



Book Chapters

---

January 2015

# Client satisfaction: does private or public health sector make a difference? results from secondary data analysis in Sindh, Pakistan

Wajiha Javed  
*Jhpiego*

Arsalan Jabbar

Nelofer Mehboob

Muhammad Tafseer

Zahid Memon  
Aga Khan University, zahid.memon@aku.edu

Follow this and additional works at: [http://ecommons.aku.edu/book\\_chapters](http://ecommons.aku.edu/book_chapters)

---

## Recommended Citation

Javed, W., Jabbar, A., Mehboob, N., Tafseer, M., Memon, Z. (2015). Client satisfaction: does private or public health sector make a difference? results from secondary data analysis in Sindh, Pakistan. *ICPD 2015: International Conference on Population and Development*, 2(5).

**Available at:** [http://ecommons.aku.edu/book\\_chapters/237](http://ecommons.aku.edu/book_chapters/237)

# Client Satisfaction: Does Private or Public Health Sector Make a Difference? Results from Secondary Data Analysis in Sindh, Pakistan

Wajiha Javed, Arsalan Jabbar, Nelofer Mehboob, Muhammad Tafseer, Zahid Memon

## I. INTRODUCTION

**Abstract**—Introduction: Researchers globally have strived to explore diverse factors that augment the continuation and uptake of family planning methods. Clients' satisfaction is one of the core determinants facilitating continuation of family planning methods. There is a major debate yet scanty evidence to contrast public and private sectors with respect to client satisfaction. The objective of this study is to compare quality-of-care provided by public and private sectors of Pakistan through a client satisfaction lens.

**Methods:** We used Pakistan Demographic Health Survey 2012-13 dataset on 3133 women. Ten different multivariate models were made to explore the relationship between client satisfaction and dependent outcome after adjusting for all known confounding factors and results are presented as OR and AOR (95% CI).

**Results:** Multivariate analyses showed that clients were less satisfied in contraceptive provision from private sector as compared to public sector (AOR 0.92, 95% CI 0.63-1.68) even though the result was not statistically significant. Clients were more satisfied from private sector as compared to the public sector with respect to other determinants of quality-of-care follow-up care (AOR 3.29, 95% CI 1.95-5.55), infection prevention (AOR 2.41, 95% CI 1.60-3.62), counseling services (AOR 2.01, 95% CI 1.27-3.18), timely treatment (AOR 3.37, 95% CI 2.20-5.15), attitude of staff (AOR 2.23, 95% CI 1.50-3.33), punctuality of staff (AOR 2.28, 95% CI 1.92-4.13), timely referring (AOR 2.34, 95% CI 1.63-3.35), staff cooperation (AOR 1.75, 95% CI 1.22-2.51) and complications handling (AOR 2.27, 95% CI 1.56-3.29).

**Discussion:** Public sector has successfully attained substantial satisfaction levels with respect to provision of contraceptives, but it contrasts previous literature from a multi country studies. Our study though in is concordance with a study from Tanzania where public sector was more likely to offer family planning services to clients as compared to private facilities.

**Conclusion:** In majority of the developing countries, public sector is more involved in FP service provision; however, in Pakistan clients' satisfaction in private sector is more, which opens doors for public-private partnerships and collaboration in the near future.

**Keywords**—Client satisfaction, Family Planning, Public private partnership, Quality of care.

W. J. is with the Greenstar Social Marketing, Pakistan (phone: +923335378623 e-mail: wajiha.javed@greenstar.org.pk).

A. J. is with the Greenstar Social Marketing, Pakistan (phone: +923337556551 e-mail: arsalanjabbar@greenstar.org.pk).

N. M. is with the Greenstar Social Marketing, Pakista, (phone: +923232433805 e-mail: nelofermehboob@greenstar.org.pk).

M. T. is with the Greenstar Social Marketing, Pakistan (phone: +923333744720 e-mail: mtafseer@greenstar.org.pk).

Z. M. is with the Greenstar Social Marketing, Pakistan (phone: +923085550859 e-mail: zahidmemon@greenstar.org.pk).

THE choice of adopting family planning (FP) methods is governed by many factors [1], but majorly hindered due to lack of knowledge. Counseling plays a major role in enhancing potential users' knowledge base and in turn leading them to make the right choice. Client satisfaction though is the key to continuation of FP methods [2].

Family planning provision, despite all the socio-cultural barriers, is facilitated by both public and private sectors in Pakistan. Both the sectors are determined to promote FP method adoption in Pakistan and to contribute significantly towards the increase in Contraceptive Prevalence Rate (CPR). Each sector, with its distinct strategies and tactics, has been able to procure substantial share of clients representing diverse socioeconomic backgrounds. Family planning methods are made available either free or at subsidized price to boost their adoption among potential low-income users. In Pakistan, the public sector usually targets the masses that are non-affording whereas private sector, targets diverse wealth quintiles ranging from poor to rich. Nonetheless, it is quite difficult to proclaim one sector to be better than the other in context of client satisfaction [3], especially in Pakistan where no such study has been previously conducted.

Literature from Kenya states that private facilities represent better physical infrastructure and service availability while public sector has better management systems [4]. Yet, the overall inclination of client satisfaction towards private sector could not be explained by the aforementioned factors. A comparative study of Tanzania, Kenya and Ghana affirmed that client satisfaction with respect to family planning was an outcome of structural factors such as availability of preferred methods, supplies and lesser waiting time in public as compared to the private sector [5]. A study to contrast public and private sectors with respect to family planning provision of services asserts that private sector as compared to the public lags behind and needs to increase provision of services in facilities [6]. Lack of the resources or their mismanagement is one of the fundamental quandaries faced by the developing countries [7]. Hypothetically, this suggests that the private sector could outpace the public sector; however, this is just a conjecture to be proved. It has been observed that clients' privacy and confidentiality in FP service provision needs improvement along with information provided to clients about contraceptive methods [8]. These are the strong characteristics as they affect clients' knowledge about contraceptive methods and decision making [9].

Despite limited resources allotted to the public facilities, more visits are acknowledged by the public sector as compared to private [10]. Is it because of the better or cheaper service provision? Clients that represent lower wealth quintiles might not be able to afford the services provided by the private sector [11]; however, this might not be the only concern here. Social franchising has been actively contributing towards betterment of reproductive health services provision; especially, in the developing countries with lesser income [12]. Thus, there might be other factors facilitating the inclination of clients' satisfaction towards the public sector than private.

This aim of this study is to compare quality of care provided by family planning services in public and private sector in context of client satisfaction.

## II. METHODS

We used Pakistan Demographic Health Survey 2012-13 dataset (Sindh province) on a total of 3133 Married Women of Reproductive Age (MWRA) aged 15-49 years. Source of family planning (public/private sector) was the main exposure variable. Outcome variable was client satisfaction judged by ten different dimensions of client satisfaction (provision of contraceptive, follow-up care, infection prevention, counseling services, timely treatment, attitude of staff, punctuality of staff, timely referring, staff cooperation and complications handling.).

Means and standard deviations were calculated for continuous variable while for categorical variable frequencies and percentages were computed. For univariate analysis, Chi-square/Fisher Exact test was used to find an association between clients' satisfaction in public and private sectors and baseline demographics (locality, age, wealth index, current contraceptive method). Ten different multivariate models were made. The covariates were locality, age of MWRA, MWRA's education, wealth index and current use of FP methods. Variables were checked for multi-collinearity, confounding and interaction, and then advanced logistic regression was used to explore the relationship between client satisfaction and dependent outcome after adjusting for all known confounding factors and results are presented as OR and AOR (95% CI).

## III. RESULTS

Overall 3133 MWRA were analyzed in the study. Initially univariate analysis was conducted between baseline demographics and public/private sector and results are presented in ten different strata of client satisfaction (Table I).

TABLE I  
UNIVARIATE ANALYSIS

Provision of contraceptives				
		Satisfied	Not satisfied	p-value
Sterilization	Public	152	25	.011*
	Private	65	2	
Follow-up care				
		Satisfied	Not satisfied	p-value
Locality: Urban	Public	143	27	.007
	Private	156	11	
Locality: Rural	Public	157	71	.000
	Private	91	11	
Age: 35-39	Public	66	26	.008
	Private	48	5	
Age: 40-44	Public	56	20	0.004*
	Private	46	3	
Age: 45-49	Public	51	15	0.005*
	Private	37	1	
Education: No	Public	173	79	.000
	Private	110	15	
Education: Higher	Public	22	5	.007*
	Private	43	0	
Wealth Index: Poorest	Public	89	40	.005
	Private	43	5	
Wealth Index: Poorer	Public	45	26	.047
	Private	25	5	
Wealth Index: Richest	Public	69	11	0.009*
	Private	103	3	
Current Contraceptive Method: IUD	Public	7	6	.026*
	Private	15	1	
Current Contraceptive Method: Sterilization	Public	138	40	.000*
	Private	67	0	
Infection prevention				
Locality: Urban	Public	123	47	0.000
	Private	152	14	
Locality: Rural	Public	127	100	0.012
	Private	72	30	
Age: 20-24	Public	5	7	0.021*
	Private	16	3	
Age: 25-29	Public	39	29	0.001*
	Private	32	4	
Age: 35-39	Public	29	55	0.02
	Private	4	42	
Age: 40-44	Public	36	50	0.002
	Private	11	44	
Age: 45-49	Public	40	26	0.005
	Private	33	5	
Wealth Index: Poorest	Public	64	64	0.033
	Private	32	15	
Wealth Index: Richest	Public	63	17	.000*
	Private	103	2	
Current Contraceptive Method: IUD	Public	21	11	0.017
	Private	38	5	
Current Contraceptive Method: Sterilization	Public	111	67	0.000
	Private	60	7	
Counseling				
Locality: Urban	Public	141	29	0.018
	Private	152	14	
Locality: Rural	Public	156	71	0.02
	Private	82	19	
Age: 25-29	Public	45	23	.018*
	Private	32	4	
Age: 45-49	Public	44	22	.010*
	Private	35	4	
Education: No	Public	180	72	.032*
	Private	102	23	
Education: Higher	Public	21	5	.026*
	Private	42	1	
Wealth Index: Poorest	Public	91	37	0.01

Provision of contraceptives					Provision of contraceptives					
			Satisfied	Not satisfied	p-value			Satisfied	Not satisfied	p-value
Current Contraceptive Method: IUD	Private		43	5	.011*	Age: 25-29	Public	33	35	.000*
	Public		8	5			Private		32	
Current Contraceptive Method: Sterilization	Private		16	0	.001*	Age: 30-34	Public	47	35	0.045
	Public		137	41			Private		49	
	Private		63	4		Age: 40-44	Public	37	39	0.00
	Public						Private		42	
Timeliness of Service										
Locality: Urban	Public		127	43	0.00	Age: 45-49	Public	35	31	.000*
	Private		154	13			Private		34	
Locality: Rural	Public		115	113	0.00	Education: No	Public	119	133	0.00
	Private		75	26			Private		93	
Age: 25-29	Public		39	28	0.00*	Education: Complete Primary	Public	22	15	.022*
	Private		34	2			Private		23	
Age: 30-34	Public		46	37	.002*	Education: Higher	Public	20	6	.046*
	Private		53	14			Private		41	
Age: 35-39	Public		37	32	.042*	Wealth Index: Poorer	Public	29	42	0.001
	Private		43	10			Private		23	
Age: 40-44	Public		46	30	.000*	Wealth Index: Richer	Public	45	24	0.016
	Private		44	5			Private		48	
Age: 45-49	Public		44	22	.010*	Wealth Index: Richest	Public	57	22	0.002
	Private		34	4			Private		95	
Education: No	Public		144	108	0.00	Current Contraceptive Method: Injectable	Public	18	13	0.014
	Private		98	27			Private		36	
Education: Complete Secondary	Public		25	10	.030*	Current Contraceptive Method: Sterilization	Public	90	88	0.00
	Private		36	3			Private		56	
Education: Higher	Public		17	10	.000*	Referral				
	Private		42	1		Locality: Urban	Public	108	62	0.00
Wealth Index: Poorest	Public		58	70	0.003	Private	135	31	0.00	
	Private		33	14		Locality: Rural	Public	88		139
Wealth Index: Middle	Public		34	16	.013*	Private	62	40	0.006	
	Private		26	2		Age: 25-29	Public	32		36
Wealth Index: Richer	Public		45	24	0.009	Private	27	9	0.018	
	Private		48	8		Age: 30-34	Public	38		44
Wealth Index: Richest	Public		65	15	.001*	Private	44	23	0.00	
	Private		102	4		Age: 40-44	Public	35		41
Current Contraceptive Method: Pills	Public		6	10	.015*	Private	38	11	0.002	
	Private		6	0		Age: 45-49	Public	36		30
Current Contraceptive Method: Injectable	Public		18	14	0.06	Private	33	6	0.00	
	Private		33	10		Education: No	Public	108		144
Current Contraceptive Method: Sterilization	Public		115	63	0.00	Private	80	45	0.00	
	Private		60	7		Education: Complete Primary	Public	21		16
Attitude of Staff										
Locality: Urban	Public		117	53	0.00	Private	22	4	.028*	
	Private		153	13		Education: Higher	Public	14		13
Age: 20-24	Public		7	5	.004*	Private	38	4	.000*	
	Private		20	0		Wealth Index: Poorest	Public	39		89
Age: 30-34	Public		54	29	0.035	Private	30	17	0.00	
	Private		54	13		Wealth Index: Middle	Public	26		24
Age: 45-49	Public		44	22	.010*	Private	22	6	0.021	
	Private		35	4		Wealth Index: Richest	Public	58		22
Education: Complete Secondary	Public		24	11	.041*	Private	93	12	0.005	
	Private		35	4		Current Contraceptive Method: Sterilization	Public	84		94
Education: Higher	Public		15	12	.000*	Private	55	12	0.00	
	Private		41	2		Complications Handling				
Wealth Index: Richer	Public		49	20	0.012	Locality: Urban	Public	107	63	0.00
	Private		50	6		Private	138	28		
Wealth Index: Richest	Public		58	22	0.00	Age: 15-19	Public	0	2	.048*
	Private		99	6		Private	5	0		
Current Contraceptive Method: IUD	Public		8	5	.013*	Age: 25-29	Public	35	33	0.02
	Private		15	0		Private	27	9		
Current Contraceptive Method: Female Sterilization	Public		122	55	0.002	Age: 30-34	Public	38	44	0.047
	Private		59	8		Private	42	25		
Punctuality										
Locality: Urban	Public		115	55	0.00	Age: 45-49	Public	36	30	0.027
	Private		147	19		Private	29	9		
Locality: Rural	Public		102	126	0.00	Education: Complete Primary	Public	21	16	.006*
	Private		69	32		Private	24	3		
						Education: Higher	Public	16	11	.000*
						Private	41	2		
						Wealth Index: Richest	Public	56	24	0.001

		Provision of contraceptives			
			Satisfied	Not satisfied	p-value
Current Method: Sterilization	Private	94	11		0.008
	Public	101	77		
	Private	51	17		
		Cooperation			
Locality: Urban	Public	110	60		0.00
	Private	147	19		
Age: 25-29	Public	38	30		0.027
	Private	28	8		
Age: 30-34	Public	45	37		0.036
	Private	48	19		
Age: 35-39	Public	46	45		0.013
	Private	38	15		
Age: 40-44	Public	42	34		0.018
	Private	38	12		
Age: 45-49	Public	33	33		0.00
	Private	33	6		
Education: No	Public	114	138		0.001
	Private	80	45		
Education: Complete Secondary	Public	23	12		.022*
	Private	35	4		
Education: Higher	Public	18	8		.016*
	Private	39	3		
Wealth Quintile: Middle	Public	24	25		0.011
	Private	22	6		
Wealth Quintile: Richer	Public	41	28		0.022
	Private	44	12		
Wealth Quintile: Richest	Public	59	21		0.001
	Private	97	8		
Current Method: Condom	Public	11	6		.049*
	Private	29	3		
Current Method: Sterilization	Public	95	82		0.00
	Private	54	13		

TABLE II  
MULTIVARIATE ANALYSIS

	Crude OR	Crude OR CI (95%)	Adjusted OR	Crude AOR - CI (95%)
Satisfaction on provision of contraceptives				
Public/Private*	1.001	0.617 – 1.624	1.03	.63 – 1.68
Satisfaction on follow-up care				
Private/Public**	3.725	2.269 – 6.115	3.29	1.95 – 5.55
Satisfaction on infection prevention				
Private/Public <sup>^</sup>	2.995	2.045 – 4.387	2.41	1.60 – 3.62
Satisfaction on counseling				
Private/Public <sup>^^</sup>	2.399	1.564 – 3.681	2.01	1.27 – 3.18
Satisfaction on timeliness				
Private/Public <sup>^</sup>	3.826	2.576 – 5.683	3.37	2.20 – 5.15
Satisfaction on attitude of staff				
Private/Public <sup>^</sup>	2.493	1.70 – 3.638	2.23	1.50 – 3.33
Satisfaction on punctuality				
Private/Public <sup>^</sup>	3.499	2.43 – 5.030	2.82	1.92 – 4.13
Satisfaction on referral				
Private/Public <sup>^^</sup>	2.858	2.044 – 3.997	2.34	1.63 – 3.35
Satisfaction on complications handling				
Private/Public <sup>+</sup>	2.130	1.537 – 2.953	1.75	1.22 – 2.51
Satisfaction on cooperation				
Private/Public <sup>++</sup>	2.760	1.962 – 3.881	2.27	1.56 – 3.29

Then Multivariate analysis was done which showed that clients were less satisfied in contraceptive provision from private sector as compared to public sector (AOR 0.92, 95% CI 0.63-1.68) even though the result was not statistically

significant. Clients were more satisfied from private sector as compared to the public sector with respect to other determinants of quality-of-care follow-up care (AOR 3.29, 95% CI 1.95-5.55), infection prevention (AOR 2.41, 95% CI 1.60-3.62), counseling services (AOR 2.01, 95% CI 1.27-3.18), timely treatment (AOR 3.37, 95% CI 2.20-5.15), attitude of staff (AOR 2.23, 95% CI 1.50-3.33), punctuality of staff (AOR 2.28, 95% CI 1.92-4.13), timely referring (AOR 2.34, 95% CI 1.63-3.35), staff cooperation (AOR 1.75, 95% CI 1.22-2.51) and complications handling (AOR 2.27, 95% CI 1.56-3.29).

#### IV. DISCUSSION

In this paper, we strived to contrast public and private sectors of family planning in context of client satisfaction. With respect to the provision of contraceptives, client satisfaction was more inclined towards public sector than private. Our results show that clients who seek sterilization are more satisfied from public sector as compared to the private. Does this mean that public sector outperforms private sector in contraceptive provision or surpasses it in sterilization cases only? Sterilization is a long-term method. Clients opting aforementioned method would barely require another family planning method to limit their family size. Thus, a major contributor to aforesaid satisfaction attribute can be erstwhile interaction with the service provider. A study reported that by 2003, Kenya acknowledged 32% CPR representing modern methods only; in addition, 40% provision of these methods was facilitated by the private sector [13]. Nonetheless, substantial heterogeneity was acknowledged with respect to the quality of care provided by the private sector [14]. In a country where people are troubled by unstable economy, inequality and poverty, the government's active involvement in health care service provision becomes mandatory [15]; yet, the public endeavors in Pakistan appear quite slow.

Another finding showed that clients were more satisfied from private sector with respect to follow-up care. A study carried out in Tanzania found that providers' technical competence in private facilities was more compared to public sector; moreover, client-provider interaction was much more satisfactory in private facilities compared to public [16]. This corroborates another finding of this study – clients being more satisfied with counseling provided by private providers as compared to public. Family planning counseling is mandatory for married women of reproductive age to avoid early discontinuation; counseling addresses concerns like method failure which can cause dissatisfaction [17]. Provider-patient interaction significantly facilitates correct method use; any discrepancy or miscommunication can lead to negative use of contraceptive method [18].

Clients seeking FP methods are usually recommended a follow-up visit. In rural localities, clients that prefer short-term methods usually visit the facilities for method provision due to unavailability. However, clients preferring long-term methods are recommended a follow-up visit if they experience any side-effects or in case of emergency. Providers' competence adds more value to the continuation of long-term methods;



especially, if the client is experiencing any side-effects. Further, client-providers interaction also determines the success-failure ratio of the follow-up visit.

We also found that clients were more satisfied from private facilities pertaining infection prevention. Another study conducted in Jamaica found that private facilities had better equipment and ample supplies [19]. In addition, private providers have sound technical knowledge and expertise as compared to public. Thus, the risk of infection is certainly lower in private facilities as compared to public. In our study, we also found that clients were more satisfied from private providers regarding complications handling. This refers to the fact that provider competence, availability of supplies and equipment significantly facilitate complications handling in private facilities. Greenstar Social Marketing, one of the non-governmental organizations in Pakistan, designs and implements sophisticated clinical training counseling programs for independent female physicians and paramedics to facilitate the provision of family planning services [20]. Not only Greenstar Social Marketing but many other donor-supported organizations strive towards the betterment of FP service provision.

We also found that clients were more satisfied from private facilities as compared to public with respect to cooperation. It has been noticed that a very few providers ask clients for their family planning or contraceptive needs [21]. The decision of spacing or limiting family size is of great importance especially in countries where family planning is subjected to diverse socio-cultural barriers. Provider's enforcement in decision-making is one of the core reasons for clients to less likely adopt modern methods where provider is an influential authority; whereas, traditional method adoption is on the rise because these methods are less likely to be provider-dependent [22]. Thus, the client must have her say in selection of a contraceptive method.

We also found some other factors such as timeliness, punctuality, provider referral and attitude of staff where client satisfaction was more inclined towards private sector as compared to public. The environment of service delivery, facility ambiance and other provider characteristics can significantly facilitate a client to adopt or reject family planning methods [23]. Clients visiting a family planning facility for counseling end up adopting a method if enthused by aforementioned factors. However, if a client is asked to wait in the line for hours, she will more likely be dissatisfied and probably prefer a traditional method over the modern.

#### V.CONCLUSION

In majority of the developing countries, public sector is more involved in FP service provision; however, in Pakistan clients' satisfaction in private sector is more, which opens doors for public-private partnerships and collaboration in the near future.

#### ACKNOWLEDGMENT

This paper is an output from a project funded by the UK Department for International Development (DFID).The views expressed are not necessarily those of DFID.

#### REFERENCES

- [1] Jain, A. K. Fertility reduction and the quality of family planning services. *Stud FamPlann*, 1989; 20(1):1-16.
- [2] Williams, T. Schutt-Aine, J. Cuca, Y. Measuring Family Planning Service Quality through Client Exit Interviews. *International Family Planning Perspectives*, 2000; 26(2):9.
- [3] Berman, P. Laura, R. The role of private providers in maternal and child health and family planning services in developing countries. *Health Policy Plan*, 1996; 11(2):142-155.
- [4] Agha, Sohail. Do, Mai. The quality of family planning services and client satisfaction in the public and private sectors in Kenya, *International Journal for Quality in Health Care*, 2009; Volume 21, Number 2: pp. 87-96.
- [5] Hutchinson, Paul. Do, Mai. Agha, Sohail. Measuring client satisfaction and the quality of family planning services: A comparative analysis of public and private health facilities in Tanzania, Kenya and Ghana, Hutchinson et al. *BMC Health Services Research*, 2011; 11:203.
- [6] Deodatus, C. Kakoko, Evert, Ketting, Switbert, R. Kamazima, Ruerd, Ruben. Provision of Family Planning Services in Tanzania: A Comparative Analysis of Public and Private Facilities, *Afr J Reprod Health*, 2012; 16(4):140-148.
- [7] Shiwani, H. Clinical governance in Pakistan: myth or reality?, *Journal of Pak Med Association*, 2006; vol. 56, no. 3.
- [8] Nakhaee, N. Mirahmadizadeh, A. R. Iranian women's perceptions of family-planning services quality: a client-satisfaction survey. *Eur J ContraceptReprod Health Care*, 2005;10:192-198.
- [9] Simbar, M. Ahmadi, M. Ahmadi, G. et al. Quality assessment of family planning services in urban health centers of Shahid Beheshti Medical Science University, 2004. *Int J Health Care Qual Assur IncLeadersh Health Serv*, 2006; 19: 430-442.
- [10] Hassan, R. Rehman, A. Facilities of gynecology department in public and private hospitals of Rawalpindi and Islamabad, *Journal of Gender & Social Issues*, 2007; vol. 6, no. 1.
- [11] Adeela, Rehman. Saif-ur-Rehman, Saif, Abbasi. Availability of health care services for women at district Headquarter hospitals of Punjab province, *JGIP*, 2013; Volume 6, Issue 10, pp. 11-23.
- [12] Stephenson, R. Tsui, A. O. Sulzbach, S. Bardsley, P. Bekele, G. Giday, T. Ahmed, R. Gopalkrishnan, G. Feyesitan, B. Franchising reproductive health services, *Health Serv Res*, 2004; 39(6 Pt 2):2053-2080.
- [13] Agha, S.Do, M. Does an expansion in private sector contraceptive supply increase inequality in modern contraceptive use? *Health Policy Plan*, 2008; 23: 1-11.
- [14] Brughla, R. Zwi, A. Improving the quality of privately provided public health care in low and middle income countries: challenges and strategies. *Health Policy Plan*, 1998; 13:107-20
- [15] World Bank, World development report 1993, Investing in Health. Washington, 1993.
- [16] Boller, C. Wyss, K. Mtasiwa, D. et al. Quality and comparison of antenatal care in public and private providers in the United Republic of Tanzania. *Bull World Health Organ*, 2003; 81: 116-122
- [17] Kost, K. Singh, S. Vaughan, B. et al. Estimates of contraceptive failure from the 2002 National Survey of Family Growth, *Contraception*, 2008; 77: 10-21.
- [18] Isaacs, J. N. Creimin, M. D. Miscommunication between healthcare providers and patients may result in unplanned pregnancies, *Contraception*, 2003; 68: 373-376.
- [19] Peabody, J. W. Rahman, O. Fox, K. et al. Quality of care in public and private primary health care facilities: structural comparisons in Jamaica. *Bull Pan Am Health Organ*, 1994; 28:122-141.
- [20] McBride, J. Ahmed, R. Social Franchising as a Strategy for Expanding Access to Reproductive Health Services: A case study of the Greenstar Service Delivery Network in Pakistan *Commercial Market Strategies*; Washington DC, USA; 2001.
- [21] Healthy people 2000: National health promotion and disease prevention objectives: Full report, with commentary. Washington, DC: Superintendent of Documents, U.S. Government Printing Office, 1991

- [22] Carton, T. W. Agha, S. Changes in contraceptive use and the method mix in Pakistan: 1990-91 to 2006-07. *Health Policy and Planning*; 2011
- [23] Hamid, S. Stephenson, R. Provider and health facility influences on contraceptive adoption in urban Pakistan, *International Family Planning Perspectives*, 2006; 32(2): 71-78.