in this area during these two years, for example, on eligibility for using the method where there were no longer any differences between the intervention and control groups at follow-up II, and there were significant differences between the control groups at follow-up I and II. These reasons may also have caused the lack of any significant effect on the providers’ performance in most items. On the other hand, this relatively limited short intervention may not have been enough to change provider performance. Moreover, in this study, we did not allocate any credit points for the programme, which otherwise might have been useful in terms of encouraging the providers to more actively participate in such programmes and increasing their effectiveness.

In all analyses on the effectiveness of the interventional programme, we included all providers working at the facilities in their assigned groups without considering their actual participation in the educational programme. Some of the providers in the intervention group did not get the education or only received the written material, which would not have been effective in improving their knowledge, based on our
results. All of these circumstances may have caused a dilution of the effect of the programme.

The results of this study of effects of the educational intervention on provider knowledge confirm the positive effect of peer-based learning for in-service education, which has been shown in the few other studies (74, 221) done in this area. However, consequent effects on provider performance are not conclusive in our study, as we only have one long-term assessment based on reported performance. More studies in this area with more rigid design are needed.

5.2 METHODOLOGICAL CONSIDERATIONS

To assess the quality of the services, we used method triangulation to help produce a more comprehensive set of results (222). Using observation of client-provider interaction and some clinical procedure, combined with exit interview with clients (study I), several aspects of the quality were quantified, based on internationally defined criteria to enable comparison with the results of other studies. FGDs were used to understand both clients’ (study II) and providers’ (study III) perspectives, in an effort to encompass all areas which may need improvements. Finally, an interventional approach (study IV) was used to address one of the barriers for high quality mentioned by the providers, i.e., inadequate continuing education.

5.2.1 Validity and reliability (Study I, IV)

Content validity of the checklist and questionnaires used in studies I and IV was verified by experts from the district health centres, one gynaecologist and two midwives. To determine the inter-rater reliability of observations of the interactions (study I), the ten first clients were observed by two observers, who independently completed the observation checklists, which were then compared. Reliability of the questionnaire in study IV was identified by Cronbach’s alpha separately for different parts, showing more than 70% in each part.

In study I, we would have preferred to use the unannounced standardized patient method, which is considered a more valid measure for performance (223, 224) than the observation method. However, this was not possible because each provider was responsible for special households. Although the experience to date suggests that observation is an effective means of identifying shortcomings in provider performance (151), the added presence of an observer in the room during the counselling and clinical sessions may cause the client and the provider to act differently than they would if they were alone. For example, the provider may show her best behaviour when an observer is present (Hawthorne effect) (33, 151, 225, 226). This effect was to some extent controlled by careful selection of the observers among female newly graduated midwives of same sex as providers and clients, who were not known by the providers and had no organizational relationship with them. The observers were trained to be as unobtrusive as possible and were dressed in the same way as the providers.
Clients may not remember the sequence or content of events during the counselling and clinical sessions (recall bias) (151). For this reason, the exit interview contained only a limited number of questions. Most of the questions were about the services received on that day. A few questions about the services received at the previous visits were limited to the last year.

Clients are likely to report that they feel satisfied with the services that they have received and may not speak negatively about the clinic or clinic staff during exit interviews, possibly skewing results positively on the question of satisfaction (courtesy bias) (151). However, this bias has been challenged in some studies (227). The possible courtesy bias was addressed with training interviewers to explain to the client in the beginning of the interviews (informed consent) about confidentiality and that what they said in the interview would not be made known to the providers and would not jeopardise their care at the facility. Also, interviewers tried to conduct the interviews in a private area, where the respondents could not be seen or heard. However, it was impossible to maintain visual privacy in some facilities, especially at some of the health posts. In addition, most of the questions in the exit interview required more objective answer.

Although, in study I, we intended to include all clients attending for family planning services, some could not be included at busy facilities during rush-hours due to the limited number of field workers. Furthermore, about one-tenth of the observed clients declined to be interviewed. However comparison of different aspects of the provider-client interaction as measured by observation showed no significant difference between the interviewed and non-interviewed groups. The number of observed clinical procedures was low and therefore inter-rater reliability of observation of the procedures could not be measured. To ensure reliability in this area, the most objective items were chosen and clear guidance was provided during training of the observers on how to code the items correctly.

In the intervention study (study IV), we could not calculate the sample size as we did not know the design effect of the cluster randomization, and therefore recruited all eligible facilities and providers in the study. However, after the study, the calculated statistical power for the total percentage score of knowledge was 81 and 90 per cent for follow-up I and II, respectively.

For ethical reasons, all questionnaires in study IV were filled in anonymously and coded at the facility level. The research team had no access to these codes and could therefore not compare the individual responses before and after intervention, and not use statistical tests based on paired data. Randomization was done after the needs assessment; it was therefore not possible to directly assess similarity between the intervention and control groups regarding their knowledge and performance before intervention. In order to address this limitation we compared results of follow-up I in the in-charges’ control group with the needs assessment results on the common items.

The mean score of the in-charges in the control group in part one of follow-up I was significantly higher than the needs assessment while there were no significant
differences in parts two and three. It might indicate that the basic knowledge of the control group was not less than that of the intervention group, and any significant increase in knowledge scores in the intervention group compared with the control group could then be considered as related to the intervention. A possible reason for the significant increase in part 1 of knowledge in the control group may be an increased emphasis placed on the teaching by the district supervisors, after getting the results of that part one week after the needs assessment.

We also compared some regular statistics about contraceptive services and supplies provided for clients during three months, prior to the intervention between the intervention and control group facilities. We found that there were no significant differences between the groups with regard to mix of contraceptive methods, number of different type of contraceptives distributed, and the proportion of high-risk women (women aged less than 18 or more than 35, with three children or more, or with a less than two years old child) who used modern contraceptives.

The main aim of this study was to assess the possibility of using peer-based education for addressing some educational needs of the providers, not at first hand its effect on performance which is affected by many other factors (60). Using more valid methods like unannounced standardized patients (223, 224) was not possible due to resource limitation and performance was only measured based on the providers’ own reporting.

Considering the limitations mentioned, more studies with a more rigid design are recommended to determine the effectiveness of peer-based education as an in-service educational method, especially in terms of its effects on provider performance. It would be an advantage to assess such effects using more valid measures like unannounced standardized patients (223, 224) or vignettes (228, 229).

External validity or generalizability (study I, IV)

In study I we have described the quality of family planning services in Tabriz, where most family planning and other main health indicators, as well as socio-economic indicators are similar to the mean of urban areas of the whole country (see page 30). Thus, the results can be indicative of the quality of family planning services in urban Iran. However, there are wide disparities among Iran’s provinces (25, 203) and the results may not be generalized to each of all provinces separately, especially provinces with higher (such as Tehran) and lower (such as Sistan & Baluchistan) socio-economic and health indicators. However, the results of the intervention in study IV might be generalized to other similar settings.

5.2.2 Trustworthiness in the qualitative studies (study II, III)

In qualitative research, the scientific value is usually judged by the trustworthiness of the findings. Trustworthiness contains three intertwined and interrelated components: credibility, transferability and dependability (230).

Credibility, corresponding to validity in quantitative research, refers to confidence in how well data and process of analysis address the intended focus (230). Using data
source triangulation, we explored the quality of the services from the perspectives of both clients and providers. Women’s experiences of the quality of family planning services and providers’ perceptions of barriers to attain high quality services were explored and the two data sources together gave a credible picture of quality of the services and the problems encountered. Another way to enhance credibility was to combine the different perspectives of the members of the research team (investigator triangulation) which was important in both Study II and III. In qualitative studies, the different ways of approaching the same subject can result in an increased understanding of the studied phenomena. Thus, multiple researchers with different perspectives might strengthen the design of a study, not for the purpose of consensus or identical reading, but to supplement and argue each others’ statements (231). In these studies, co-authors included one midwife with field experience from the urban facilities (PI), three scientists from Sweden; one specialist in health policy and management, one sociologist and one obstetrician/gynaecologist all with experience in reproductive health in low- and middle-income countries; and two scientists from Iran; one specialist in health services management and one paediatrician with long-term experience of health service management at the district level in the province where the study was performed. This synergy of investigators helped in applying different analytical perspectives and enhanced the quality of this research.

Transferability or external validity indicates to what extent the findings can be transferred to other settings beyond the context in which the study was done (230, 231). In qualitative research authors can give suggestions about transferability but the reader must decide if the setting of the study is sufficiently similar for its findings to be transferable to their own context (222, 230). By carefully describing the study settings in these two studies, the readers can judge to what extent the findings are also applicable to other settings in Iran or elsewhere.

Dependability, corresponding to ‘reliability’ in quantitative research, is often discussed in terms of the researcher’s critical and transparent mode of describing the research process and tools. One important aspect is the researchers’ own role in the research process. The PI (the facilitator) herself is a midwife with field experience from the urban facilities but with no organizational relationship with the providers or their managers. Thus, no bias is suspected in the flow of the discussions due to hierarchical relationships between the PI and the participants. Another way of achieving dependable data in Studies II and III was to create a sense of confidentiality and ease among participants during the FGDs. Most of the women were not familiar with each other, and they were very open in expressing their views. Although most of the providers were familiar with each other to some extent, this did not seem to limit the free flow of the discussions; on the contrary, they were very open in expressing their views, even about their own deficiencies. The PI's familiarity with the work environment was felt to facilitate honest, open discussions. Using semi-structured guidelines in the studies, the same issues were covered for all participants, which is important for the dependability of such studies (230).
5.3 SOME IMPLICATIONS FOR POLICY AND RESEARCH

Based on the study findings, multifaceted interventions are recommended in order to improve services. Such interventions should include in-service education programmes based on providers’ needs, simplifying record management, appointing more staff in deprived areas, and establishing a supportive supervision and management system.

Some of the barriers identified by the participants in the present study, such as constraints in physical infrastructure, can be solved at district level with some support from higher levels. More complex issues such as provider multitasking are directed by national policies and revisions should therefore be considered in future national programmes.

There is a high need for improvement of information and education for clients in all areas of reproductive health, including family planning. Multiple communication channels and methods, including printed materials and videos as well as group counselling, should be used to address this need. The messages should be consistent, clear, evidence-based and comprehensive, in order to enable the women to make informed choices in all areas of reproductive health, e.g., to choose the most suitable contraceptive method for their own situation and use it safely and effectively.

Evidence-based guidelines and facilities for infection prevention procedures should be provided at the facilities to improve the providers’ performance in this area.

The public health services should address men more actively for mutual benefit of couples, especially through providing education and counselling for couples and men. The barriers for male involvement, like lack of privacy and inconvenient working hours, should be removed, e.g., by activating the health facilities at some hours in the afternoons.

Sexual health services, including couple counselling on marital issues, need to be integrated in the context of the primary health care to address one of the women’s and couples’ most important problems.

The amount of contraceptive pills and condoms provided in each visit should be increased considering the clients’ individual wish and needs. This would decrease method discontinuation and the providers’ workload, specially their paper work, and enable services with higher quality especially for those clients who need more time to spend with the providers.

Assigning some of the tasks that require special competencies, such as counselling with clients who wants to choose a new family planning method, to a single provider at each facility will help to reduce the multiplicity of tasks and need for giving all providers in-service education in all service areas, and enhance quality in the specialised areas. Implementing the new approach towards promoting IUD services (195), which involves focusing on a smaller number of competent providers, would also be useful at the facilities.
Since one of the basic requirements for integrating services is a common target audience, omitting school health care from the providers’ tasks and assigning particular individuals to this important task will help to improve quality of services both at the facilities and at the schools without compromising the objectives of the integration.

Multitasking and inadequate continuing education was mentioned as important barriers for the quality of services. Therefore, reducing the providers’ need to memorize all the information by using evidenced-based job aids and method brochures may enable the providers to enhance quality of their task performance and address one of the clients’ expectations to access evidence-based printed materials. Thus, a study on effects of using the ‘balanced counselling strategy’ (43) or the ‘decision-making tool for family planning clients and providers’ (76) combined with the method brochures on the quality of care and the providers’ and clients’ satisfaction is recommended.

Many people, including people with higher need for health information, looked for services at the private settings, including pharmacies. Therefore, a study on client satisfaction and quality of services at the private settings is recommended.

Other important areas for research have been identified, such as the consequences of the current system of multipurpose health providers for provider satisfaction and service quality, compared with a system where different specialised providers would work within an integrated service setting, which could be tested using combined quantitative and qualitative study designs. Such studies are needed to find the best way to provide a full range of integrated sexual and reproductive health services in the primary health care system. Moreover, findings of such studies can guide the development of content and curricula for continuing training for reproductive health providers at urban primary health facilities.

Studies on how supervision is actually performed are also needed, as well as studies to explore the managers’ and supervisors’ opinions on the providers’ perceived barriers and their own perspectives on these issues.

On-site educational programmes including peer discussions should be used as a complement to formal large group educational efforts for the providers. Research on the effect of peer-based learning on provider performance with more rigid design is needed.
5.4 CONCLUSIONS

There is a gap between the national policy and the reality in the public primary health centres with regard to the quality of reproductive health services. Women’s experiences of the strengths and weaknesses of the services and their suggestions for improvement should be taken into account in order to provide services which both strengthen women’s autonomy and rights, and involve husbands for mutual benefit. Moreover, the providers’ views of existing barriers for optimal performance should be considered in the current national strategy to achieve reproductive health-care goals.

Multifaceted interventions are recommended to improve providers’ satisfaction and their ability to provide high quality services, and to strengthen clients’ rights. The findings of these studies can be used to guide the content and form of such interventions. The findings can also provide a basis for further studies concerning the quality of other services provided at public health facilities, and quality of services in the private sector.
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7 REFERENCES


52. USAID, INFO Project, Johns Hopkins Bloomberg School of Public Health. Center for Communication Programs. Elements of family planning success-
essential components of family planning programs. [cited 2009 5 Jan]; Available from: http://www.jhuccp.org/fpsuccess/front_page


82. UNdata. National accounts estimates of main aggregates- United Nations Statistics Division -per capita GNI at current prices - US Dollars. [cited 2009 2 Feb]; Available from: http://data.un.org/Data.aspx?q=GNI+per+capita+Iran&d=SNAAMA&f=grID%3a103%3bcurrID%3aUSD%3bpcFlag%3a1%3bcrID%3a364


157. Murphy E, Steele C. Client-provider interactions in family planning services: guidance from research and program experience. MAQ Paper 1(2) 2000.


204. Safari R. Comparison of the level of job satisfaction among midwives working at health centers and hospitals with private offices in Tabriz, 2002 (in Persian with English abstract): Tabriz University of Medical Sciences; 2003.


