

# FACTORS ASSOCIATION WITH IUD SERVICE PRODUCTIVITY OF SUN QUALITY HEALTH DOCTORS IN MYANMAR

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**ABSTRACT:** Sun Quality Health (SQH) Network is general practitioners' partial franchised network cooperated with PSI/Myanmar, one of the INGOs in Myanmar working in public health. For Reproductive Health, SQH doctors provide birth spacing services with affordable price for low income people with the support of PSI. Most of them provide short term birth spacing services and only one fourth of them provided long term method (Intrauterine contraceptive device, IUD) service and 79% of IUD services were provided by 19% of providers. The objective of the study is to find the factors association with IUD service productivity of SQH doctors. This study is cross sectional descriptive analytical study and data was collected in 5 states and 7 Divisional Regions of Myanmar. The study was done with questionnaire interview and in depth interview and therefore it included both quantitative and qualitative study. 175 SQH doctors were interviewed by structured interview and then 9 doctors were selected based on their IUD service performance and in-depth interviews were done. Majority of the respondents (37.7%) were from the age group between 46 to 55 years and 43.4% were male doctors. 85.1% graduated as M.B.,B.S. and without other specialization. Majority of clinics (77.7%) were located in urban and 54.3% of the clinics opened from 4 to 8 hours per day. Most of them (61.7%) had separate examination room for IUD service. Average mean daily general client load was 38.4 and birth spacing client was 7.2 per day. Most of them (64.6%) had IUD client referral network to their clinics. Most of them (72.6%) had clinic assistants for IUD service. Regarding to knowledge of IUD service by answering quiz, 65.1% of the providers had medium level of knowledge. According to the results of quantitative and qualitative study, presence of separate examination room for IUD service and daily birth spacing client load were significantly associated with IUD service productivity. Relating to IUD service, confidence level of providers on IUD service skill, time taken for IUD service, presence of birth spacing client referral network, presence of clinic assistant for IUD service and presence of special event day for IUD service were significantly associated with their IUD service productivity. Attending IUD refresher training was also one of the significant associated factors for IUD service productivity.

**Keywords:** Intrauterine contraceptive device, IUD service, Productivity, Sun Quality Health doctors, Myanmar

## INTRODUCTION

According to Myanmar country report on fertility and reproductive health survey (FRHS) 2007, maternal mortality rate (MMR) in 2007 is 316/100,000 live births. The contraceptive prevalence rate (CPR) is 41% (38% modern methods and 3% traditional methods) and CPR for

intra uterine device (IUD), one of the long term methods is 2%. Unmet need for contraception leads to unintended pregnancies and one of its harmful consequences is unsafe abortion. In 2007, unmet need for contraception is 17.7% [1].

Most women in Myanmar seek contraceptives through the private sectors where the majority of the products are expensive and low quality. Affordable long term method including IUD is not typical in private sector.

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PSI/Myanmar is a non-profit organization that uses social marketing to empower low-income and vulnerable people to lead healthier lives. Sun Quality Health is a franchised network of private doctors committed to improving health care for low income populations. Skilled doctors with pre-existing, private clinics are invited to join the network by participating in intensive, disease specific training [2]. There are currently 1285 Reproductive Health (RH) providers in Sun network and most of them provide short term birth spacing services such as combined oral contraceptive pills, 3 month injection, oral emergency contraceptives, male and female condoms. Only one fourth of the providers (320) provide both short term and long term (IUD) services [3].

From 2003-2011 October, there were totally 354 trained IUD providers but only 320 providers are in active providers list. Out of 320 IUD providers, nearly half of them reported back to PSI/Myanmar regularly for their IUD service provision [3]. Moreover, according to the SQH performance analyzing report 2010, 19% of the IUD providers contributed 79% of IUD services which means out of total 28,557 IUD insertions, 22,560 IUD services were provided by only 19% of SQH IUD doctors [4].

Technical training interventions do not reduce providers' attitudinal barriers towards IUD provision and "Non-training" intervention should be designed to lower these barriers [5]. Although providers are obviously essential partners in service programs, their perspectives have received remarkably little attentions and that is a major gap [6]. Physicians are important gatekeepers of women's access to effective methods of contraception. An understanding of physician behavior in this domain is therefore important [7]. The main objective of the research study was to identify the factors associating Sun Quality Health IUD providers' IUD service productivity

Nowadays, over 100 million women worldwide use IUD as method of choice for contraception and it makes the most popular reversible method of birth control [8]. But there are some countries still back in IUD service due to the safety concern and programmatic obstacles and challenges. Like the other health care setting, providers are also key players in family planning services and it can be found in one of the articles from Canadian Journal of Public Health that "Physicians are important gatekeepers of women's access to effective methods of contraception. An understanding of physician behavior in this domain

is therefore important" [7].

Most of the women in Myanmar seek contraceptive care from both public and private sides. According to FRHS 2007, the private sector plays a main source for the majority (52%) of current modern contraceptive users and followed by public sector (42%). Source of contraceptives depends on the different kinds of methods. For IUD, the range is wider, private clinics (24%), government nurses and midwives (22%) and government hospitals (18%) [1].

There are previous findings of the relationships between the socio demographic factors and the providers' knowledge and attitude on IUD. Female GPs fitted more IUDs than male GPs and this correlated with positive knowledge and attitude. Young GPs (<40 years of age) and recent graduates (<10 years work experience) were the most knowledgeable [9]. In 2009 PSI/Cambodia's qualitative study of "IUD provision in Cambodia: provider productivity study", providers' previous experience, level of confidence, Medical equipment set up & number of helpers in the clinic and the counseling strategy are the determinants that correlate to high and low IUD clients [10].

Time factor and procedures for IUD insertion is also influence on the providers' behavior for IUD provision [11]. From the studies in El Salvador and Kenya, it have found that certain characteristics of IUD service delivery make it less attractive to providers, including the time required for insertion, the variety of supplies and equipments needed for the procedure [12].

Providers' experience in terms of the number of IUDs inserted in their careers, appears to improve knowledge, self-confidence in the ability provide the IUD and to lower age-related attitudinal barriers towards IUD recommendation. Formative research is needed to better understand reasons for the high levels of provider barriers to IUD provision [5].

Privacy of the clinic is one of the important factors for the clinical service like IUD insertion. In Malawi, researcher noted that although 76% of the facilities were able to provide privacy but only 62% of mystery clients reported back that they received sufficient privacy [13].

## MATERIALS AND METHODS

This study is a descriptive analytical study. A cross sectional study design is used to describe the factors associating with the IUD service provision by the SQH doctors by determining the relationship between the independent and dependent variables. It was done with questionnaire interview and in

**Table 1** Distribution of the respondents by the places of study (n=175)

Place of the study (States and divisional regions)	No. of respondents	Total no. of Existing providers	Percentages (%) out of 175 doctors
1. Ayarwaddy	20	20	11.4
2. Bago	33	34	18.9
3. Kachin	4	7	2.3
4. Kayin	4	4	2.3
5. Magway	12	21	6.8
6. Mandalay	7	81	4.0
7. Mon	15	15	8.6
8. Rakhine	1	1	0.5
9. Sagaing	8	28	4.6
10. Shan	2	21	1.1
11. Tanintharyi	6	6	3.4
12. Yangon	63	81	36.0
<b>Total</b>	175	320	100.0

depth interview (quantitative and qualitative methods).

The study was done in 12 states and divisional regions. Among those providers, according to the systemic stratified sampling technique, the sample providers were asked to participate voluntarily for the research study. Total number of Sun Quality Health IUD providers is 320 [3]. Sample size for the study was 175 SQH IUD providers who were active for IUD service during January to March 2012. All the SQH IUD Providers were listed from the PSI/Myanmar Management and Information System (MIS) and the study samples were be selected by systemic stratified sampling, Table 1.

Moreover, according to PSI/Myanmar IUD program standard operation protocol, providers who provided IUD services to 9 women and above within 3 months were defined as productive providers and those who provided less than 9 IUDs within 3 months were defined as unproductive providers [14]. After finishing all questionnaire interviews, 9 SQH IUD providers were selected for in-depth interviews based on the IUD client load within past 3 months such as: category 1 - 3 providers who had no IUD client within January to March 2012, category 2 - 3 providers who had 1 to 10 IUD clients and category 3 - 3 providers who had more than 10 IUD clients (Figure 1).

The quantitative data was collected by structured questionnaires by the interviewers who were medical doctors trained by the principle investigator. For in-depth interviews, open-ended questions and semi-structured interview were used to find intensive information about the topic of interest. All in-depth interviews were done by the main researcher.

The results of the questionnaire were coded in the database and analyzed by using the Statistical

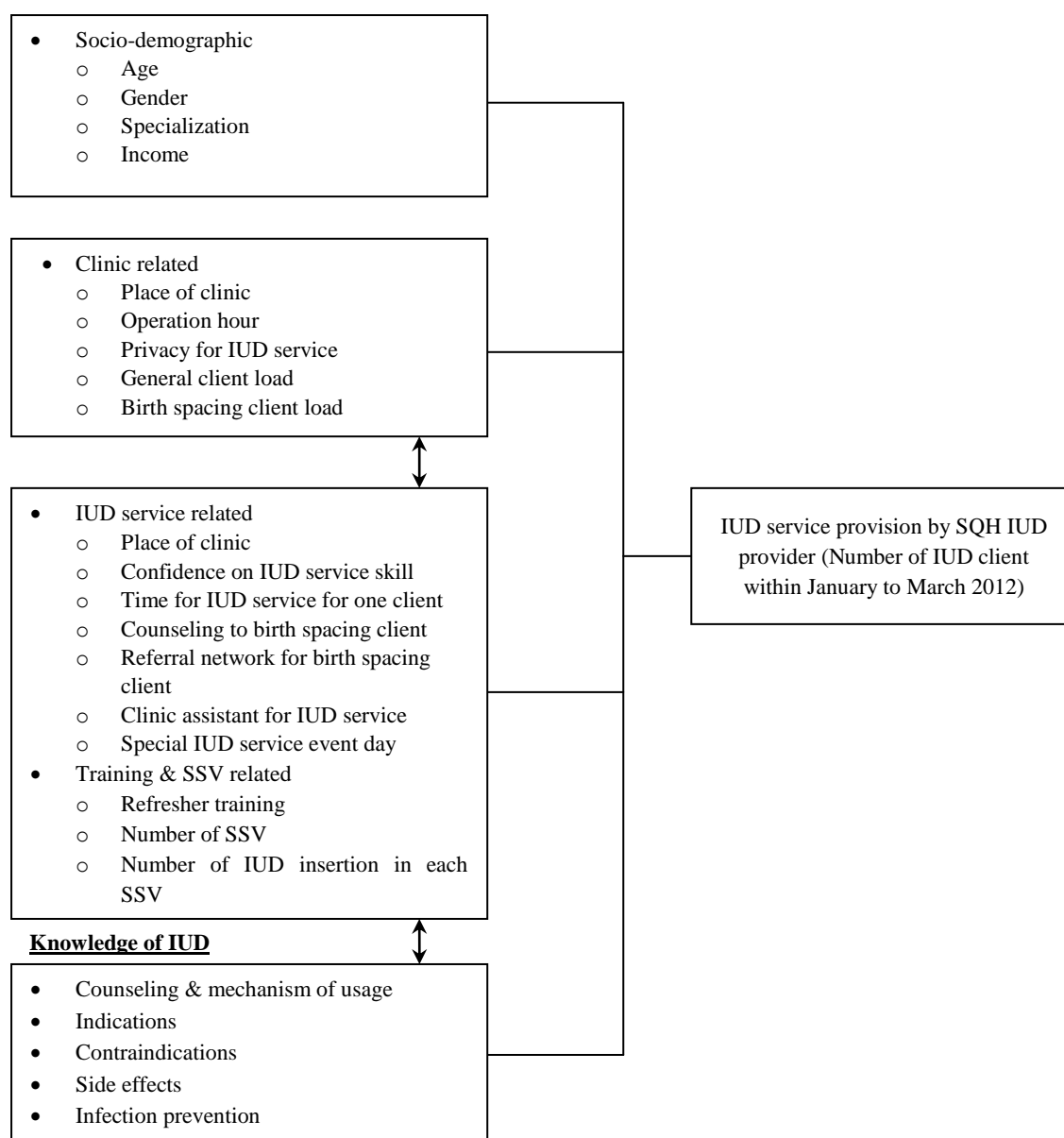
Package for Social Sciences (SPSS) version 17 (SPSS licensed for Chulalongkorn University) Window software. Data analysis was done by descriptive statistics to find frequencies, means, proportions and standard deviation (SD). In order to find the relationship between the independent and dependent variables were calculated by Chi-square test. In-depth interview results were analyzed by content analysis using thematic analysis to discover key ideas patterns and relationships from the interview results.

The proposal received the approval from Ethical Committee of Chulalongkorn University. All the interviewees were explained about the research study including purposes and questionnaires and written consent was obtained. Confidentiality was kept by using identification no. for recording of the questionnaires. The respondent could feel free to answer or not any questions. Privacy was maintained throughout the interview and the process was done at providers' clinics at their free time.

## RESULTS

Average mean age of the respondents was 49.8 years (SD 9.8). The age range was 27 years to 67 years. Most of the respondents (37.7%) were in the 46 to 55 age group and 76 doctors (43.4%) were male. All providers were graduated as M.B.,B.S. and 26 doctors of them (14.9%) had specialization.

Out of 175 clinics, 136 (77.7%) clinics were located in urban area, 28 (16.0%) in sub-urban area and 11 (6.3%) were in rural area. Out of 175 clinics, 108 (61.7%) IUD clinics had separate examination room for IUD service and the others had not. Their minimum daily general client (not birth spacing client included) amount was 7 clients per day to maximum daily general client amount



**Figure 1** Conceptual framework

was 150 clients per day. The average mean of daily birth spacing client was 7.2 (minimum 1 to maximum 20).

The majority of doctors 113 (64.6%) received referred clients from local referral network like Sun primary health workers (volunteers trained by PSI/Myanmar), basic health staffs and midwives. 35.4% (62 doctors) responded they did not have referral networks. Among the SQH IUD providers, 127 (72.6%) had a clinic assistant for IUD service.

For training related factors, 86 providers (49.1%) attended refresher training and 50.9% had not attended. Supportive supervision visits (SSV) were routine visits made to the providers after the training to build up skill competency and confidence for IUD service. Apart from 7 providers

(4%) all other 168 providers were supported by SSV visit at least one time to five times. Most of the providers, (69.7%) had 3 SSV visit.

The respondent's knowledge on IUD services was assessed by knowledge quiz. Out of true or false quiz, average mean score was 12.4 and minimum score was 9 and maximum score was 15. 15 respondents (8.6%) were in the low scored group, 46 respondents (26.3%) in the medium group and 114 respondents (65.1%) in the high scored group.

Provider's productivity was not significantly different between the genders ( $p$ -value=0.308). Out of the total number of 68 high performers, 32 (47.05%) were males and 36 (52.95%) females. There was significant difference between the clinic

opening hours ( $p\text{-value}\leq 0.001$ ), presence of separate examination room for IUD service, daily birth spacing client load, self-confidence on IUD service provision skills, time taken to provide a client with IUD service, presence of referral network, presence of clinic assistant for IUD service, attending refresher training (all at  $p\text{-value}\leq 0.001$ ), event day for IUD service ( $p\text{-value}=0.006$ ) and the providers' productivity. Daily general client load ( $p\text{-value}=0.085$ ) and knowledge level of providers on IUD service ( $p\text{-value}=0.056$ ) were not significantly associated with providers' IUD service productivity.

## DISCUSSION

Our findings of no significant difference in providers' productivity and gender were not consistent with the findings of Gupta and Miller [9] in Stockport and Manchester in England where females GPs fitted more IUD than males GPs and young GPs (<40 years of age) and recent graduates (<10 years of work experience) were the most knowledgeable. This may be due to differences between the studied countries, including clients' belief and trust upon the providers, same gender providers and providers' qualification (all SQH IUD providers in Myanmar were medical doctors).

The location of the clinics whether it was located in urban or suburban or rural was not associated with the providers' productivity on IUD service. During the in-depth interview, some respondents, however, mentioned they did not have many clients because their clinic was situated in urban areas and they thought there would be more IUD clients in rural areas. Other in-depth interviews, however, identified one high performer in urban area and one medium performer in rural area. Clinic opening hours were significantly associated with providers' productivity as expected since the longer the clinic operates, the more clients come and are served.

Presence of separate examination and IUD room was, as expected, significantly associated with providers' productivity as confirmed by two Low Performers in-depth interviews: without separate rooms they were not interested in IUD service because they had to prepare their general examination room for IUD clients before insertion.

Although general client load was not significantly associated with the providers' productivity, birth spacing client load was, as expected, associated. Providers' self-confidence

on IUD related skill was significantly associated with providers' productivity as reported by other studies [10] and by one of the high performer's in-depth interview.

Significant association between time taken for IUD service and providers' productivity is confirmed by other studies [15]. Birth spacing client referral network and attending refresher training were significantly associated with providers' productivity as expected and confirmed in all high performers in-depth interviews.

The significant association between presence of a clinic assistant for IUD service and providers' productivity was confirmed in two Low Performers in-depth interviews. Arranging special event day to provide IUD service was, as expected, significantly associated with providers' productivity because they could provide IUD service to many women during a single day without the delays related to routine GP practice.

The programmatic recommendations of this study include to recruit new IUD providers based not only on their interest in IUD, but also on clinic opening hour, birth spacing client load, presence private room and of an IUD related clinic assistant. Moreover, SSV should not only give to newly trained providers but also to those with low productivity. Regular annual refresher training for all SQH IUD doctors, developing client referral networks and organizing special IUD event day are also recommended.

Recommendations for further research should include investigation on providers' behavior and additional factors that could influence providers' behavior and productivity beyond the providers' perception on client's choice for removal of IUD and include the study of clients' views as well. Because there are many misconceptions in the community on this effective, reversible long term birth spacing method.

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