

FACTORS THAT HINDER FEMALE DENTISTS IN PURSUING THEIR CAREER

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ABSTRACT

Dentistry is a profession where due to the phenomenal growth of Pakistani population, the ratio of dentists to population has greatly decreased and is currently 1:16,426. Another contributing phenomenon in this regard is female dropouts from the profession. Many females occupy a place initially, and leave the profession eventually, whereas a male student having studied dentistry on this seat would have practiced his profession. The Pakistani government spends 7,500 US dollars on the education of a dentist. It actually becomes a double loss of the society. The designated role of a homemaker for females in the family centred society of Pakistan affects the professional lives of these women adversely as it is a heroic task to balance both family and professional life. The overwhelming household and motherhood responsibilities consequently results in, women leaving their occupation at a rate twice that of men. Also women feel strongly that males have stronger personal and professional support systems than women. The government of Pakistan / parents spend millions of rupees on this highly technical and professional education; shall it be transformed into well – educated good house – wives? Pakistan Medical and dental Council (PMDC) does not allow part time work options in teaching institutions and government hospitals. Accepting the women and understanding their requirements to keep up with their family needs and professional demands, is one step forward and this change agent will definitely bring many improvements and reforms.

Key words: Dentistry, female drop outs, motherhood, professional support.

INTRODUCTION

History of Dentistry

The history of females taking up dentistry as a profession goes back to middle of nineteenth century and Lucy B. Hobbs Taylor has the honour of being the first female graduate who was granted a degree by dental college. She got admission into dental college of Ohio and was awarded a graduate degree in 1866 (King, 1945). The number of women entering the field of dentistry gradually increased, as they started coming to America for further studies, especially from Europe where females were not allowed to get admission in dental institutes in their own countries. Initially dental colleges in America were also not very keen to offer admission to females. However ladies were mostly accepted in many dental institutions by 1880. We are indebted to these pioneer women in dentistry, for enjoying the privilege of education in the field of our choice today.

In Europe, the timeline began in 1895 when Lillian Lindsay became the first woman who qualified as a dentist in the United Kingdom (UK) and from there onwards the gradual increase of women in the profession started. It is said that by 2020, over 50% of all dentists in the UK will be females (Murray, 2002).

In Pakistan, the first women dentist was Moh-tarma Fatima Jinnah, sister of Quaid-e-Azam Mohammad Ali Jinnah, the founder of Pakistan. She went to Calcutta University in 1919, and got admission in R Ahmad Dental College. In 1923, she established a private dental clinic in Bombay, after her graduation (Commire, 2000).

Global Perspective

As the women entering dentistry and medicine are increasing day by day, this makes the issue of balancing family – work all the more important if we want to utilize this work force in future.

Women are competing for higher education and procuring different professional degrees with great enthusiasm at a pace higher than that of men, but even today, they are immensely under represented when leading positions are considered. Research has evidenced that women are more likely to be found in specialties such as pediatrics, obstetrics and gynecology, psychiatry, pathology and family practice (Jagsi et al., 2007) and they are prepared for under-representation in top positions in medical organizations and medical school faculties. Women try to balance their work and family life in many different ways (Bowles and Mc-

Ginn, 2005). Females with higher degrees tend to fall out of profession because they want to have children and not because their work is devalued. Women also think, there is a lack of female mentorship and professional support as they do not know where to find locum during their maternity leave (Davidson et al, 2012).

Motherhood has its effects on the professional lives of these women as it is a heroic task to balance both family and professional life. The plan to have children consequently results in, women leaving their occupation at a rate twice that of men (Windy, 2012). With regards to keeping stability between the demands of family life and dentistry, women automatically take the onus of "double shift". According to a survey by American dental association in 1995, women in dentistry spend about 15 hours per week with children, child-care consumes about 11 hours weekly, and housework takes about 9 hours. Women in dentistry spend about double the amount of time in household chores and child care, as compared to their male counterparts, adding to an extensive amount of work to their lives (Ross et al, 2014). In a study by Sophia Mobiloson, "life style and professional balance" people mentioned that there was a definite link between specialty choice and your life style issues. Balanced lifestyle required certain career decisions and sacrifices. Participants appeared to accept these sacrifices with resignation, and they saw them as being inherent part of practicing medicine (Mobilos et al, 2008).

According to a recent report by Organization for Economic Co-operation and Development (OECD) Centre, June 2013, the benefits of maternity leave for women's empowerment include both health and economic outcomes. In spite of the increasing attention of developed countries on such policies, this study shows that the vast majority of developing countries still lag behind the 14 – week conventional duration of maternity leave (Cerise et al, 2013). According to Dr Susan Torres a community health dentist in Chicago, flexibility was an important factor as to why she opted for career in dentistry (Kramer, 2008).

Most female professionals felt that they were required to make more compromises and sacrifices than their male counterparts (Belkin, 2008; Craig, 2006; Pailhe and Solaz, 2006). Females took it as a journey with challenges, not only near the top, but all along the way. Some women decide to remain single, the others plan to marry but not to have children and still others choose to be ambidextrous and try to strike a balance between their personal and professional life (Hewlett, 2002; Nieva and Gutek, 1981). As compared to men, females are not well versed when it comes to training, education and work experience as they cannot allocate more time to these activities due to other responsibilities at hand (Eagly and Carli, 2004, 2007). This results in lack of learned women in queue, which is occasionally referred to as "pipeline problem". In dentistry,

number of females in this queue has tremendously increased during the recent years but a closer examination shows that the females are indeed in the pipeline, but the pipeline is "leaking". Those who make use of the company policies and flexible working condition are often sidelined whereas on the contrary, if females leave their profession and want to re-enter, they find it hard to do so and sometimes even have to take positions lower than what they previously left at (Williams, 2010). This gap can be explained by the fact that, this irregularity and erratic trend in the labour ratio is because women self-select themselves out of the professional track for "motherhood" which does not lead to the upper end of hierarchy in their vocation (Belkin, 2003).

According to Lisa Tedesco, the "glass ceiling" exists because culturally it is believed that career of ladies is easily diverted by problems in raising a family. Also women can't be tough and are only competent in certain roles. This is also reflected in the phrase "the higher, the fewer" and is strongly supported by research (Turner and West 2006). If women are to move through the glass ceiling, health care institutions must become sensitized to the factors that prevent women's advancement and facilitate entry – level opportunities for women in administration (Davidson and Cooper, 1992; Hamel et al., 2006). Doctors, in fact are seeking careers that involve less occupational stress while having a potential for 'controllable lifestyle' (Ek et al., 2005). In order to facilitate the females there should be aided in a way that they have facility, in the form of flexible working hours and day care center in the vicinity (Mobilos et al, 2008).

Active mentoring is important, in personal and professional growth and development (Sambunjak et al., 2006; Weinert et al. 2005; Mayer et al., 2008). Bickel and Clark (2000) have noted that women receive inadequate mentoring and encouragement in their career development which is partly because of women's tendency to think of relationships in terms of support and affiliation, whereas men are more accustomed to competition and hierarchy, which is the tendency to view relationships in professional, educational and / or workplace context. Since the role of women as home makers is considered superior to their professional growth so least priority is given to their profession. They are the first ones to quit the job if their family needs them. The unavailability of jobs with flexible working hours disrupts the balance maintained by the "super woman" juggling her personal and professional life. Better job offers with provision of part time and flexible hours, proper maternity leave and day care facilities can prevent major dropout. Females are in constant battle with the odds and often end up contributing much less than their true potential. The working conditions of doctors, over work and extended working hours are different reasons that affe-

ct doctor's level of job satisfaction (Murray, 2001).

For females to progress in career not only provides the opportunity for personal growth, but can also satisfy status and security needs and simultaneously provides an opportunity for "self – actualization". Majority of doctors working at primary health care establishments are not satisfied with their jobs because of social status and workload (Lithuania, I. 2005). In medical profession, the level of job satisfaction of doctors and health care workers, directly affect their attitude towards the patients and colleagues (Sohag, 2012). Therefore steps should be taken to solve this problem (Sultana and Watts, 2008) as we see women facilitating others everywhere but how often do we see women leading others?

Pakistani Perspective

Medical and dental professions are taken up by both males and females with great zeal and fervour. The parents of these children dream nothing short of making them a specialist in these fields. The students aspire to take up these fields right from their childhood as their parents inculcate their wishes and dreams into their children's mind as they grow up. Young boys and girls have always been attracted to join medical and dental profession not only in Pakistan, but also around the world.

After Pakistan came into being, the medical and dental students got admission into professional colleges according to merit. The numbers of seats in medical colleges were limited for girls compared to those for boys. Due to the quota system there were 80% seats for boys and 20% for girls (Santana, 2013). Therefore, the merit for girls was always higher than that for boys as there were limited seats for girls. In 1991, the father of an affected student (girl) filed a writ petition in the high court stating that girls having the same marks as boys were not admitted to medical college and in order to treat both genders alike merit should be applied equally. The Supreme Court's decision was announced in favour of girls, lifting the quota system (Santana, 2013), and ever since there has been open merit for both boys and girls. As a result, more girls started entering medical colleges (as they are more enthusiastic to pursue a career at this stage). Number of boys in class has been reduced ever since as girls are hard working with regards to their studies. Moreover, higher education in public institutions is almost free. Apart from this, girls enjoy the privilege of girls' only medical colleges as well. Hence, there are better chances for girls to get in to medical colleges than boys; still we do not find more lady doctors than male doctors in hospitals and clinics. It is observed, that though it is prestigious, highly competitive and difficult to get admission in a medical and dental college, surprisingly, after all this effort, females drop out from the profession, which of course is a pity. It is a national loss and

possibly a psychological trauma for the individual. In Pakistan, the literacy rate is also very low and more so in the case of females. According to a survey in 2008-2009, the literacy rate is 47% in females and 70% in males in Pakistan (Husnain, 2012).

Dentistry is a field where the man power is less. The ratio of dentists to the population has greatly decreased during the last few years. So the demand for dentistry is greater than ever before. There is increased public awareness about the dental health. There is a wave of women dentists surging through health sciences. However, the future for women in dentistry seems to be promising to those who have the enthusiasm, ability, and the will power to succeed.

Another perspective according to a recent publication is that the prevalent trend to become a doctor or a dentist is to earn a certain title. It is a belief in the society that these females would get better proposals if they have the status of a doctor (Imtiaz, 2012). Many females occupy a place initially, and leave the profession eventually, whereas a male student could have studied dentistry and practiced his profession. For those who continue to pursue their career, there is continuous instability between family and professional needs, and this becomes extremely challenging when dealing with family and work together. The most frequently cited reasons for women not pursuing their careers, are to have a better balance with family life, lack of time, and financial sacrifice.

However there are still dropouts in dentistry in Pakistan. PMDC does not allow part time work options in teaching institutions and government hospitals. Accepting the women and understanding their requirements to keep up with their family needs and professional demands, is one step forward and this change agent will definitely bring many improvements and reforms.

The question arising from this situation is about the utility of a large number of female medical/dental graduates; will they become part of and contribute to the health profession or take up their destined business of house – wives? The government of Pakistan / parents spend millions of rupees on this highly technical and professional education; shall it be transformed into well – educated good house – wives?

In the traditional, chauvinistic, society of Pakistan, very few professions are considered dignified for women, medicine being one of them, leaving a void in rest of the professions. In order to raise the acceptance of the society to females in other professions apart from the ones considered noble, increase in the literacy rate of the country and the awareness of the population is needed. More so many women desirous of pursuing higher education are forced to choose either medicine or education as their specialty despite their aptitude and interest in other fields. The obvious outcome is that they are not keen to practice medicine afterwards.

If we talk about women empowerment then education must be made mandatory for all. According to Yasmeen (2005) the strict cultural and traditional mind set of our society has led to, even highly educated women not receiving equal rights as those of men. Most of the inequality is based on societal expectations in our culture. Many women have self – imposed obstacles due to guilt they feel if they weren't available for their family, whereas males wouldn't feel the same guilt nor have the same restraints. Hence, an awareness campaign about prejudiced traditional practices based on the idea of the inferiority of women at all levels in society should be undertaken. This may change attitude of the society, and minimize gender discrimination.

Women feel strongly that males have stronger personal and professional support systems than women. Some female dentists have voluntarily chosen to leave the dental profession despite the considerable time, effort, and financial expenditures involved in their educations. We cannot deny the fact that most female dentists, after graduation, either leave their profession behind or move forward with some other profession. Some good examples of attractive jobs that female dentists prefer to adopt are media, teaching, Non-Governmental Organization (NGO) or health management. Nationwide when we see the women dental surgeons, the number of females, working as Consultants, is even more disappointing. This becomes of paramount importance when we see the dentist to patient ratio in Pakistan being 1:16,426 (Anwar, 2012) and it becomes glaringly exaggerated, if the ratio is taken out for female dentist to female patient. It actually becomes a double loss of the society. The Pakistan government spends 7,500 US dollars on the education of a dentist (Ghausi, 2002). According to Pakistan Medical and dental Council (PMDC) officials the ratio between the population and the health care facilities has improved during the recent years, but even now our country has to strive for the optimal ratio required for 1,000 people, accepted internationally (Achakzai, 2008). The skimpy pay scale and unkempt work places serve only to dampen down the spirit and enthusiasm of young female physicians (Imtiaz, 2012). Still unkind is the attitude of the government towards female physicians. No incentives and perks are provided whatsoever.

In Pakistan harassment faced by lady doctors both in the streets and in workplaces is another reason for leaving the profession. A bill called "The Protection against Harassment of Women at the Workplace Act 2010" has been passed but the compliance has been very low. Just passing a piece of legislation has done little for rectifying this issue. Women are still facing adverse and biased attitudes at the hands of investigators and disciplinary committees when they complain against work place based harassments.

Policies extending the period and coverage of mat-

ernity leave are thus required in order to improve women's professional growth. Maternity leave is just one factor, for women to keep up with their profession and the family requirements. Interventions like part time work options and provision of proper child care facility are also very important factors for women to resume their professional responsibilities especially in a family centered society of Pakistan (Khawaja, 2004).

According to a famous saying, when you educate a man, you are educating one person; but when you educate a woman, you educate a whole nation. The yawning gap between the number of women and men (If the number of medical and dental graduates registered by the Pakistan Medical & Dental Council (PMDC) over the last one – and – a – half years is authentic), then women continue to be on the march. Currently, there are about 70% female students studying dentistry in Pakistan as opposed to only 30% male students. According to PMDC statistics up to 28th March 2013, registered dental practitioners for BDS were 11840 in total, registered females are 6,840 (57.7%) while number of registered males is 5,000 (42.2%) (www.PMDC.org).

Though there has been increase in the ratio of female to male students in the institutions since 1990, but when it comes to faculty members the rise is not equally dramatic. There still remains a scarcity of women as Deans / Head of the Departments in both private and government learning institutions. The question is why don't women pursue a career in dentistry when they always seem to take more interest than their male counterparts? (Dental Tribune, 2013). Though the statistics in both the academic medicine and dentistry show progress, but there is still much room for improvement in the status and role of women in Pakistan. The leadership potential of women can be capitalized in medical and dental academics. But this talented lot is being underutilized, unfulfilled and unrealized in our part of the world. The authorities should take serious notice and action to address this growing challenge.

Moreover, the occupational stress multiplies into family stress usually produced by uncooperative husband / or in – laws, lack of the facilities for a proper day – care for children, insufficient income to afford day – care for infants, etc therefore it is imperative that steps should be taken in order to reduce the misery of professional women (Bano et al, 2005). A few even said, that their lives have been a ride on a roller coaster with too much ups and downs in their emotional life. In our society, support of the husband and family matters the most in achieving success. The females need to know exactly what they want in life, do careful planning and take cautious steps to convert every chance into opportunity. This requires mastery in communication, the art of convincing others by asserting oneself (Imtiaz, 2012).

We can take good examples from western count-

ries, where the enrolment of females in dental schools is increasing day by day (from 40 percent to over 50 percent in some schools) (Dental Tribune, 2013). This can be attributed to the better working policies, on – site day – care centres, replacement staff for maternity leave and the option of part time working facility. There is a need for continual monitoring of workplace rules, and increased gender balance in shouldering the responsibilities, especially regarding the work – home balance. This will facilitate females to pursue their professional roles. The structural changes at societal level, regarding equal distribution of raising the children and household responsibility, will help women to achieve their professional aspirations to a larger degree (Ayers et al, 2008).

In medical profession, the level of job satisfaction of health care workers and doctors directly affect their attitudes towards the patients and colleagues. Quality of medical care and doctor – patient relationship is also dependent on the level of job satisfaction and female doctors are less satisfied as compared to their male counterparts. Removal of these barriers will facilitate the women to ensure equal opportunity and these resources will help them to achieve their required skill set, which will help the nation to have access to this greatest talent pool, and hence add to organizational success.

Most of the conclusions drawn regarding females arise due to different roles of women in the society depending on the cultural back ground. Therefore most of the deductions made cannot be applied to different cultures as the roles of women and men are different. Hence, carrying out research in Pakistani perspective will highlight many different aspects which might be different from those of the western cultures.

RECOMMENDATIONS

In order to reduce the misery of professional women following recommendations are made:

- Four months maternity leave and replacement staff for this time period.
- On – site day care centers with good child care facility.
- Active mentoring of females.
- Education and awareness of people on mass media so as to change the attitude of the society, making them realize the need of women dentists in our society.
- Increased gender balance in shouldering the responsibility regarding work home balance, so that females have enough time and are well versed when it comes to education, training and experience.
- Option of part time job offers and flexible working hours.
- Improvement of working conditions at primary

Health Care centers. Work places must be organized and well equipped with instruments and material so that there is less frustration during working.

- Also improvement of residential conditions, social status and security at primary Health care centers.
- Strict enforcement of the bill, “The protection against harassment of women at work place Act 2010.”

It is **concluded** that research indicates that while men’s careers benefit from having children at home, women’s careers are hindered by it. Previous research tells us that what seems right for men in terms of career growth and advancement goes wrong with the women. Though many female physicians marry either other physicians or highly career oriented professionals, still they fail to follow a smooth career path. Gender has been shown to play an important role in determining the extent to which children and the employment status of one’s spouse influence one’s attitude toward relocating for the sake of career (Landau et al., 1992).

If immediate steps are not taken to rectify the current situation and amendments are not made to change the trends, Pakistan will be facing a gross shortfall of women in its medical work field, which is a disaster waiting to happen. Professional bodies and associations are required for females, to cultivate professional attitudes and reinforce support for their careers.

It is an appeal to the government and health sector is to plan something before the situation goes from bad to worse.

REFERENCES

1. Achakzai, J. 2008. PMDC registered 4,766 MBBS, 759 BDS doctors in 2007. Daily Times.
2. Anwar, F. Health and Nutrition. *Economic Survey of Pakistan*, 2012: p. 151-160.
3. Arif, S. Broken wings: Issues faced by female doctors in Pakistan regarding career development. *International Journal of Academic research in business and social sciences*. 2011; vol. 1, special issue ISSN. 2222-6990: p. 79-101.
4. Ayers, K.M, Thomson, W.M., Rich, A.M. and Newton, J.T. Gender differences in dentists’ working practices and job satisfaction. *J Dent*; 2008; 36 (5): p. 343-50.
5. Bano, S., Aslam, S.K., Zafar, S. Problems of Female Doctors Working in Hospitals, *Journal of Agriculture and Social Sciences*; 2005; 1 (4): p. 376-377.
6. Belkin, L. The opt – out revolution. *The New York Times*, October 26, 2003: p. 42.
7. Bowles, H. R. And McGinn, K. L. Claiming authority: Negotiating challenges for women leaders. In D. M. Messick and R. M. Kramer (Eds). *The psychology of leadership: New perspectives and research*. Mahwah, NJ: Lawrence Erlbaum. 2005: p. 191-208.
8. Belkin, L. When mom and dad share it all. *The New York Times*. Retrieved June 15, 2008.
9. Bickel, J. and Clark, V. Encouraging the Advancement of Women. *Journal of American Medical Association*,

- 2000; 283: p. 671.
10. Braun, V. and Clarke, V. Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*, 2006; 3 (2): p. 83.
 11. Buciniene, I. Health care reform and job satisfaction of primary health care physicians in Lithuania *BMC Fam Pract*; 2005; 6 (1): p. 10.
 12. Commire, A. (200). *Women in World History*. Gale. ISBN 978-0-7876-4067-5. [23 December 2012].
 13. Craig, L. Does father care mean fathers share? A comparison of how mothers and fathers in intact families spend time with children. *Gender and Society*, 2006; 20: p. 259–281.
 14. Cerise, S., Eliseeva, A., Francavilla, F., Mejia, C. and Tuccio, M. How do maternity leave and discriminatory norms relate to women's employment in developing countries? *OECD (Organization for Economic Cooperation and Development)*, 2013: p. 1-14.
 15. Davidson, S., Major, P.W., Flores-Mir, C.M., Amin, M. and Keenan, L. Women in Orthodontics and Work – Family balance. *J Can Dent Assoc*; 2012; 78: c61.
 16. Dental Tribune, 2013.
 17. Doyle, A. Semi structured interview, 2014.
 18. Eagly, A. H. and Carli, L. L. Women and men as leaders. In J.A. Itonakis, R. J. Sternberg, and A. T. Cianciolo (Eds). *The nature of leadership*. Thousand Oaks, CA: Sage, 2004: p. 279-301.
 19. Eagly, A. H. and Carli, L. L. *Through the labyrinth: The truth about how women become leaders*. Boston: Harvard Business School Press, 2007.
 20. Ek, E.W., Ek, E.T. and Mackay, S.D. Undergraduate experience of surgical teaching and its influence on career choice. *ANZ J Surg*, 2005; 75: p. 713-718.
 21. Ghausi, S. (2002). Dawn the internet edition. Retrieved July 01, 2013.
 22. Ghazali, S. A. Shah, I.A., Zaidi, S.A.A. and Tahir M.H. Job satisfaction among doctors working at teaching hospital of Bahawalpur, Pakistan. *J Ayub Med Coll Abbottabad*; 2007; 19 (3): p. 42-45.
 23. Guest, G. MacQueen, K.M. and Namey, E.E. *Applied Thematic Analysis*. Thousand Oaks California: Sage, 2012: p. 11.
 24. Hamel, M.B., Ingelfinger, J.R., Phimister, E., Solomon, C.G. Women in academic medicine: progress and challenges. *New England Journal of Medicine*, 2006; 355 (3): p. 310-312.
 25. Hewlett, S. A. *Creating a life: Professional women and the quest for children*. New York: Talk Miramax, 2002.
 26. Hushain, Z. Pakistan Social and Living Standard Measurement Survey. *Ministry of Education – Government of Pakistan*, 2012: p. 137-149.
 27. Imtiaz, M. and Faisal, A. Red Alert: Female Physician Dropout in Pakistan. *Kemcolian Journal of Medical Sciences*, 2012; 1 (1): p. 53-55.
 28. Jagsi, R., Butterson, J.R., Starr, R. and Tarbell, N.J. A targeted intervention for the career development of women in academic medicine. *Archives of Internal Medicine*, 2007; 167: p. 343-345.
 29. Ross, J., Scarbecz, M. *Women in Dentistry*, 2004.
 30. Khawaja, A.K., Qureshi, R., Andrade, S.M., Fatmi, Z. and Khuwaja, N. K. Comparison of job satisfaction and stress among male and female doctors in teaching hospitals of Karachi. *J Ayub Med Coll Abbottabad*, 2004; 16 (1): p. 23-27.
 31. Kramer, K. Balancing Act: Young Dentists Adjust to Demands of Family and Career. *CDS Review*, 2008; 10: p. 10-12.
 32. Mayer, A.P., Files, J.A., Marcia, G., Ko, M.G. and Blair, J. E. Academic advancement of women in medicine: do socialized gender differences have a role in mentoring? *Mayo Clinic Proceedings*, 2008; 83 (2): p. 204-207.
 33. Mobilos, S., Chan, M., and Brown, J.B. Women in medicine: the challenge of finding balance. *Can Fam Physician*, 2008; 54 (9): 1285-6.e5.
 34. Mouazzam, I. (2013, June 3). The Express Tribune. Retrieved July 3, 2013, from The Express Tribune with the International Herald Tribune.
 35. Murray, A, Montgomery, J.E, Chang, H., Rogers, W.H., Inui, T. and Safran, D.G. Doctor discontent. A Comparison of physician satisfaction in different delivery system settings, 1986 and 1997. *J Gen Intern Med*. 2001; 16 (4): 52-59.
 36. Murray, J.J. Better opportunities for women dentists: a review of the contribution of women dentists to the workforce. *BDJ*, 2002; 192: 191 – 196.
 37. Pakistan Medical and Dental Council. (Doctors registration with PMDC after qualifying. Till 31st March 2014.
 38. Pailhe, A., and Solaz, A. Time with children: Do fathers and mothers replace each other when one parent is unemployed? *European Journal of Population*, 2006; 24: p: 211–236.
 39. Sambunjak, D., Sharon E.S., Ana Marui, A. Mentoring in Academic Medicine: A Systematic Review. *Journal of American Medical Association*, 2006; 296: p. 1103-1115.
 40. Santana, R. Pakistan Medical Schools: Where Women Rule. *The Huffington Post* 2013.
 41. Sohag, AA et al. A comparative study on factors causing job dissatisfaction among serving doctors at teaching hospitals of Hyderabad, Pakistan. *Pak J Med. Sci*. 2012; 28 (4): p. 710-715.
 42. Sultana, R.G. and Watts, A.G. Career guidance in the Middle East and North Africa. *International Journal for Educational and Vocational Guidance*, 2008; 8 (1): p. 19-34.
 43. Turner, S.P and West, K.P. A Qualitative Comparison of Women's Leadership Programs at Local and National Levels. Supplement. *Journal of Dental Education*, 2006; Vol. 70, No. 11: p. 41-46.
 44. Weinert, C., Billings, J., Ryan, R., and Ingbar, D. Academic and Career Development of Pulmonary and Critical Care Physician Scientists. *American Journal of Respiratory and Critical Care Medicine*, 2005; 200: p. 503.
 45. Wendy, M., Stephen J. Ceci. When Scientists Choose Motherhood. *American Scientist*, 2012; Vol. 100, No. 2: p. 138.
 46. Williams, W.M. and Ceci, Stephen J. "When Scientists Choose Motherhood." *American Scientist*, 2012; 100 (2): 138.
 47. Williams, J. *Reshaping the work-family debate: Why men and class matter*. Cambridge, MA: Harvard University Press, 2010.
 48. Yasmeen, S. *Impact of Higher Education in Understanding of Social Recognition in Women*. PhD Dissertation, University of Arid Agriculture, Rawalpindi. Pakistan, 2005.