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Women in Orthodontics and Work-Family Balance: Challenges and Strategies

by

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DEDICATION

This thesis is dedicated to my family.

To Gavin, Fiona and Sean – thank you for re-arranging your lives to always be home when I was.

To my parents – thank you for your continued love and support. To mum – thank you for being the most wonderful mother I could ever ask for and for inspiring me to have success in both my personal and professional life.

To my husband, Trevor, thank you for the last 10 years and for your unwavering support and encouragement.

To our unborn child - who I hope to meet any day – thank you for being with me every step along the way.

ABSTRACT

There has been a dramatic increase in the number of females entering the orthodontic profession over the past few decades, however, there is very little published literature on female orthodontists and work-family balance. A qualitative study, using the framework of phenomenology, was used to analyze data obtained from semi-structured telephone interviews of a purposive sample of Canadian female orthodontists. Results conveyed that the issue of work-family balance is of paramount importance to the women interviewed. They defined balance in terms of having success, and satisfaction, in both their family life and professional life. However, they recognized the requirement of compromising and prioritizing. The participants discussed the specific challenges of work-family balance in orthodontic practice, and outlined adaptations to the maternal role and the professional role, to help achieve balance. Finally, they identified areas where they experienced the most role conflict.

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INTRODUCTION

Orthodontics is a specialty area in the field of Dentistry that deals with the diagnosis, prevention and treatment of malocclusions, that is, dental and facial irregularities ("What is Orthodontics," n.d.). Orthodontists' training involves undergraduate schooling (often a full degree is sought), followed by a 4 year program in Dentistry. An additional 2-3 year residency program is dedicated to advanced education in Orthodontics, culminating with the receipt of a certificate or degree in Orthodontics. Training duration can last from 8-12 years, therefore entrance to the work-force is delayed, and education and launching a career coincide with the child-bearing and child-rearing years. Due to an increase in the number of women pursuing a career in orthodontics, there is a rising interest in how female orthodontists balance the demands of career and family. Although research in medical specialties has investigated work-family balance, there is no published literature on female orthodontists and work-family balance. In fact there is little research available for any of the dental specialties. The proposed study provides insight into the issues and barriers Canadian female orthodontists face with respect to work family balance and the solutions and strategies they employ to achieve a balance.

DEFINTION OF TERMS

Work

For the purposes of this study, work is defined as the primary career role. The target study population was female orthodontists in Canada, therefore work includes all aspects of the orthodontic practice. Time for patient care, time to complete paperwork, and time for promotion and marketing were all considered to be part of the primary role of the orthodontist. Although there are components to one's career that are adjunctive to the primary role, such as holding positions on membership committees, obtaining continuing education requirements, and teaching, they were not included in the current definition of work.

Family

Family can be defined as "the basic unit of society traditionally consisting of two parents rearing their children" ("Family," 2010). Although the confines of the definition were not limited to specify two parents, the notion that "family" involves rearing children, was integral to this study. All aspects of rearing children from birth, maternity leave, and childcare were considered part of "family." Furthermore, spousal relationship and personal time were acknowledged as part of the working definition. For the purpose of this study, elder care was not considered a component of the definition of "family."

SPECIFIC GOALS OF STUDY

Primary Objectives

- Identify issues female orthodontists in Canada face with respect to work-family balance
- Identify strategies employed by these women to help achieve balance

Secondary Objectives

- Determine basic demographic information for the target population
- Provide a reference for females in various stages of the profession concerning the experience of balancing a career in orthodontics with family

CHAPTER 2: LITERATURE REVIEW

INTRODUCTION

There has been a remarkable increase in the number of women entering the profession of orthodontics in the past three decades. The Journal of Clinical Orthodontics published their first Practice Survey in 1981 at which time the number of female respondents was 0.6%. By 2005, that number had increased to 14.5% (Keim, Gottlieb, Nelson, and Vogels, 2006). Although the 2007 Practice Survey did not find an increase in the number of female respondents, Blasius and Pae (2005) reported that 26% of orthodontic residents are now female, and Keim and Sinclair (2002) found that in 1999-2000, approximately 50% of first year residents were female.

The following literature review provides a review of the limited information on female orthodontists and work-family balance. Although the numbers of female orthodontists are increasing, this change is relatively recent and the literature on female orthodontists is still lacking. Therefore, where appropriate, information on work-family balance from related healthcare fields is reviewed.

The first section below reviews the relevant literature on female orthodontists and work-family balance. A sub-section examines work patterns of female orthodontists. The second section reviews the literature on work-family balance and dentists.

The third section highlights relevant literature on work-family balance and physicians. This section includes a sub-section of the literature on breastfeeding behaviors of physicians.

Finally the fourth section presents the theoretical framework explaining work-family balance. Several theories are discussed to provide context for the results of this study.

WORK-FAMILY BALANCE IN ORTHODONTICS

The literature provides a very cursory examination of female orthodontists and work-family balance. The literature that does exist is in the form of expert opinions and small surveys, with little methodological credibility.

Cohen et al. (2004) published a round-table interview with 6 orthodontists, who spoke at the first organized luncheon for women in orthodontics, at the 2003 American Association of Orthodontics annual meeting. The 6 speakers of the event shared their thoughts on women in orthodontics. When asked the most important problem women orthodontists face today, the responses all discussed work-family balance. When asked how women orthodontists can strike a balance, answers focused on the importance of prioritizing and having support, including hired help and spousal support.

At the women in orthodontics luncheon at the 2007 American Association of Orthodontists 107th annual session, Bray (2007) presented a lecture on the challenges facing female orthodontists. Her results were from a 2007 national survey of 100 orthodontists. Participants were asked to identify the top challenges facing today's female orthodontist, as well as to provide possible solutions. The number one challenge mentioned by 83% of those surveyed, was balancing practice, home, family, and self. Solutions offered included: prioritize; learn to say "no"; have a housekeeper, nanny or cook; find supportive husbands; organize with a planner/calendar; force yourself to make the time; go home and do not be in charge there; be content with a smaller practice/fewer days; have a stay at home husband; delegate all you can; work only part-time; be selfish with your own time; accept it [balance] does not exist.

These two articles reveal that although work-family balance is a challenge for female orthodontists, there is very little available literature on the topic. Understanding how female orthodontists integrate career and family is imperative to properly inform both incoming residents and practicing orthodontists. There has also been significant interest in the impact of having females entering the profession. With the assumption that women are going to take time away from their careers to address family needs, the concern has been a potential lack of manpower. The following section reviews several recent articles on work-patterns of female orthodontists.

Work Patterns of Female Orthodontists

There has been some limited research looking at work-patterns of female orthodontists and how they compare to male orthodontists, in an effort to determine the impact of an increasing number of females entering the work-force.

Blasius and Pae (2005) mailed questionnaires to 396 female orthodontists in the US and obtained a response rate of 66.9%. The results were based on four age categories 29-36, 37-44 and 45-64. The average age of female respondents at the birth of the first child was 32 years. The average number of days worked per week was: 3.74 ± .90 for the youngest group; 3.63 ± .76 for the middle-aged group; and 3.81 ± .84 for the oldest group. They found that women with one or more children were more likely to work fewer hours per week than women without children, or any of the men. They also found that the number of children was a good predictor of the number of days worked. The differences in days worked between males and females ranged from .37-.75 days per week. Their conclusions, however, indicated that the data was taken at one point in time, when the majority of female respondents were in the younger age categories, had young children, and were attending to family duties. Therefore, although they found women worked on average a half day less than men, that sex-gap

could be eliminated as children aged and women returned to work. Blasius and Pae (2005) also found that although female orthodontists were slightly less likely than males to own their own practice, only 20% of the women in that study were not in an ownership position. Furthermore, although solo practice dominated, regardless of sex, females were slightly more likely than males to be involved in a group practice. The results also showed that females in non-ownership positions were more likely to take extended leaves of absence.

Murphy, Parkin, Willmot, and Robinson (2006) studied female orthodontist work patterns compared with males in the UK. The survey was mailed to 1,660 orthodontists with a response rate of 72.7% overall. The results were reported in terms of clinical sessions worked per week (with a session being defined as a notional half-day or 3 ½ hours). The women worked 7.2 sessions per week (equivalent to approximately 25 hours or 3.5 days per week, based on a 7 hour work day.) In comparison, men were found to work 8.2 sessions per week.

Collins, Cunningham, Moles, Galloway, and Hunt (2009) also studied male and female orthodontist work patterns in the UK. They mailed a questionnaire to 1088 orthodontists across the UK and obtained a response rate of 81.5%. Similarly to Murphy et al. (2006), they reported their results in terms of clinical sessions worked per week (a session being a half-day or 3.5-4 hours) and found that female orthodontists worked 6.99 sessions compared to 8.27 sessions worked by males. They also reported on the career breaks taken by female orthodontists with 56.5% of females taking at least one career break. Maternity leave was cited as the most common reason for a career break. The average career break for men and women was 10.77 months with women taking an average of 4-6 months longer, per career break, than men.

The three articles described above provide preliminary information on the differences in work patterns of male and female orthodontists. Although

female orthodontists were found to work slightly fewer hours per week and take more leave, more research is required to determine the long-term effects of these reported differences. The following section will consider the relevant literature on work-family balance and the field of dentistry including general dentists and all specialties.

WORK-FAMILY BALANCE IN DENTISTRY

With little information available on work-family balance and orthodontics, the next closest relevant literature is that pertaining to the entire field of Dentistry. Only one recent article was found that related to work-family balance and dentists.

Ayers, Thomson, Rich, and Newton (2008) surveyed 482 female dentists and dental specialists in New Zealand and obtained a response rate of 83%. They studied career satisfaction with work-family balance being a prominent theme. The percentage of registered specialists in the sample was 7.9%. Compared to males, females were more likely to be employed as an associate in practice rather than owning their own practice. Overall they found that women faced substantial challenges that limited career potential and satisfaction. Family responsibilities like child-bearing and child-rearing affected female work life, resulted in more career breaks, and reduced hours upon return to work. They found that almost one third of the women on breaks had been off for more than a year. They also noted that one third of those on breaks either did not intend to return to work or were unsure. Although they reported generally high levels of career satisfaction across all dentists, it was lower for females than males. They also reported a higher level of satisfaction among the specialist group, and they proposed that specialization was perhaps a means for a female to improve career satisfaction. They did however acknowledge the increased time and financial costs associated with this additional training, and that most women

who were specialists had their children following completion of their postgraduate training (60.7%), or did not have any children (17.9%).

This article provides an interesting view on work-family balance as a component of career satisfaction. Furthermore, the inclusion of specialists in the sample provides an interesting comparison with general dentists.

With the limited number of quality studies looking at work-family balance in dentistry, it is of value to consider the same topic in the related healthcare field of medicine. The following section will review the literature on work-family balance and physicians.

WORK-FAMILY BALANCE IN FEMALE PHYSICIANS

Although the practice of medicine can be quite different from that of dentistry, there are similarities between the two healthcare fields. Duration of training, and professional involvement with career, are two of these commonalities. Furthermore, the body of medical literature is greater. Therefore, including relevant studies on work-family balance and physicians can be helpful in augmenting the limited literature on the topic in Dentistry. The following section reviews several recent articles and studies on work-family balance and female physicians. A sub-section independently addresses breastfeeding practices of female physicians.

Carroll, Brown, and Reid (1995) conducted a qualitative study to describe the experiences of achieving personal balance by female family physicians that practiced obstetrics. They purposefully selected 9 participants who were married with children. The study identified personal and contextual factors that had both positive and negative influences on the women's ability to practice obstetrics. Personal factors included role models and mentors, life-cycle stage, support, and personal coping strategies. Mentors were identified as those who provided technical backup and supervision, whereas role models were people one could model one's life after. Many of the women reported having mentors, but none

had role models for the personal and professional lives they were leading and wished to know more people in this capacity. The stage of life-cycle was a factor for women. Younger women had the challenge of juggling the demands of a young family, while older women had more flexibility with childcare as their children grew older. Another personal factor was support, and having a support system was critical for these women to be able to practice obstetrics. All of the women had arranged support whether it was from their parents, nanny, spouse, neighbors, teenaged children, or colleagues. This included household help, for laundry, cleaning, and meal preparation. Finally, personal coping strategies were considered. Few of the women had developed techniques to help alleviate stress and reported having very little time for themselves. Many felt their friendships had suffered because of the hectic nature of their lives. Contextual influences included societal expectations, professional socialization, and work environment. Most of the women interviewed felt a great deal of pressure to be good mothers, housekeepers, and wives. They also felt pressure from the profession to perform the same work as male colleagues. In describing a positive work environment, the women identified a call group of physicians with similar practice styles, good back-up for obstetric problems, flexible hours of work, and supportive partners as being important.

Potee, Gerber, and Ickovics (1999) conducted a survey in 1996 of 863 women who matriculated at Yale University School of Medicine from 1922 to 1999 and obtained a 70% response rate. Forty-eight percent had children; 11.3% did not have and did not plan to have children; and 40.2% planned to have children in the future. The sample included students currently enrolled in medical school who made up 38% of this latter population. The results of the study focused on the data obtained by the women who had children and the women who did not have, and did not plan to have, children. Fifty-nine percent of the women without children were single, divorced, or widowed. There was no significant difference between the decades in the percentage of women who did

not have children. Fifty percent of this group of women was not interested in having children, while another 25% had problems with fertility. Of the women with children, 49.6% had their first child after their medical training was completed and they were in practice. The mean age at which they had their first child was 31.1 years. Maternity leave information was also acquired: 36.6% of women took maternity leaves of 6 weeks or less; 19.7% took 6-10 weeks; and 18.6% took 10-16 weeks. Over 10% of respondents took one year of more to stay home with their first child. Time taken for maternity leave increased over the decades. Of those women who graduated prior to 1970, 48.6% of women took 6 weeks or less, and 30% took between 7 weeks and 8 months. For women graduating between 1970 and 1999 the opposite trend was true: 32.5% of the women took less than 6 weeks; and 54.6% took between 7 weeks and 8 months off. Although the length of maternity leaves increased, satisfaction with the duration of leave decreased. Forty-seven percent of women graduating from 1970-1999 believed their maternity leaves were too short. With respect to childcare, 60.1% of women used a nanny or live-in childcare provider for more than 10 hours per week. Spousal involvement with children was seen to increase across the decades, as did the use of daycare. Finally, with respect to work patterns, women with children were found to work part-time more than women without children. Career satisfaction was similar between the two groups.

Dumelow, Littlejohns, and Griffiths (2000) performed a qualitative study on the relation between career and family for 202 English hospital consultants. They presented their results in three categories. The first category was a career-dominant relationship. One-fifth of the females fell in this category and felt that their family or personal life had been restricted to benefit their career. Women in this group had wanted children but felt that constraints of practice had influenced their personal lives to the extent that they did not have children. The second category was a segregated relation. Just over half of the women were in this category. A segregated relation was characterized by having family

responsibilities highly organized to accommodate more time for career, which involved full time domestic support. The third category was an accommodating relation, and described one-third of women. All of the women in this category had worked part time, or taken a career break at some point in their career. The conclusions of this study were that doctors seemed to fit in with the system, rather than the system adapting to meet the needs of a changing workforce, with a greater importance on work-family balance.

Gordinier et al. (2000) surveyed female gynecologic oncologists on balancing professional and personal life. Surveys were mailed to 146 potential participants and a response rate of 58% was obtained. Sixty-one percent of the respondents had children. Eighty-eight percent felt that their training had a moderate to great effect in determining timing of children and 74% cited the ideal time to have children was following training. The majority of women took 3-7 weeks off for maternity leave and 62% said they would have taken more time off in retrospect. None of the women wanted less time for their maternity leave than they had taken. Results for childcare showed that 78% of respondents employed a nanny, whereas 8% depended on a relative, and another 8% relied on a partner or spouse. Only 6% of respondents used daycare. Of those with a nanny or relative providing childcare, an equal number of the providers lived inside the home as outside the home. Fifty-two percent of women with children considered a nanny their ideal preference for childcare compared to 29% of women without children. Another 29% of women without children considered a spouse or partner to be the ideal caregiver. The survey also asked about mentors, with only 35% of the respondents having a female mentor in gynecologic oncology. Seventy-one percent felt that having a female mentor was of moderate to great importance, and the most common quality sought in an ideal mentor was being a role model for achieving a successful balance between family and full-time practice. Furthermore, the ideal mentor would be helpful in

advising about balance between work and family and would be able to define realistic goals in both of these areas.

Gjerberg (2003) published a study on women doctors in Norway and the challenging balance between career and family life. The sample included 1805 doctors surveyed in 1996 with a response rate of 67%. Eighty-five percent of the respondents were specialists and 51% of women cited that "care of children" and "possibilities of combining work and responsibilities for children and family" had been of great importance in their choice of specialty. Of those who did not specialize, 70% of the women emphasized the difficulties in balancing career responsibilities with family as a reason for choosing not to specialize. The median age of women at the birth of their first child was 28 years in women doctors in primary care specialties and 30.5 years in women doctors in hospital-based specialties. The study also looked at part-time work and found that more females than males worked part-time. They also found that women doctors who had given birth within the past year were more likely to change from full-time to part-time work due to "caring responsibilities." An increase in the number of children was also found to increase the probability of changing from full-time to part-time work. In general, being a specialist decreased the probability of changing to part-time work.

Caniano, Sonnino, and Paolo (2004) surveyed 95 female pediatric surgeons with a 79% response rate. Although their focus was not strictly on work-family balance, their survey determined the keys to career satisfaction in order to improve recruitment into the field of pediatric surgery. One of the main elements identified was the need for promotion of balance between professional and personal obligations. Among the findings were issues related to timing of childbearing and maternity leave. Eighty-three percent of the respondents had their first child after completion of all training, which resulted in 46% being 35 years of age or older at the birth of their first child. Many of

them commented on the biological challenges of achieving pregnancy at an older age and the need for assisted reproductive technology. Maternity leave was another issue and was characterized as inadequate by 41%. Strategies to achieve balance included three quarters of the women hiring in-home childcare help, and 90% employing routine housecleaning services. When asked what they would change about their personal life, 44% would have more time for their spouse and 35% desired more time for personal hobbies. When asked for reasons women do not choose a career in surgery, 75% listed lack of positive female faculty role models as one of the most important reasons.

Verlander (2004) published an opinion paper on female physicians balancing career and family. The main areas she addressed were: timing of pregnancy; maternity leave; childcare; breastfeeding; and alternative work schedules. She stated that timing when to start a family is critical for most professional women and may be a particular challenge for women who undergo extended training. For specialists in both medicine and dentistry the training for medical or dental school and residency coincides with the biologically optimum time to have children. This is also when work demands are high and finances are strained. She also addressed the increased risk of infertility, and congenital abnormalities if childbearing is postponed until a woman's mid-30's or later. In her study, Verlander (2004) also discussed childcare options. She stressed that having a high degree of confidence and trust in the quality of childcare could dramatically reduce the stress of balancing parenthood and career. The first option she provided was a live-in nanny, which was the most expensive and reduced family privacy but offered the most flexibility. A second option was a paid childcare provider who comes to the home, which was also an expensive option. A third option was paid or unpaid childcare provided by extended family. Other options were informal childcare in the provider's home and daycare, which were both less costly.

Danesh-Meyer et al. (2007) surveyed 337 male and female ophthalmologists in Australia and New Zealand and obtained a response rate of 75%. The purpose of their study was to assess practice profiles and attitudes toward career and family with an emphasis on identifying gender differences. Males were more likely than females to have children (88.3% versus 71.3%), and the majority of females (55%) postponed the timing of their first child until after completion of their training, compared with only 23% of males. Females were also more likely to report that if given another chance they would have had children at a different point in their career. The article discussed childcare in terms of percentage of time spent looking after children less than five years of age. Females reported contributing the greatest amount of time to childcare, with a median of 45%, and relied on nannies and daycares as secondary childcare. Males, in contrast, contributed only 10% and relied on their partner for 80% of the contribution. Although there was no significant difference in career satisfaction between genders, females were more likely to report that they felt frustrated by the amount of time they had to devote to their career and felt that they often had to choose between career and family.

Mobilos, Chan, and Brown (2008) used a phenomenological approach to study work-family balance in Canadian physicians. Their purposeful sample included 12 physicians representing various specialties, age ranges, marital status, and numbers of children. The results of this study showed several themes. The first was related to “lifestyle and career choices”. A commitment to a balanced lifestyle often meant a sacrifice in family life or career, particularly earlier on in one’s career. The participants appeared resigned to accept these sacrifices as a byproduct of their choice of profession. Flexibility of work schedule was a top priority when choosing specialty as this permitted working reduced hours to allow an increase in time for parenting. A second theme was “career planning and trajectory”. All of the participants identified taking maternity leave as one of their biggest challenges in the struggle to balance

family and career planning. There was no general agreement on the ideal time to get pregnant. Some dismissed residency as an appropriate time due to curriculum demands, while others found that the stresses of practice were a deterrent. A final theme was “seeking balance”. All of the women interviewed identified achieving balance between their professional and personal life as their main challenge and they struggled to manage their multiple and conflicting demands and roles.

The above section highlights the relevant literature on female physicians and work-family balance. Although the spectrum of studies is varied in target population and study methodology, common themes are seen across the results. Timing of children, maternity leaves, childcare, altering work patterns, and importance of mentors are commonly mentioned as issues with respect to work-family balance. One issue that is acknowledged in the literature is managing breastfeeding while balancing a career. The following section reviews the recent literature on breastfeeding patterns of female physicians.

Breastfeeding Practices of Female Physicians

Although there is no literature on breastfeeding practices of female dentists, there are studies that examine the breastfeeding habits of physicians. Interestingly, breastfeeding is rarely discussed in the literature on work-family balance, and is instead addressed independently. The intimate nature of a mother and baby needing close contact during the breastfeeding period is often compromised due to career demands. Therefore, mothers are relegated to pumping breast milk during the day to try and maintain their supply. The concern is that this adaptation leads to decreased duration of breastfeeding than would normally be achieved. The literature discusses breastfeeding behavior of female physicians with respect to initiation, duration, and exclusivity of breastfeeding. Exclusivity relates to the length of time the baby receives only breast milk and no supplementation.

The Mothers' Survey by Abbott Laboratories (as cited in US Public Health Service, 2000) stated that in 1998: 64% of women breast-fed in the early postpartum period; 29% were still breastfeeding at 6 months; and 16% were breastfeeding at one year. In 2000, the Healthy People Report, issued by the US Public Health Service, stated goals for 2010: 75% women breastfeeding in the early postpartum period; 50% still breastfeeding at 6 months; and 25% breastfeeding at one year (US Public Health Service, 2000). Gartner et al. (2005) published the American Academy of Pediatrics (AAP) policy statement on breastfeeding. The policy states that exclusive breastfeeding provides ideal nutrition and is sufficient to support optimal growth and development for approximately the first 6 months of life. Breastfeeding provides continuing protection to the infant as well as health benefits to the mother. Furthermore, the AAP recommends that breastfeeding continue for at least 12 months. Similarly, the World Health Organization (WHO, 2002) recommends exclusive breastfeeding for the first 6 months of life, followed by appropriate complimentary foods up until 2 years of age.

Arthur, Saenz, and Replogle (2003) surveyed personal breastfeeding behaviors of female physicians in Mississippi and obtained a response rate of 61%. To provide context for the number of physicians who initiated breastfeeding and the duration of the breastfeeding, the study compared the participants to the US Public Health Service Healthy People 2010 targets. Frank et al. (1998) stated that physicians demonstrated good health habits generally, compared with other women (even those of high socioeconomic status), and generally exceeded goals in the Healthy People report. It was proposed that the physicians in the study would also exceed breastfeeding goals. Arthur et al. (2003) showed that female physicians in Mississippi did in fact exceed the recommended initiation rate for breastfeeding, with 94.2% having breastfed at least one child. Approximately 21% of the participants breastfed their first-born children for at least 6 months, falling short of both the 1998 reported rate of

29% and the 2010 goal of 50%. Only 7.6% of first-born children were being breastfed for 1 year or longer, which was also less than the 16% being reported in 1998 and the goal of 25%. The mean duration for breastfeeding was 14.5 weeks. Sixty-nine percent of the mothers used formula supplements at some point while breast-feeding. The mean age of the baby at time of first supplemental feeding was 8 weeks. The factors most commonly cited for reasons to wean their children completely from breastfeeding included: return to work (45%); diminishing milk supply (31%); and lack of time to pump breast milk (18%). Of the women who did not breast-feed, 38% reported return to work as the reason for not initiating breastfeeding and this was the most commonly cited reason.

Duke, Parsons, Snow, and Edwards (2007) studied breastfeeding practices of physician mothers in Newfoundland and Labrador and obtained a response rate of 68%. The breastfeeding initiation rate was 96.6%. More than half of the respondents (54.5%) breastfed for 7 months or longer. The study looked at several variables to determine their effect on duration of breastfeeding. The decade in which physicians graduated played a role, with those graduating more recently than 1980 breastfeeding for longer periods of time. They also found a significant difference between specialists and family doctors; fewer specialists breastfed for 7 months or longer (33.3% vs. 65.5%). Finally, having a partner that worked part-time was found to positively correlate with a mother breastfeeding 7 months or longer. Other factors considered but not found to have a significant effect were: age; length of maternity leave; benefits; type of remuneration; income level; practice setting; solo or group practice; part-time or full-time work; and rural or urban practice. The three most common reasons to stop breastfeeding were: return to work; baby losing interest; and time constraints. The study did not look at exclusivity of breastfeeding.

The above sections give an overview on the recent literature on work-family balance and work patterns of orthodontists. Work-family balance and dentists and physicians, as well as breastfeeding practices of physicians, were also reviewed. The following section will present several theories on work-family balance.

THEORETICAL FRAMEWORK

Included in the literature review on work-family balance, are the theories that have defined and explained the concept of balance. The evolution of work-family balance theories, as well as a definition of work-family balance, and role conflict is presented. Conflict theory and its subcategories of time-based, strain-based, and behavior-based conflict are discussed as well as an adaptation of conflict theory: bidirectional work-family conflict. Work-family facilitation theory and work/family border theory are also discussed.

Clark (2000) provides a brief reflection on the effects of industrialization of the market economy, which led to the segmentation of work and home. With males typically acting as the breadwinner, and females as the homemaker, early research treated these two elements as separate entities. More recent changes to society caused research to focus more on the interdependencies between home and work. These changes included an increase in the divorce rate, leading to higher numbers of single parents, an increase in the number of women entering the workforce, more part-time work, a trend toward increased mobility of workers, a paradigm shift in workers' expectations on quality of life outside of work, and an increased social value on fathers' involvement in the home. These developments led the research to adapt and generate theories that carried a practical significance (Clark, 2000). The following section provides a brief overview of some of the prominent work-family balance theories that have been proposed.

Work-family balance is a term that is often used in the literature although rarely defined. As Frone (2003) articulates, most authors imply that its meaning is self-evident in that work and family life are in balance. This "balance", however, is an elusive concept where work and family are somehow integrated or harmonious. Clark (2000) defines work-family balance as "satisfaction and good functioning at work and at home, with a minimum of role conflict" (p. 9).

Role conflict was described in the work by Kahn (1964) as the resultant competing pressures from the various roles of an individual that preclude fulfillment of these roles. Role conflict, in this context the conflict of work and family roles, is the focus of a large body of literature. Greenhaus and Beutell (1985) describe work-family conflict as:

> A form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible in some respect. That is, participation in the work (family) role is made more difficult by virtue of participation in the family (work) role. (p. 77)

Conflict theory elaborates on this definition and provides a theoretical model that the two roles are enacted in separated environments and that satisfaction or success in one role or environment entails sacrifices in the other and vice versa (Zedeck & Mosier, 1990). Greenhaus and Beutell (1985) further divide work-family conflict into time-based, strain-based or behavior-based conflict. Time-based conflict exists when time dedicated to one role compromises the ability to satisfy the other role. This can be due to the person being physically absent or mentally preoccupied. It is similar to the theory of resource drain where time and attention are the finite resources that have to be divided between the two roles. Edwards and Rothbard (2000) stipulate that the difference between resource drain and the time-based conflict is that the latter leaves demands in a domain unmet. Strain-based conflict is based on evidence that shows that stressors in one role can cause strain symptoms such as

dissatisfaction, tension, anxiety, and fatigue, which negatively impact the ability to function in the other role. Finally, behavior-based conflict describes the situation where role behavior is defined in a way that is incompatible with behavior expectations of another role. Traditionally, the example of a male manager is used where at work he might be expected to be aggressive, independent, and unemotional, which would be in conflict with the nurturing attributes required of a father at home.

Dierdorff and Ellington (2008) considered behavior-based conflict within the context of the work role requirements. Their study used data collected by the General Social Survey administered by the National Opinion Research Center at the University of Chicago in 2002. The total sample was of 2,765 adults living in the United States and the response rate was 70%. Their findings supported the hypotheses that certain behavior requirements of the work-role influence work-family conflict. Increased interdependence, such as interaction with other people and other work roles to meet one's own work-role obligations, leads to increased work-family conflict. As well, work roles with increased responsibility for others were more likely to experience work-family conflict.

Frone (2003) built on conflict theory and proposed the bidirectional nature of work-family conflict. He explained that work can interfere with family (WIF) and family can interfere with work (FIW).

Grice et al. (2007) used this theory of WIF and FIW in their study of women in the postpartum period. They studied 1157 women with a response rate of 71%. The postpartum period involves many physical and emotional changes for the new mother making this a particularly fragile time. Telephone interviews were conducted at 5 and 11 weeks after childbirth and at each time point data on women's physical and mental health was collected. They found the majority of women on leave did not experience WIF (62.2%) or FIW (74.2%). In comparison, more than half of the respondents who returned to work at 5 weeks experienced WIF (58.9%) and FIW (53.2%). Overall they found that both WIF and

FIW were negatively associated with mental health outcomes. Furthermore, women demonstrated better mental health at 11 weeks than 5 weeks suggesting the value of time away from work for rest and recovery. They did find that a number of women on leave at 5 weeks reported high levels of WIF. The reason for this was explained by the finding that 10% of the women agreed to participate in limited work-related duties such as answering emails and responding to emergencies and this contact with work was enough to generate WIF.

Frone (2003) further proposed that work-family balance should mean more than the absence of inter-role conflict. He introduced the concept of work-family facilitation that represents the extent to which the experience, skills and opportunities afforded by one role translate to ease participation in the other role. The same bidirectional effect is seen with work-family facilitation in that work can facilitate family and family can facilitate work.

Along the same vein as the concept of facilitation introduced by Frone (2003), Barnett and Hyde (2001) published a study that also focused on the potential benefits of multiple roles. They proposed four principles in their theory of women, men, work, and family. The first principle was that multiple roles are beneficial for mental, physical, and emotional well-being. The second principle outlined a number of processes that can contribute to the beneficial effects of multiple roles: buffering; added income; social support; opportunities to experience success; expanded frame of reference; increased self-complexity; similarity of experiences; and gender-role ideology. The third principle was that the beneficial effects of multiple roles are dependent on the number of roles and the time demands of each. There is an upper limit at which point overload and distress occur and role conflict predominates. Finally, the fourth principle was that psychological gender differences do not mean women and men need highly differentiated roles. They presented evidence to support their principles,

however acknowledged that future study is required to address gaps in knowledge concerning the benefits of multiple roles.

Another recent theory is work/family border theory presented by Clark (2000). Earlier theories were criticized for their limited focus on the emotional experience of role conflict and their inability to help in solving problems with work-family balance. The border theory presents the idea that work and family are separate spheres, akin to different countries with a border between them. The theory identifies border-crossers as the people who daily transition between the domains of work and home. Highlights of the border theory include the discussion of border strength, which includes the element of border permeability. The theory proposes that when the domains of work and family are similar, weak borders will facilitate work-family balance. Conversely, if the domains are different, strong borders will facilitate work-family balance. Border-crosses are also defined by their identification and influence in the two domains and two propositions are made based on these characteristics. Both propose that border-crossers with identification and influence in both domains will have more control over borders and therefore greater work-family balance. The final central concept to the border theory is the idea of domain-members, some of which are referred to as border-keepers. Spouses are provided as an example of border-keepers at home, and supervisors are an example of a border-keeper at work. The theory suggests that balance is enhanced by domain members demonstrating high "other-domain" awareness, and great commitment to the border-crossers. Good communication between border-crossers and domain-members is also critical.

This literature shows the varying views of work-family balance, with the negative focus of role-conflict and it's time-based, strain-based and behavior-based components, contrasting with the positive outlook of role-facilitation. This differs from border theory that focuses on the temporal and behavioral relationships, but also defines spatial and social connections between the two.

Work-family balance is likely to differ across different professions and with the minimal literature on female orthodontists and work-family balance, there has been a lack of relation between the findings and the underlying work-family theories. Therefore, relating the current study to the theories presented is an important step in understanding the context of work-family balance in female orthodontists.

SUMMARY

A review of the literature shows that there is very little information on work-family balance and female orthodontists. Similarly, there is little literature on work-family balance and dentists. In contrast, work-family balance has been researched more extensively in the field of medicine, and although there are some critical differences, we can draw some parallels between these two professions. Work-family balance is a significant issue for professional women, and a body of literature discusses the theories that have been generated to explain the relationship between work and family. Role-conflict theory and border theory are two main theories that relate to the balance between maternal and professional roles. Although they differ in their approach, both focus on the minimization of role conflict as integral component to achieving work-family balance.

CHAPTER 3: THE METHOD OF INQUIRY

INTRODUCTION TO QUALITATIVE RESEARCH

Qualitative research methods are particularly applicable in research areas where we have very little prior knowledge. Sofaer (1999) presents the idea of research as the process of reducing uncertainty about a phenomena or question. The premise is that at the inception of research there may be uncertainty not only about the answers but also the right questions to ask or how to ask them. Creswell (1998) supports this by stating that qualitative research is often indicated when variables cannot easily be identified and theories to explain the behavior of participants have not yet been developed. Qualitative research serves to provide rich descriptions and meaningful explanations of phenomena. This reduces uncertainty, thereby providing information on the phenomena in a way that facilitates further research and study. As a summary of the debate between methodologies, Patton (1999) articulates that: "A consensus has gradually emerged that the important challenge is to match methods appropriately to empirical questions and issues, and not to universally advocate any single methods approach for all problems" (p.1208).

Within qualitative inquiry there are a number of different approaches. Creswell (1998) presented five qualitative traditions; Biography, Phenomenology, Grounded Theory, Ethnography, and Case Study. In simple terms, a biography focuses on the life or experiences of one individual. Grounded theory is employed to generate a theory that relates to a particular situation. Ethnography seeks to interpret a culture by the researcher becoming immersed in the day-to-day lives of the people. A case study is an in-depth exploration of a single case or several cases. For this study, Phenomenology was selected as the most appropriate form of inquiry. Phenomenology seeks to report the meaning of lived experiences with respect to an event or phenomena.

In this study, the focus is the lived experiences of female orthodontists with respect to the phenomenon of balancing a career and family.

PHENOMENOLOGY AS A RESEARCH METHOD

Phenomenology originated from the school of philosophy. To properly understand the methodology it is important to have an appreciation for its philosophical roots. Spiegelberg (1981) explains that at the beginning of the twentieth century, the German philosopher, Husserl conceived the term phenomenology as a method of inquiry to study consciousness as experienced by the subject. Husserl's concept of phenomenology was that it was a rigorous science aiming for absolute certainty; an intuitive inspection and faithful description of the phenomena in question. An intrinsic component of Husserl's phenomenology was reduction, or bracketing as it is commonly referred to, which was the idea of suspending all judgments or presuppositions about a topic of interest. Stewart and Mickunas (1990) state, that to examine nature with neutrality, the researcher must remove himself from a natural attitude in lieu of a theoretical attitude.

Sokolowski (2000) relays how Husserl's ideas influenced the German philosopher, Heidegger, who further developed the concept and adapted it, giving birth to Heideggarian hermeneutics. Hermeneutics already existed as a philosophy of biblical and literary interpretation and of historical research, but Heidegger extended the reach of hermeneutics to the self-interpretation of human existence. Cooper, Mohanty, and Sosa (1999) explains that the main deviation from Husserl's phenomenology was the belief that we are too much "beings-in-the-world" for us to "bracket" the world and as a result the feature of reductionism was omitted from hermeneutic phenomenology. Polit and Beck (2004) discuss that instead of reductionism, meaning and interpretation became the main feature of this type of inquiry.

Each of these philosophers has spawned a school of followers with Husserl's descriptive approach at one end of the spectrum, and Heidegger's interpretive approach at the other. Polit and Beck (2004) describe a third school, from the Dutch Utrecht School, that combined elements of both. Although this approach is still called hermeneutic phenomenology, it is characterized by its descriptive as well as interpretive components. For the purpose of this study, interpretive hermeneutic phenomenology was selected as the research method, because interpretation by the researcher in addition to the descriptive analysis, were important aspects of the data analysis.

QUALITY AND CREDIBILITY IN QUALITATIVE RESEARCH

Quality and credibility are paramount in any research method. Lincoln and Guba (1985) pose the question that addresses four aspects of trustworthiness: How can one establish confidence in the truth value, applicability, consistency, and neutrality of the findings? They present the four measures to ensure trustworthiness and how they relate to the conventional measures of trustworthiness: internal validity; external validity; reliability; and objectivity.

In lieu of internal validity, qualitative inquiry focuses on credibility. Credibility requires the data to be a true reflection of the participants' experience of the phenomenon being studied. Lincoln and Guba (1985) suggest that member checking is the most crucial technique for establishing credibility. Member checking involves returning the interpretations of the researcher to the participants to validate that they are a true representation of the communicated lived experience. An important step in member checking is allowing the participants to respond to the data. Furthermore, Patton (1999) discusses the importance of researcher credibility. With the researcher acting as the instrument of measurement in qualitative research, credibility of this person is critical. Patton (1999) recommends a statement that discloses the experience,

training, and perspective of the primary researcher in terms of any personal or professional information that may, in the opinion of others, be viewed to affect data collection, analysis, and interpretation.

The second component is external validity. Conventional inquiry opposes the views of naturalistic inquiry, where findings from a sample can be representative of a greater population. Instead, the concept of transferability is considered. Transferability addresses the generalizability of the findings. However, an original investigator does not know the context in which the findings will be transferred. Therefore, transferability judgments are more the responsibility of the investigator who wishes to transfer the data at a later date. Lincoln and Guba (1985) explain that the best measure a qualitative researcher can take is to provide sufficient descriptive details in the research report to allow proper analysis for appropriateness of transferability in future research settings.

The third component is reliability, which in qualitative research is better described as dependability. Although the instrument of measurement is human, and can be criticized as unreliable, there is the added benefit of the dynamic aspect of the instrument. This can include insights and adaptations to the changing data. Dependability seeks to include both factors.

Finally, the question of objectivity, as viewed from the qualitative perspective, is answered by ensuring that data can be confirmed, and thus confirmability is the fourth measure of trustworthiness. Triangulation through multiple analysts is a measure that can help establish both dependability and confirmability of research. Although there are several types of triangulation, Patton (1999) describes this type of triangulation as having two or more researchers independently analyze the same qualitative data set and compare findings. This serves as an important step in recognizing interpretive bias.

There is a great deal of variability in the methods of phenomenology. Although there is no set list of rules, there is rigor involved with undertaking a

phenomenological study. Patton (1999) explains that central to the questioning of qualitative methods is the nature of the analysis. Statistical analysis, delineated by formulas and rules is employed for data analysis in quantitative research, whereas in qualitative research, the data analysis is a creative process, informed by creativity, intellectual rigor, perseverance and insight. Patton emphasizes the importance of these characteristics in the qualitative analysis.

CHOOSING THE SAMPLE

Following approval from the Human Ethics and Research Board, potential participants were identified through provincial licensing board lists of registered orthodontists. All provinces were included with the exception of Quebec to ensure English-speaking individuals. This avoided the possibility of misinterpretation due to a language barrier. Differentiation between males and females was made by the graduate investigator using three methods. The first was using the person's first and second names as a guide. Second, internet searches to locate websites or other online information to confirm the individual's gender were used. Finally, a well-known orthodontist in the orthodontic community was able to confirm the gender of many of the individuals. Where those three methods still failed to confidently confirm the identity, such as the event of a unisex name or where it was unclear if the name was gender-specific, and the individual was not known to the orthodontist, the default was to assume the individual was a female and include them in the mail-out. Where addresses were provided in the provincial lists, they were accepted as being current. Unlisted addresses were recruited online whenever possible.

One hundred and nine names were identified from the provincial lists, as being female, with addresses that could be located. An information letter (see Appendix A) with a brief questionnaire (see Appendix B) were mailed to the identified orthodontist. The information letter outlined the goals of the study and explained that by returning the questionnaire they may or may not be

selected for an interview. The questionnaires were brief, and designed to obtain demographic information to aid in purposive sampling by maximum variation. Written consent was obtained from the study participants (see Appendix C).

Purposive (or purposeful) sampling is an approach to choosing the study sample. Purposive sampling is a common modality in qualitative research. Patton (2002) described it as the intentional inclusion of information-rich cases in the sample to aid in learning as much as possible about the main research issue. Vivar, McQueen, Whyte, and Armayor (2007) explain that the goal with phenomenology is to gather rich information about a group of participants, rather than generate data that can be extrapolated to a whole population. Therefore, large sample sizes are not necessary. Vivar et al. (2007) comment that although larger samples may provide a broader range of experiences from which to draw conclusions, in phenomenology, the interest lies in the common features of the lived experience, which can often be obtained from a smaller sample. Polit and Beck (2004) state that phenomenology samples often include 10 or fewer subjects.

In the design of this study, the decision was made to include all age ranges of orthodontists in the sample, from 26 years (typically youngest age for a graduated orthodontist) onward. As well, women of different marital status (single, married, divorced) and those with or without children were included. Finally, women from different geographic regions and both solo and group practice types were included. The choice to allow this amount of diversity was intentional. The diversity in ages was considered important to see if the issues women faced in work-family balance changed depending on different stages of practice. Although for the purpose of this study work-family balance is defined as the balance between the primary professional role and having and raising children, there are different interpretations of this term. Despite the definition of work-family balance in the context of this study, women without children

were included in the sample. The reasons a woman does not have children are many and varied, but for the purpose of this study it was important to determine if the reason was related to the career of orthodontics. In the literature, Dumelow et al. (2000) describes women physicians who, due to lengthy training, delayed having children until it was biologically impossible. As well, there are examples where women made the decision not to have children as the demands of the career were too all-encompassing. This finding would be a significant issue faced by women in this career that might have been missed if women without children were not included in the study sample.

Patton (2002) describes several different strategies for purposefully selecting information-rich cases. Maximum variation sampling aims at capturing and describing the central themes across a diverse group of participants. He acknowledges that a great deal of heterogeneity in a small sample can be problematic with samples being unlike one another. However, he stresses the power of this method; common patterns that emerge from a diverse sample are significant in capturing the core experience of the phenomenon of interest. To ensure maximum variation sampling, the first five subjects were selected to include: the various age ranges; a variety of geographic locations; and different numbers of children. Within the first 5 subjects, 1 had erroneously completed the questionnaire stating that she did not have children, when in fact she did. Another subject was contacted on several occasions, and although she expressed interest in the study, an agreeable time for the interview was not found. Contact was maintained between the graduate researcher and the subject for the duration of the data collection portion of the study, however, the interview was not able to be conducted. This was the only case where a participant was selected for interview and did not complete the interview. In selecting the next 5 subjects to be contacted for interviews, decisions were made to "fill in the gaps" by choosing candidates across the age ranges, and based on their type of practice (solo or group). Finally, the last 3 subjects were chosen with the

intention of ensuring the most information-rich permutations and combinations had been included. Although qualitative research does not intend to garner information transferrable to a larger population, reasonable effort was made to model the final sample of 13 after the 41 responses obtained based on their characteristics.

For this study, the anticipated number of interviews was 10-15 with the eventual number to be determined by data saturation. Polit and Beck (2004) define saturation as a guiding principle in qualitative research that involves sampling to the point at which no new information is obtained and redundancy is achieved. The actual number of subjects interviewed was 13, which was sufficient to expose the core elements of the lived experience while drawing from a diverse group of participants. Sampling occurred concurrently with data collection and analysis, which allowed key themes to emerge during the interview process. The data was considered to be saturated when no new concepts were presenting from the data. This was determined by agreement between the graduate researcher and two qualitative experts.

DATA COLLECTION

In-depth interviews are the primary method of data collection in phenomenology (Creswell, 1998). Interviews were conducted between November 2009 and February 2010. All interviews were conducted over the telephone at times determined to be convenient by the participants. At the beginning of each interview, the graduate researcher informed the participants that the interview would be recorded and transcribed. They were also informed that a summary of the quotes used from their interview, as well as the context in which the quotes were presented, would be sent to them. The purpose of this step was for the participants to verify that the graduate researcher's interpretation of their thoughts, and the description of the lived experience, was correct. Permission was also asked to contact them in the event that new topics

arose, during subsequent interviews that might not have been covered in earlier interviews. Furthermore, the participants were offered the opportunity to follow-up with any further comments or thoughts at any time, and provided with the graduate researcher's contact information. The length of the interviews ranged from 25-35 minutes.

Starks and Trinidad (2007) describe the use of a semi-structured interview in phenomenological studies. With the objective of the interview being to uncover the participant's story the researcher acts as listener, while the participant is asked broad questions to share their experience. The researcher then asks probing questions with the intention of clarifying the story. The format of the interview was semi-structured with an interview guide (see Appendix D), to provide the researcher with a consistent line of questioning for all interviews. Questions were broad in nature and designed to allow the participant to interpret the questions in the context of their own experience, and generate their own thought process. The researcher's role was primarily as a listener, and interruptions were kept to a minimum, to ensure the participant was offered the opportunity to fully explore and communicate her experience. In some cases the participants were very succinct with their answers and the interview guide format was followed closely. However, in most interviews, the structure was adapted as the participants answered questions on their own without sequence. In these cases, the researcher asked questions to clarify or illuminate specific topics. As the interview process continued, and patterns emerged from the data, the line of questioning was honed to ensure that these important themes were addressed. This technique helped minimize the need for follow-up with the subjects.

During the period in which interviews were being held the graduate researcher transcribed the completed interviews to gain familiarity with the data, as well as any emerging themes. Interviews were transcribed verbatim,

omitting only names, and other identifying information. Participants were given a pseudonym consisting of a single initial, allocated alphabetically to the subjects in the order they were interviewed. The key linking the pseudonyms to any identifying information was only accessible by the graduate researcher. Polit and Beck (2004) identify verbatim transcription as a critical step in preparation for data analysis. After the first two interviews were complete, the graduate researcher met with her thesis advisor to discuss the line of questioning and emerging topics. Throughout the interviewing process, one or both thesis committee qualitative research experts were available to answer any questions of the graduate researcher, and to clarify any thoughts.

DATA ANALYSIS

Data collection, purposive sampling, and analysis all occurred concurrently. Although there are many published step-by-step guides for qualitative analysis, Patton (2002) discussed that there is no one set of rules for any study. Jasper (1994) summarizes various methods of data analysis as all following a certain basic process. The process begins with transcribing the material; coding the data into themes; clustering these themes into categories; and using these categories to describe the attribute of the phenomenon in question. Polit and Beck (2004) describe this overall process as an editing analysis style, whereby the researcher acts an interpreter of the data by seeking the meaningful segments and units. Once these segments are identified, a categorization scheme to organize and sort the data is developed, after which emerging patterns are used to connect the categories.

In this study, analysis started with familiarization with the transcripts. Field and Morse (1985) describe the first step in data analysis as the task of becoming extraordinarily acquainted with the data, starting with close analysis of the transcripts. Throughout the interviewing process, the researcher kept field notes as striking or recurrent concepts emerged. As interviews were transcribed,

these initial concepts or key words were modified and grouped in collections according to similarity. Each group was assigned a color, and a key was made to help with coding. Using color-coding options in a word processing program, the transcripts were then coded according to the key. Field and Morse (1985) address this process as the recognition of persistent words, phrases, themes, and concepts. Notes of the supporting and relevant passages or paragraphs are made for later analysis and assimilation. A sample of the coded transcripts was read by two qualitative experts to validate the consistency of the graduate researcher. This step is an important use of triangulation of analysts to help establish dependability and confirmability of the data.

The next step of analysis involved combining all sections of any one color from all of the transcripts. This allowed the data to be viewed with like topics together to better see where themes were emerging. Repetitive words and phrases used by the participants were highlighted as a method to ensure the main themes correlated to the content of the transcribed interviews. The graduate researcher met with the two qualitative experts to discuss the main themes, and determine the patterns linking the themes. This portion of the analysis involved interpretation of the data by the graduate researcher to succinctly and accurately establish the meaning of the lived experience. Descriptive or supporting quotes from the interviews were used to substantiate or illustrate the subcategories of the main themes.

A final step to establish credibility of the analysis was to return the analyzed data to the study participants as a form of member checking. Summaries of the quotes used from each participant, and the context within which they were being presented, were emailed to the participants to ensure that the interpretations made were accurate, and that the conclusions were representative of the lived experience. At that time, participants were given the opportunity to react to the data and dispute any errors in interpretation. As well,

they were encouraged to provide any further thoughts or details that had emerged since the interviews. All of the participants replied with immediate and affirmative feedback.

A cursory review of the literature was performed at the time the research topic was proposed. A subsequent review of the literature was postponed until data analysis was well underway. This strategy is discussed by Speziale, Carpenter, and Covenant (2003) as a means of allowing the purest understanding and description of an experience by avoiding subjecting the data to the researcher's preconceived ideas about the phenomenon. The importance of the literature review is to be able to present the resultant data in the context of the existing knowledge on the topic. Furthermore, the literature review serves to provide context for the research by providing not only the relevant background studies but also underlying theory of the work.

The graduate researcher in this study was a female orthodontic graduate student who became pregnant during the research process. Although her experience with qualitative research was limited to this study and she may have had some bias, two non-orthodontist qualitative experts closely followed the research process to ensure quality and credibility of the researcher and methods.

SUMMARY

The qualitative tradition of phenomenology was chosen as the research method of choice to investigate female orthodontists and work-family balance. Purposive sampling was used to select a rich and varied sample of women to interview. Thirteen interviews were conducted by telephone and recordings of the interviews were carefully transcribed. The resultant data was analyzed for recurrent and emerging themes. Finally interpretive skills were used to organize these themes into a rich description of the phenomenon. A review of the literature was completed to provide context for the findings of this research.

Importance was placed on enhancing the quality and credibility of the data and the research process as a whole.

CHAPTER 4: FINDINGS

The results of this research are presented in several sections. The first section describes the study sample with demographic information concerning both the target population and the study participants. The following sections discuss the common themes that emerged from the collective narrative obtained by examining all of the participants' individual experiences (see Figure 1).

The first theme was the specific challenges of orthodontics on work-family balance. Four sub-themes were outlined: scheduling issues; dependence on referrals; large amounts of paperwork; and lack of professional support. Scheduling issues was further divided into three sub-categories: length of treatment; frequency of recalls; and large number of patients scheduled per day. Finally, lack of professional support was divided into three sub-categories: limited number of orthodontists; lack of female professional mentors; and lack of guidance from professional organizations.

The second theme was how female orthodontists defined work-family balance. Two main sub-themes presented from this section. The first was that balance, to these women, means satisfaction in both personal and professional capacities. The second sub-theme was the understanding that achieving balance involves compromise and establishing priorities.

The third theme was role adaptations and role conflict. This section has three sub-themes. The first sub-theme was adaptations to the maternal role, which was divided into six areas: timing of children; maternity leaves; employing a support system; breastfeeding; segregation from other mothers; and personal and relationship time.

The second sub-theme was adaptations to the professional role, which was divided into four areas: changes to practice structure; modifications to practice during maternity leave; cutting back days; and reassurance of referrals.

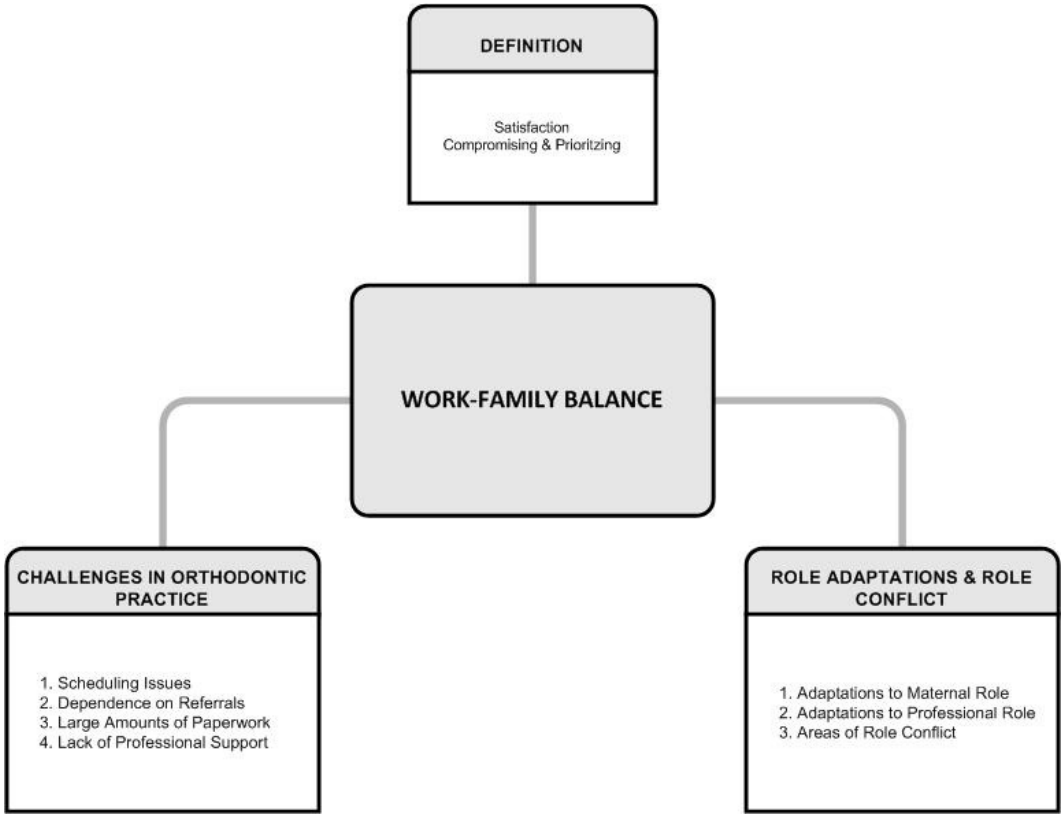

Figure 1. Model of Work-Family Balance

The final sub-theme outlines the areas where the women experienced the most role conflict despite adaptations. This sub-theme was divided into four sections: timing of childbearing; maternity leaves; breastfeeding; and caring for a sick child.

THE STUDY SAMPLE

Demographic Profile of Target Population

One hundred and nine female orthodontists were identified across Canada, excluding Quebec, from provincial licensing board lists: 65 females in Ontario; 27 in British Columbia; 10 in Alberta; 5 in Manitoba; 5 in Nova Scotia; and 2 each in New Brunswick and Newfoundland. Prince Edward Island and Saskatchewan did not have any female orthodontists listed with their provincial licensing boards.

Of the 109 letters sent, 1 was returned because the recipient was male. Five letters were returned to sender because the addresses listed with the provincial licensing board were incorrect or incomplete. Forty-one questionnaires were returned, which corresponds to a response rate of 39.8%.

The demographic data for the survey respondents is presented in Table 1. Of the 41 responses, the division between the four age groups was as follows: 10 respondents were 25-35 years of age; 17 respondents were 36-45 years of age; 10 respondents were 46-55 years of age; and 4 respondents were in the 56+ age category.

In the 25-35 age group, 2 were single, 1 was engaged without children and 7 were married or common-law with children. In the 36-45 age group, 4 were single/divorced without children, 2 were married or common-law without children, and 11 were married with children, making this the single largest subgroup. In the 46-55 age group, 2 were single, 1 was divorced with children, 1 was married without children, and 6 were married with children. In the 56+ age

group, 1 was single, 1 was divorced with children, 1 was married without children, and 1 was married with children. The largest sub-group for all ages, except the 56+ age group, was the married with children sub-group, making up 25 of the 41 responses. In addition, there were 2 individuals who were divorced but had children making the overall number of respondents with children 27 of 41 (65.8%). The questionnaire only gave options for single or married and in 2 cases respondents specified divorced. Although the divorce rate seems low in this population we have not accounted for the number of respondents who replied as "single" who may in fact be divorced, or those who were divorced and re-married. Another sub-category of "married" that was not included on the original questionnaire was "common-law" which was specified by 2 respondents. One respondent also specified that she was "engaged". Finally, 1 respondent described herself as "pregnant", therefore was placed in the corresponding category of those with children.

Overall, there were 21 from ON, 10 responses from BC, 7 from AB, 2 from NS, and 1 from NF. No responses were obtained from Manitoba or New Brunswick. There were no female orthodontists listed in Prince Edward Island and Saskatchewan, and Quebec was excluded.

Demographic Profile of Participants

From the 41 responses, purposive sampling with a focus on maximum variation was employed to obtain a rich sample of women across the country, from different age groups, marital status, with and without children, and different types of practice structure. Table 2 displays the results of the 13 women interviewed along with basic demographic information. Age at time of graduation was of interest as the training for orthodontics is lengthy and can interfere with the normal childbearing years. The number of years in practice was important to understand practice maturity. Finally, although demographics from a sample this small cannot be generalized to the larger population, the days

per week worked was useful in determining if there was any emerging data that warranted sampling according days worked and presence of children. To summarize the participants: 4 were in the 26-35 age range; 1 was single without children, and 2 were married with children. Of the 4 women, 1 was an owner of two practices (1 solo, 1 group) and the other 3 were associates; 1 in a solo practice situation, and 2 in group practices. The 4 participants interviewed from the 36-45 age range were married with children, and owned their practices. Two were sole proprietors, and 2 were in group practices. Three participants were interviewed from the 46-55 age group: 1 was divorced without children, and 2 were married with children. All owned their own practices: 2 were in a solo practice, and 1 in a group practice. Finally, 2 participants fell into the 56+ age range: 1 was single without children, and 1 was married with children. Both owned their practices and were sole proprietors.

CHALLENGES TO WORK-FAMILY BALANCE IN ORTHODONTIC PRACTICE

Orthodontics, as a specialty, is considered to offer opportunities for work-family balance that other specialties may not. For example, specialties such as pediatric dentistry and oral surgery require hospital time and significant on-call demands that are virtually non-existent in a typical orthodontic practice. In some cases the women interviewed specifically chose orthodontics as a specialty because of the perception that orthodontics affords work-family balance. Although this study did not aim to evaluate career satisfaction for these women, through the interview process they did portray a sense of satisfaction with their careers. However, the results of this study show that the majority of the women also felt work-family balance was a challenge for them and for many it was a constant struggle and work-in-progress. One woman describes how she modeled her career after her childhood orthodontist:

"That's why I entered the career, because my orthodontist…was always happy and that was kind of the start of it all. I thought I would like to have a job where I

could juggle family, and work, and be happy with everything so that was the goal." - G

Another woman explained that she chose the career because she felt it would allow her to set her own hours and have flexibility in her schedule. After being in practice for many years she describes the difference between the reality and her perception:

"It's a little more engrossing than I had anticipated, but…if it's your practice, then you can choose to hire associates and the practice goes on while you go deal with, and be involved with the care taking and being a mother." - F

Throughout the interviews there were common items mentioned by the respondents, unique to the practice of orthodontics, which were seen as specific challenges to work-family balance. The four areas outlined were scheduling, dependence on referrals, large amounts of paperwork, and lack of professional support (see Figure 2).

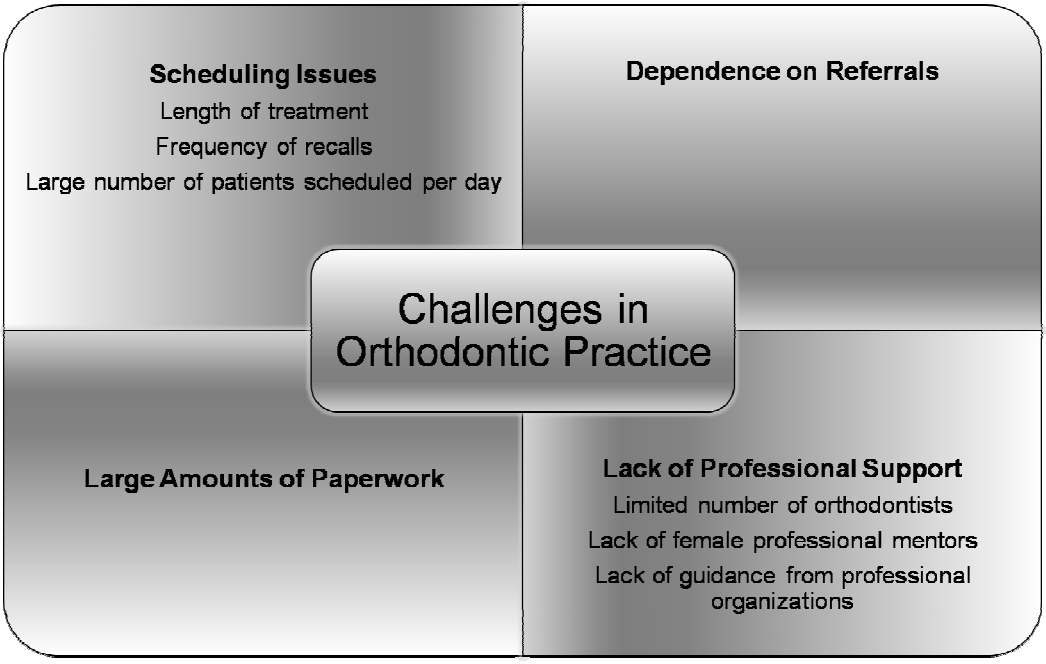

Figure 2. Challenges to Work-Family Balance in Orthodontic Practice

Scheduling Issues

Scheduling issues encompasses three areas of orthodontic practice: length of treatment, frequency of recalls, and number of patients scheduled per day.

Length of Treatment

Orthodontic treatment lasts on average 24 months, which means a significant commitment is made between the orthodontist and the patient. Having made this commitment, the women did not want to abandon their patients during this time, for things such as a maternity leave.

"We're essentially married to these patients for two years; you can't just get up and leave." - A

Frequent Recalls

The nature of mechanics in orthodontics requires that patients are recalled on a frequent basis. Typically recalls range from 4-10 weeks intervals, however, sometimes patients are seen at weekly intervals. This constant demand for availability was considered as a challenge to flexibility for these practitioners, particularly when it comes to longer absences for either vacation or a maternity leave.

"The fact that you have to see the patients every 6 weeks, that was the problem. My general dental friends would just say, 'Oh well, we just moved the recalls out a little further and you know it wasn't too bad.' With orthodontics, you really have to sort of carry on at a pretty steady pace or the practice either dies, or everyone is unhappy."- F

Large number of Patients Scheduled per Day

With the frequency of recalls, patients are seen for a significant number of appointments during their treatment time, which means that a large number

of patients are seen each day in a practice. This number ranges with the size and style of practice but can range from 40 to 100 or more. This was also seen as a challenge to flexibility as women discussed the difficulty in canceling and rescheduling so many patients. Although this was mentioned with respect to scheduling medical appointments, or when childcare fell through at the last minute, the majority of women saw this as a significant challenge when they had a sick child at home. One young woman projected as to how a sick child would be managed between herself and her partner.

"I won't be able to stay home if my child is sick…my husband has a little more flexibility with his job and fortunately can stay home if we have a sick child. It's simply not realistic to be cancelling 80 patients." – C

Dependence on Referrals

Orthodontics is a referral-based specialty, therefore, there are a significant amount of resources that need to be directed to marketing the practice. With several women commenting on competition in their area, this part of the business became even more important. The time required for these activities was above and beyond the days scheduled for patient care and tended to fall during lunch hours and evenings, which then conflicted with family time.

"Our market is competitive and for us we really have to do a lot of the little extra things…I hate that part of my work; I really do. And that's a part of orthodontics. I think it depends on your location and where you practice, but depending on your market, you really have to promote yourself." - M

Large Amounts of Paperwork

Completing paperwork was mentioned as a challenge by most of the women and allocating time for this was an important part of their time management plan. Although any business requires a certain amount of paperwork, orthodontics generates additional paperwork in two ways. The first is that required to treatment plan cases, as multiple records and measurements

often need to be considered in devising a treatment plan. Secondly, large amounts of paperwork are inherent in a referral-based practice, as communication with referring dentists is critical. Due to the length and nature of treatment, there are often several letters sent out to either other specialists or to the referring dentist during treatment. One woman described how despite her 4 days work-week she required the fifth day to complete her paperwork.

"Working the four day week, the Monday I take to do my paperwork at the office; so I do go in on the Monday such that my weekends are free to spend with my family, rather than doing that stuff on the weekends." - I

Lack of Professional Support

A major issue specific to the practice of orthodontics was the lack of professional support. This sub-theme was divided into three areas: the limited number of orthodontists, lack of mentorship and lack of guidance from professional organizations.

Limited Number of Orthodontists

Although orthodontics is the biggest specialty, there are relatively few orthodontists across Canada and each year, Canadian orthodontic schools graduate only 20 new orthodontists to service the entire country. The lack of orthodontists means that finding a locum was difficult for the women interviewed, particularly in less densely populated areas. Two women discuss the difficulty in finding a locum.

"It would be great if we had locum orthodontists in Canada, but I think we don't have the demand that is high enough for that." – E

"It's not like it's easy to find a locum that's an orthodontist; someone to cover for you; it's not an easy thing to do." - M

Lack of Female Professional Mentors

Another side-effect of having few orthodontists is the lack of mentors, specifically female mentors, with respect to work-family balance. Although motherhood is a challenge to any woman, the logistics of balancing a career in orthodontics with motherhood make this challenge even greater. Many of the women felt there was a lack of guidance from fellow professionals as to strategies that might help achieve this balance. This deficiency in professional support started with training in graduate school where almost all of the participants said they did not have female mentors or role models to provide them with an example of how to incorporate their career and family. Several women reflected on their experience in graduate school and whether they had female mentors.

"Female orthodontists? No. I don't remember any. I'm trying to think really hard. No, no, we really, didn't; it was predominantly male." - A

"I never really got that there was a female perspective other than mine at that school and that was sort of scary in the beginning" – B

"There weren't a lot of female orthodontists in the teaching programs…so no I wouldn't say I had any mentors there." - L

Similarly, once in practice most of the women felt that they either did not know many other female orthodontists or they did not know them well enough to be able to discuss balance strategies.

"There are only a couple of us here, so no I've kind of had to figure it out all by myself." - M

Another participant from a large metropolitan area also felt that she did not have other female orthodontists to relate to.

"Unfortunately not. I don't know a lot of other female orthodontists. I've met some at meetings and things like that, but none of them happen to be in my particular, my particular phase in life, so no." - K

Despite the fact that the main issues mentioned were common to most of the women, the women seemed to be proceeding without guidance or an example to model themselves after. Several of the women recognized that they themselves did not have the solutions and felt having a role model would have made things much easier.

"[I'm] doing what I think I can. I think that your question based on role models is a good one in that if you could actually see how somebody else swings it, you might feel less overwhelmed or you might see some of the things that they do and go, 'well I can try that; it clearly hasn't sunk their practice', but when you've got no one to give you a frame of reference I think it's quite hard." – I

Another woman had the shared sentiment that she herself did not know how to achieve balance, however she felt that there were people who did.

"There are a few people who have balance. What do they do? I don't know about balance, because, no one's told me how to get a balance." – D

She added that it would be useful for new graduates to have an example set for them that they could model themselves after.

"So for the newer generation to know… this is what someone who did it well went through." - D

Lack of Guidance from Professional Organizations

Finally many of the participants felt that there was a lack of guidance from professional organizations on the work-family balance topic. They felt there were ways that their professional organizations could be of assistance in dealing with work-family balance issues. Suggestions ranged from simple gestures such

as offering courses or mail-outs with information on integrating career and family to having an organized system in place to help provide locums to allow for longer maternity leaves.

"It would be nice to have something put out by…the American Association of Orthodontics… a committee or something that provides help with your pregnancy or managing your practice while you have a baby…Even a talk, an AAO speaker, on how to balance, how to have your first child and continue to practice." – F

The wish for an organized system to allow for a longer maternity leave was communicated by several women as well. Although some women speculated as to how it could be arranged within a small group of orthodontists, others felt it would be beneficial to have a more widespread effect.

"It would be great if there was a female orthodontics group that supported each other and worked out a locum at a reasonable rate, at the beginning of a person's career." – D

"I just kept thinking, it would be nice if somehow we had something where we could take a year off as self-employed people; that would be such a nice luxury. Something as a professional body so we can just sit there and say 'this is for us, and we can take this year off, and it's within our right'."- A

WORK-FAMILY BALANCE DEFINED BY FEMALE ORTHODONTISTS

Work-family balance is paramount to female orthodontists. Although work-family balance can be defined in many ways, the participants of this study commonly described it as having satisfaction in both their personal and professional roles. They also recognized that in order to achieve a healthy balance, compromising and prioritizing were necessary. The following section discusses two sub-themes: satisfaction; and compromising and prioritizing.

Satisfaction

When asked to describe in their own words what work-family balance means to them the women commonly defined it in terms of success or satisfaction in both their family life and their career.

"I'm satisfied that I'm accomplishing something at work, and that I feel some kind of reward from being at work, but at the same time a reward from being at home as well. So as long as I'm feeling a reward from both. If I stop feeling that way, then I guess I've lost that balance. I don't think that I could lead a whole, or fulfilling life without having both." - K

"Trying to be able to feel satisfied in your home life, and your family life, and also work as well. Feeling satisfied in both would be the balance. The question is do we ever achieve the balance?...I would say I'm almost there. I'm not completely dissatisfied in either. I'm satisfied in both aspects with a little bit of pull." - M

With the dedication involved in pursuing a career in orthodontics it is perhaps not surprising that these women felt strongly about the importance of their careers. The training can include up to 12 years of university, which is a significant commitment. Having attained that goal, it provided them with a sense of independence and what appears to be a great amount of satisfaction. On the other hand, this population seems to be very pre-disposed to motherhood as well. Even the older women without children expressed that had situations been different they may have welcomed children into their lives.

"We're all Type A's…and I think at some point, we all want our own say; or own business; and our own way of practice…we don't just imagine having our career and that's it. You want a family. I think it's a very strong instinct. For most women I think."- A

Some women actually felt they were better mothers or better orthodontists with a balance.

"I work Monday, Wednesday, and Friday, and I am home weekends, Tuesdays, and Thursdays. So I always have one day at work, and one day with the kids, and that's the perfect balance for me, because it's kind of half and half…. if I worked less then I would not be as patient with the kids; if I worked more then I would not see them enough. So that's my balance…I'm just a better person if I have the balance."- G

"I feel it's important that you maintain your own identity outside of your practice… I've decided that I would rather make less money and have time for my family and for myself. I feel that if I'm more rested, I'm better able to do a better job when I'm at the office."- J

Compromising and Prioritizing

Although the women identified that balance meant satisfaction in both work and family aspects, a prominent theme was the essential component of compromise.

"I think about work load and time spent with your child; I think half of the week is a good work and family balance …half of the time with your child; I think that is a good balance… I would love that the day has more hours, like 36, so you could do everything you want. But no, it's all about compromise again. You have to decide what you are willing to give up, and you will have to give up stuff" – E

Another woman was conflicted in her views, recognizing that it is impossible to satisfy the demands of both roles but reluctant to consider it as "compromising."

"Success in both and you have to be happy in both; by maintaining a balance it's not possible to fulfill all of your obligations in the family; or all of your obligations at work; so it's always a balancing act; it's always a juggling act… you don't want to be compromising on either end of the spectrum." – A

One woman simply stated that she had to learn that she couldn't do it all.

"It pains me to say 'no' but then I have to say 'no' to some things." - D

Prioritizing was mentioned as a strategy by many of the women. They understood that having your priorities outlined was imperative to knowing how to allocate your time. It was a common underlying theme that with the introduction of children into one's life there was a need to restructure priorities from work to family.

"I used to be very…career-oriented and I would say: 'children are not going to slow me down'; and it's 'easy to achieve a balance'; and 'I don't understand these women who just want to stay home all the time with their children'. Once I became a mother, I really understood that….wow, priorities just shift" - A

With prioritizing came the need to be organized. Several women discussed trying to keep everything organized in both aspects of their lives.

"I do find it helps the balance to try and maintain that organization at all times... being organized helps, but then it sort of takes away all your relaxation time." - L

Although the majority of women felt they had achieved some level of balance they also felt it was work in progress and a constant priority for them. There was a sense of frustration in trying to achieve that balance that was communicated in their comments.

"It is very important, but obviously I've been working very hard to try and get it, and it hasn't come to me. So you'd think that if something was important you'd do it within a certain amount of time, but it hasn't happened, for me." – D

One woman identified the significant stress it caused her.

"It's the thing I work on the hardest I would say and it's probably one of my bigger sources of stress, in my practice, and in my family life: trying to find that balance" – L

ROLE ADAPTATIONS AND ROLE CONFLICT

The balance these women did achieve or aimed to achieve came from a variety of strategies and there were commonalities to their approaches. As the previous section discussed, compromising and prioritizing were key words when it came to balance. The actions the women took to balance their family and profession reflected their priorities and the compromises they chose. Adaptations to both the maternal role and the professional role were necessary to accommodate the other. The first section discusses the adaptations to the maternal role. The second section discusses the adaptations to the professional role. Furthermore, there were areas where, despite adaptations, role conflict occurred and these are discussed in the third and final section (see Figure 3).

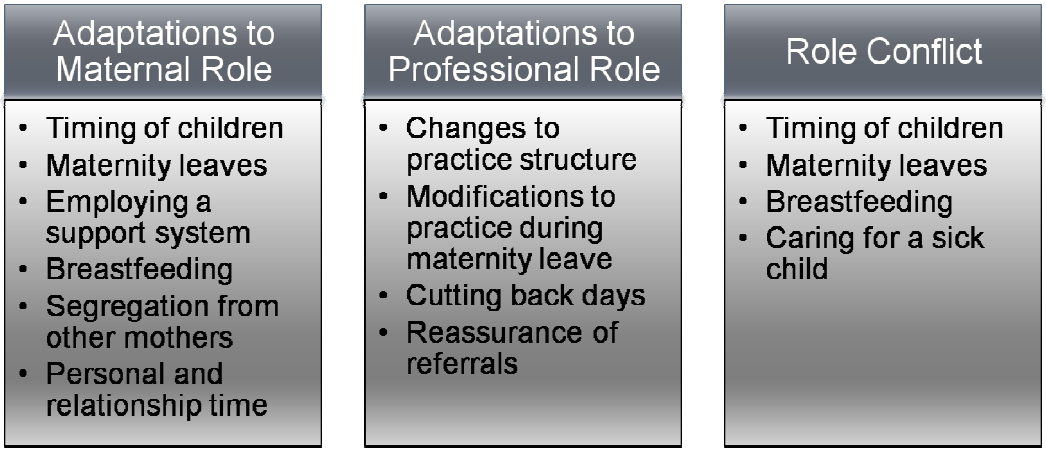

Figure 3. Role Adaptations and Role Conflict

Adaptations to Maternal Role

For the majority of these women, having children was of extremely high importance to them. Their maternal instincts were strong and balancing this with their professional role was difficult for them. Having the professional role made certain demands on family life that necessitated adaptations to the maternal role. There were six main areas where adaptations commonly took place among most of the women: timing of children; maternity leave; breastfeeding; employing a support system; segregation from other mothers; and personal and relationship time.

Timing of children

Timing in relation to starting a family was a challenge to work-family balance. The concurrence of launching a career and beginning family called for choices to be made. For the majority of women in this study, that involved delaying childbearing. The average age of our sample at graduation was 30.5 years and the average age of the timing of the first child was 34 years. None of the women chose to start a family while in residency and none of them delayed their careers to start a family immediately following completion of their education. Starting a family while in residency did not seem to be an option for these women.

"Certainly I didn't want to have children during graduate school, so that ruled that out. And then I didn't want to have children while I was setting up my practice…" – F

"My thinking at the time was not to have children until I had graduated and set-up a practice." – H

For this group of women, the norm was to wait until their careers were more established before starting a family. Having a more established practice also offered financial security. However, one mother who chose this route weighed the advantages and disadvantages of motherhood at an older age:

"I had resources; I had stability; practice was stable; my life was stable; my income was stable; everything was settled…I should have done it probably 5 years earlier… Ideally I would have done it in my mid thirties or early thirties, not over 40; just because of the tiredness factor and being younger to have more energy with the children." – F

Although there was the perception that with a more established practice an orthodontist could bring on an associate to help relieve the workload during a maternity leave, only one woman chose this strategy.

Delaying pregnancy had biological effects as well. Several women expressed that they had experienced fertility problems and pregnancy did not come easily to them.

"I would have been pregnant 6 years ago if that had worked that way. The opportunity did not present itself until now. " - I

One woman who did not have children alluded to the fact that she had tried to get pregnant but was unsuccessful.

"I don't have children, but it's not to say that I haven't tried" – J

The majority of the women saw the timing of their children as something that was a compromise for them and felt it would have been preferable to have had their children earlier. When asked what they considered to be an ideal time to have a child, there was no consensus except that there was no such thing as a good time.

"There was never really a good time to have kids; it's always a good time; there isn't a better time…there's never an easy time." - D

Maternity Leave

Maternity Leave was the biggest issue faced by women in the challenge of work-family balance. The nature of orthodontic practice with frequent recalls

and long, continuous treatment demanded that sacrifices were made concerning the duration of a maternity leave.

Time off for maternity leaves ranged from 2 weeks to 9 months. The details are presented in Table 3. The 10 women with children took 17 maternity leaves with the average being 8.5 weeks post-partum. One participant was in the unique situation of being business partners with her husband so that he was available and willing to cover her and accommodate longer maternity leaves than was typical. Excluding this candidate, the average length of maternity leave was 5.8 weeks. In contrast, the average duration suggested by the women as the minimum recommended leave was approximately 11 weeks. Almost all of the women specified that the return to work should be on a part-time basis.

Most of the women worked right up until their baby was due to minimize their time away from work and maximize their time off with the baby. Table 3 shows the length of time women took off prior to the birth of their children. One woman admitted to scheduling a C-section for her due-date to avoid the potential of delivering late.

"I had C-section planned on my due date. I twisted the arm of my OBGYN because I had nobody to replace me for my patients." - E

Although the women varied in the length of time they took, and what they thought would have been an acceptable minimum, almost all felt that their maternity leave was too short.

"I actually went back after four weeks, on a part-time basis, for about four days and then I took another three weeks off, and then I went back another four days before I actually went back full-time, so I would say I never really had very much time off because I was back to work."- A

The same respondent discussed what her ideal maternity leave would have entailed.

"Ideally, if it were up to me, I think 6 months would have been perfect. I think probably the earliest would have been four months…just to really connect with the baby and actually integrate this change into your life because it does turn your life upside down…they're getting used to you and you're getting used to them. I think not before four months and ideally it would have been nice after 6 months." - A

Some women seemed to accept that a short maternity leave was a reality of the profession they had chosen.

"Personally, I'd love to have 6 months off. Even that isn't long enough, but too many things could go wrong when you leave the practice for extended periods of time. For my business partner, even 1 month seems too long! So, there's a big compromise you make when you run a business and that's just one of the things you have to accept…I'm very fortunate to have this career and four months will have to do. You just tell yourself 'that's how it is' and deal with it." - C

A few women commented that although their maternity leaves were short, they were ready to go back to work. However, they specified that this was because they returned on a part-time basis. This offered them an outlet from the home environment.

"I was actually ready to go back after 8 weeks because it was on a part time basis. To have professional conversations and not just "baby talk" …it just kept me sane. For me personally it was good, although, I didn't get to sleep a lot. The only negative about that was the sleep deprivation issue so I had to sleep a lot on the weekends. But I think for normal people you know 6 months or so is good to take off for maternity leave." - G

Another mother who went back after just 3 weeks of maternity leave discussed her experience and what she would minimally want now looking back.

"I would like 3 months off. I think that, because I mean they are so small… 3 months off but that doesn't mean I wouldn't go back just a day a week in the meantime… I think that's the best. As much as I was ready to go back, I was ready to go back because I was alone; I didn't have a nanny. Because I was taking time off my husband was working to bank hours so he could be off after I went back to work. So I was totally alone and I think that's why I was crazy about going back to work. But I think having a nanny with me, 3 months off, that would totally be the ideal thing… and after that part time, like 3 days a week." - E

Breastfeeding

Breastfeeding was highly prevalent in this study population. Of the 10 women who had children, 9 of them breast fed their children, for an initiation rate of 90%. In all cases where there were multiple children, they were all breastfed. The woman who bottle-fed was in the 56+ category. Data for the exclusivity and duration of breastfeeding for each child are presented in the Table 4. The mean duration of breastfeeding for this sample was 10.8 months. In 85% of cases, breastfeeding continued for 6 or more months. Three women were currently breastfeeding although only one was still exclusively breastfeeding. The mean duration of exclusive breastfeeding was 6.3 months and in 64% of cases exclusive breastfeeding continued for 6 or more months. Four women exclusively breastfed, 1 or more of their children, for less than 6 months. Most of these women felt that formula was required to supplement their diminishing milk supply and they would have liked to been able to exclusively breastfeed longer. Two of the women did in fact exclusively breastfeed another child for a longer time. Six women breastfed, at least 1 of their children, exclusively for at least 6 months, and 2 of those women were still exclusively breastfeeding at least one of their children at the 12 month mark. There were 5 cases where there was more than one child. In 2 of these situations, the subsequent child was breastfed the same amount as the first child. In 2 other cases, subsequent children were breastfed longer on a part-time

basis. One of these women explained that with each additional child she took more and more time off to accommodate for breastfeeding. In only 1 case was a subsequent child breastfed for a shorter amount of time. This woman described how her practice had built-up to the point where she could not pump enough to sustain her milk supply for her second child.

Women adapted this desire to breastfeed by dedicating time at work to pump, in order to maintain their milk supply, and their children were bottle-fed their breast-milk during the day. They continued breastfeeding during evenings and weekends when they were with their child. Some women used their lunch hour to pump while the majority scheduled 1-2 15 minute breaks in the day. Two women actually had their nanny or their husband bring their child to work so that they could breast-feed and 1 went home at lunch to be able to breastfeed. Both women in associate and ownership positions were able to allot time for pumping. As one business owner stated:

"One thing about being self-employed and owning your business; you can set aside the time to do that and you have the privacy to do that." -A

However, for the majority of the women who pumped, it presented a challenge.

"I pumped and that meant a lot of stress at work because you had to run out to accommodate for that"- D

Employing a Support System

Part of the adaptation at home was employing a support system. This varied from having spousal support or involving grandparents to hiring childcare and household help. Regardless of what the system was, the women were unanimous in the importance of this support in achieving balance. One woman looking back on her career and raising children put it simply.

"A mother can't have a day job, and run a home, and take care of the children, and go to practices, and take the kids to piano and drums, and all that." - B

Another younger respondent already recognized the need for help.

"I think when you are working as a female, that's a must. Some people do it [without help], but I just think it's hard on your family." - E

Childcare was a huge topic in the work-family balance discussion and each approach was slightly different. The large majority of the respondents employed nannies with most of them being live-in nannies at some point. The length of time ranged from 1 year live-in to 12 years live-in. The responsibilities of the nannies also varied with some of them focused on childcare and others more in the role of a housekeeper. Although the majority hired nannies, many families tried to have a parent or grandparent as the primary childcare provider for at least the first child during the first 6 months.

Four of the women mentioned that their parents had helped with childcare at some point and in two of these cases the participant's mother was the sole provider of the children for the early years. One woman discussed the benefit of having her mother care for her young baby:

"As far as childcare, she's at home with my mum, so that for me is a huge relief. I don't think I could, I don't know, I think nannies are great, but I think I would have just felt too guilty. It might be easier later on but I would have just felt too guilty being at work while some stranger was with my child. So having my mum there was a huge bonus for us." – A

Her view of a nanny was shared by another young research participant as well. Although she did not yet have children, this woman and her partner had discussed their childcare options already.

"We thought about the nanny thing but I think we're hoping to do this on our own if we can…I have colleagues who have nannies and absolutely couldn't live without them; but I also I'm scared to teach my children that 'I don't have to do that work, I don't have to cook or I don't have to clean'…and of course I worry

that they would become more comfortable with the nanny than they are with me." – C

She did recognize however, that things would have to be adaptable:

"But to buy more time with my family it may be worth it, despite the compromises." – C

This view seemed to represent the main thought on this issue. Although a number of women reported trying to balance childcare between themselves and their spouses when their first child was young, with time, the need for help became apparent. One woman described the evolution of their childcare situation. She and her husband, who was another healthcare specialist, both worked 3 days a week and alternated those days to maximize time with their child and eventually hired a nanny when their second child was born.

"The first year we had some help; my friends helped out, and we had the baby sitters, and we juggled back and forth for that one day. That is strenuous…that was a big mistake to try and juggle that, as well as the breast feeding, and everything else. What I would do differently is get help right from the start. I would have done that earlier if I had known it would work out that well." – G

Another woman discussed her decision to increase her childcare and the freedom it allowed her.

"Just lately I have increased my childcare to have my caregiver do half a day on Friday so that I can actually have time, just a little bit more freedom to get the groceries, or go to the gym, or have a little time for myself, or have a little time to go to the office, without being constantly stressed about childcare arrangements." - L

One point that was very clear was that although these women had hired help, they were adamant that they were going to be intimately involved in

raising their children. Two women with nannies discussed their approaches to rearing their children.

"Starting from day 1 when they were born, I was a principal raiser of my children. Not a nanny, or my mother, or some other person. So that meant I had to spend more time at home than I did at the office." – F

"My husband and I have traded off short days and long days so that we can be the ones to bring the kids to school, and to the bus stop, that sort of thing. We are not relying on baby sitters and nannies to raise our kids." - M

Almost all of the participants referenced the support and involvement of their husbands as being significant, however, two women explained that they still felt their maternal role heightened the importance they placed on work-family balance compared to their husbands.

"*I think we have that maternal instinct. My husband is fantastic, but he just does not have the same instinct to go with the baby, to attend to the child, to always want to be there, and I don't think he is always plagued with the guilt that I am by leaving her behind. It's just a different kind of instinct that we have." - A*

"I have so little free time and the free time I have I really want to spend it with my children. I think there is a lot more pressure on a woman that way. I don't think men expect so much of themselves as far as spending time with their kids… which is you know a broad statement I guess; but at least as far as my husband is concerned, he's a great dad, but he doesn't stress himself out as much as I do that he doesn't spend as much time with them." - L

Hiring help for domestic chores was very common. Whether it was the role of a nanny or separate housekeeper, delegating tasks such as cooking and cleaning allowed these women, and their spouses, to spend more time with their children. One woman with a young baby was waiting for her nanny to arrive.

"I mean, if you have to run errands; cook and clean; you have no time for your child after that. I think it's going to be easier to achieve the balance once I have the nanny." - E

Even for women without children, household help was important.

"I think you need to make sure that you have help at home. And not because that type of work is below you, but it's just that you need to be able to give yourself the opportunity to have some freedom, to be able to pursue family activities, or hobbies, or sports, or whatever." - J

Segregation from Other Mothers

Very few women felt they had access to role models within the profession, however, there was a sense of segregation from mothers outside the profession as well. A strong theme among the women was that their career demands limited their ability to seek the normal avenues of support available to new mothers. The need for them to return to work quickly and not have a lengthy maternity leave precluded them from participating in those types of activities.

"I feel that I don't have as much in common with some of the other mothers, or some of my friends, that have taken a year off to be with their children and don't work. They're a very tight-knit group because they spend a lot of time going to programs like music classes, and mommy get-togethers, swim classes, and all these things with their children, and they have a lot of time to have lunch together, and have play-dates. I guess I don't have that experience almost at all. I have one day off a week, and even when I have that one day off, I sometimes try to make it to a program. But often we're running around visiting grandparents and running errands and so I don't have that connection with other mothers I think that I would like." – K

One woman described how her lack of participation in these support groups left her seeking answers and advice from other sources.

"Being a working mom, I think you definitely are a little bit more alone. I mean I look at all those stay-at-home moms that go to those meetings and I never had time. Every time there was a meeting, I was working… They know what's going on, they give tricks to each other, and I found that I was actually really by myself. I was doing research on the internet, or asking my doctors, trying to read in books, because I had no idea. We don't have much time for socializing or to do those "mom" things that other people have time to do. So, you are a little bit more isolated." – E

Another woman summarized her thoughts on her experience versus that of her friends who had the privilege of taking more time for maternity leave.

"I do have a number of friends here that are "stay-at-home" moms or part time professionals and I have quite a feeling of envy and jealousy for them and their lives. But they probably have envy and jealousy for certain aspects of my life too; they wear sweats every day and they always say how nice I look when I go to work, but I think there is less stress on them." - L

Personal and Relationship Time

With many demands from both work and home, the first place to compromise was time for personal use and time with one's spouse. There seemed to be a general sense of acceptance that something had to be eliminated, and this was one area they were willing to make a compromise. Some women clearly articulated that they had no personal time.

"As far as taking time for myself right now, you know, just to do pleasure things; it's non-existent." – A

"*There is no time for myself or very little…I have to really schedule time for myself, and that's a haircut." - M*

Another woman discussed how she put her own needs last, even after having time for her husband.

"I don't have any personal time. The time that I have I try to spend with my husband but I am lacking personal time. I haven't read a private book in 8 years I think, all work related, or children related. So the balance for personal time is not there." - G

Time with their husbands was also a big issue because in the list of priorities, children and practice came first. This was true for both women with young children and those with teenagers.

"The children are getting the benefit of the time; my husband and myself, I'd say we are both suffering."- L

"The children come first, and then the practice, and then maybe myself and my husband" – F

One woman described the lack of quality personal time with her husband as they balanced raising their small children.

"My husband and I actually went through a period of 13 months where we did not go out for dinner together…We do put our kids to bed, between 7 and 8 o'clock every night. One, because we believe that kids need to go to bed early and get a good night's sleep and two, we just need to be able to have a little bit of time. Now ironically, that time after they go to bed is left for making lunches, going through their book bag, and getting stuff ready for the next day, and often it's taking care of little office details as well too." - M

Adaptations to Professional Role

Although the demands of the profession required concessions within the family role, the demands of being a mother also necessitated changes to the career. The four areas identified as adaptations to the professional role were:

changes to practice structure; modifications to the practice during maternity leaves; cutting back days; and reassurance of referrals.

Practice structure

All of the women interviewed desired to own their own practice. While 8 women chose solo practice, others thought a group practice offered more freedom. Many of the women started out as associates, although the length of associateship ranged from a few months to several years. Structuring of the practice was one career decision that was modified to try and accommodate family. Choosing to be an associate was the most common adaptation mentioned by women of all ages. Women who chose to associate early in their careers felt it afforded them more flexibility.

"The whole purpose of being an associate was to be able to have someone else cover my patients while I was on maternity leave." – I

Women looking back on their careers were almost unanimous in suggesting associateship as a good strategy for achieving work-family balance. Two participants discussed the approach they would recommend to a new graduate.

"My advice to the orthodontists that are just coming out of school and are planning a family… do an associateship until you get your family settled and established, until you have all your kids, your youngest is a little bit older, and then start thinking about building a practice."- M

"Female orthodontists, if they want to have family life, should probably associate so that they can have the best of both worlds." - D

Another woman agreed that starting up a practice was a huge undertaking.

"I think for anyone who's just starting out, the first couple of years are grueling in that there's just so much work involved with setting up a practice or taking over a practice" – J

One woman discussed her choice to start-up her practice right away and commented on the different path some of her colleagues took.

"Some colleagues of mine have just said 'we just want to associate'. They have not gotten the practice, they don't own their business, and they just prefer to stay associates, and be at home with their kids, which is a great option. I always wanted to own my business and so the sooner you get on that the better" – A

One woman currently associating saw both the negative and the positive aspects of associating and discussed her reasons for choosing to adapt her practice development.

"*Financially it's not great. The sooner you buy in, the sooner the financial benefits come. It's nice to just have a salary too which is what I'm working with. It's guaranteed, you don't really have to worry about it. At the end of the day you go home and you don't need to concern yourself about, paying the bills, and staffing issues, so much. The timing has to be appropriate, and I think if I wasn't in this phase of my life where I was looking to have more children,…I think I'd be more ready to buy into the practice. Because I plan on, probably within the next year, having another child, I don't think the transition is right, right now… I would love to buy into the practice…I don't know that I would have enough motivation to spend…the necessary amount of time that it takes to buy into a practice and to really run it well. If I had to buy into his practice now and not have him around, I don't think I would be able to spend as much time at home as I do." - K*

The other end of the associateship spectrum was owning your own practice and hiring an associate. This also offered more opportunity for work-family balance. One woman who had a mature practice by the time she started her family describes her realization after the birth of her first child that she needed support at work in addition to home.

"I had no associate at that point but very soon after I had my first child I hired one. About 2 months after I had my first child I realized, 'I don't think I can do this'…I thought the full time nanny might do it; but no, I pretty much needed a full time associate as well. I learned by the first child… you need help in the office…If it's your practice then you can choose to hire associates and the practice goes on while you go deal with be involved with the care taking and being a mother." - F

Although it worked for this participant, she was significantly older starting her family and had built up an established practice. Most practitioners felt that early in their career they did not have the financial ability or patient load to facilitate bringing on an associate.

"If I'd been in practice for 10-15 years; or if I were in a very established practice, or a group practice, then it would be very easy to bring in your partner or an associate to cover for you for a few months and then you can really disconnect and be there with your family" – A

Group or partnership practice also offered flexibility and more options for achieving work-family balance.

"I really enjoy the group practice because you are more flexible, when one of the children is sick for example, you can call and the other person jumps in" – G

Another woman who was a more senior solo practitioner commented on her view of group practice.

"What I've seen actually, is the individuals who are able to accomplish the most in the profession, do other extra-curricular things, and do more, are those who are actually partners in practice…. they seem to have obviously way more support in terms of the practice, and it allows them more flexibility, someone who can do their emergencies, or take over their patients if they have to go away." - H

Practice Modifications during Maternity Leaves

Due to the number of patients in an orthodontic practice and the frequency of recalls, maternity leaves were generally kept to a minimum. Maternity leaves spanning more than the average lapse in time between appointments for an orthodontic patient necessitated finding a replacement to cover during this time. One woman started to plan for this well in advance by beginning to limit the number of patients she was accepting as soon as she found out she was pregnant.

"When I found out I was pregnant I stopped accepting new patients so that I could start to limit my new starts and put less pressure on the practice." - L

In most cases the women had someone cover them for the time they were away. The most straightforward scenarios were in group practice or associateship situations where another orthodontist could see the patients. One woman describes the adaptations to the schedule that were made to help facilitate all of the patients being seen by one partner.

"We scheduled bigger intervals for the patients. Instead of seeing them every 4 weeks, we scheduled them at 6 weeks, so that we didn't have the full double load. So we spread out the appointments a bit for both of our patients so he was able to see them all in the same amount of time. I didn't have too much distance from the patients because it was only for 1 or 2 appointments."- G

In solo practices, it was a bit more difficult to manage. Typically the maternity leaves were even shorter, and patients were seen on an emergency basis. The arrangements for this emergency coverage typically involved an agreement between colleagues to cover for one another on a limited basis.

"I had arrangements with the other orthodontic clinic. They are a group practice and they generously offered to see all my emergencies, never charged the patients or anything like that, just out of the goodness of their hearts. But I had

these disgruntled parents that would say 'we didn't pay for this, we didn't sign up for this, for her to be gone on maternity leave', even though my maternity leave basically lasted 3 weeks." - L

Another modification to practice following a maternity leave was that women went back to work on a part-time basis. This was almost viewed as a necessary compensation considering the compromise on the length of maternity leave. One woman discussed her plan to start back part-time following her maternity leave.

"I'm hoping to start back with 2 days a week, and then maybe work up to 3, so when I say that I'm going back and it's only part time, it's a lot more palatable than if I were to go back 5 days a week." - C

Another participant described her approach to returning to work and the way she built her schedule back up.

"The first 4 months I was only working 2 days, so I did the Wednesday, and the Friday. And then I added a half day, and then I went to the full day, after I stopped breast feeding." – G

One participant summed up her thoughts on the practice adaptations that are necessary following childbirth.

"You get older, you get wiser, you go through all of that and you realize the patients and the practice will still be there when you are done, when the baby is older. In the beginning, it's hard to fathom that." - M

Cutting back days per week

One of the most common changes women made to their practice was decreasing the number of days they worked once they had their children. Most women started their career working 4-5 days per week and cut back a day once they had their children. Table 3 displays information on the work-patterns of the

participants on their return from maternity leave. The majority of women started back part-time and then built-up their days over time. The women were not asked how many hours they worked per day or how they divided their time between direct patient care and paperwork. Some women discussed that they used one of their days off to complete their paperwork, while others tried to condense everything into their three or four days at the office. One woman described her approach to her number of work days and how she incorporated her paperwork.

"I've tried to keep my practice to 3 days a week and when I have more work to do than can fit it in the 3 days at the office, it comes home with me and then I can do it while the children sleep, or are at school, daycare, or playschool." - F

One young woman without children described her ideal balance in terms of days per week worked and the adjustments she would have to make to accommodate the decrease in days.

"Ideally I'd like to work 3 days a week, and have 4 days for my family. For me, that's the perfect balance. I think that's a great mix of having the career for me to have some independence, and also having time for my family…it won't just be the 8:00am-4:30pm, it'll be maybe, 6:30am-4:00pm, or 6:30am-5:00pm, so I can get all of my paperwork done and see as many patients as I can during that time, so I don't have to go in on any of the 4 days I have off." – C

For the 2 women, without children, who were more advanced in their careers, the numbers of days worked per week was not any more than those with children. One woman worked 2.5 days per week and the other 4 days per week.

Reassurance of Referrals

Referrals drive business for orthodontic practices and therefore a significant amount of time is required to foster these relationships and to build confidence in one's abilities as an orthodontist. Some women felt that choosing

to incorporate family and career and choosing to take a maternity leave had an impact on referrals.

"From a work perspective there is an impact on some of the new referral sources that I've gained. Many general dentists out there that are concerned about females taking maternity leave, and deserting their patients for a set amount of time, and that lapse in treatment. They're worried about where a female orthodontist's priorities will be when she does have kids" – C

Another woman reflected on her career and speculated whether or not her choice to balance her children with her work had an impact on referrals.

"If I were to guess either way, I would say no, but I have wondered. And I guess I have seen changes to referral patterns over the years." - M

Adaptations to this part of the professional role came in two forms. Some participants chose to continue with their plans and sacrifice the referral sources that did not support their decision.

"Some referring dentists are hesitant, because they might think you are not taking your job as seriously as you should be, because you are not working full time. But there are enough referring dentists that are like-minded, so I don't have a lack of referring dentists now, and I'm doing quite well. The ones that think you cannot divide it up 50/50, they just don't refer. So that was kind of a little bit of a shock…that I got negative feedback that way; that they thought I was not serious about my job." - G

Others felt that they had to make an effort to reassure their referring dentists. One woman discusses her experience with being pregnant for the first time and restoring faith in these referral sources that becoming a mother would not adversely affect her ability to practice orthodontics.

"That was a little bit of an issue and I kind of always wanted to reassure them that, 'listen, I'm sticking around; I'm here for the long haul…I'm not going to be one of those women, that all of a sudden I'm going to be working one day a week.' I wanted them to continue and have the….confidence that…just because you see me here and I'm pregnant, I'm not going to be an absentee orthodontist."- K

Areas of Role Conflict

To achieve work-family balance, female orthodontists incorporated a number of changes to both their maternal and professional roles as discussed above. However, despite adaptations to both roles, there were areas where role conflict between the two roles existed and this conflict was not easily remedied. The four areas outlined were: timing of children; maternity leaves; breastfeeding; and caring for a sick child. The conflict the women felt with respect to these areas was the greatest unresolved threat to work-family balance, and the biggest source of stress for these women. The four areas are discussed in detail below.

Timing of Children

The decision of when to start a family in relation to the lengthy training and building of a practice was a difficult one for all of the women. For this sample, childbearing was delayed on average 3-4 years following graduation. The choice to delay childbearing carried with it concerns about waiting too long. One younger respondent without children commented on this.

"It's tough on women. Because we get out of school, and we're already late 20's, early 30's, even mid-thirties, so we don't have time on our side. And if it takes a while to get pregnant, you have to juggle that along with the different stages in your career." – C

Biological considerations were a big factor in this decision, in favor of starting a family early on. However, establishing the practice was also a top

priority for these women. They were keen to start their careers after so much training and expressed concerns over financial strains during this time as well. The conflict of these roles was apparent from this woman's statement.

"Once you get in, and you start as an associate, you want more. I think a lot of us aspire to have our own practice and you don't really lose that vision. So you work towards that, and then all of a sudden you think, 'ok I really have to start thinking about having kids and I've got to do it fairly soon'." - M

One woman commented that she would have had to delay her career had her work environment been less flexible:

"It would have been difficult because then I would have had to stay at home and start my working relationship later, and then with the second one it would have been the same issue…I was eager to get started…I would have had to postpone my professional career if that had not worked out." - G

Almost all of the women looking back suggested that starting a family early on in the career, and possibly associating during this time, was the best option. Biologically, women are younger at this stage, which is an advantage in trying to conceive, and several women commented that achieving pregnancy had not been easy for them. On the business side of things, practices are typically less busy earlier on and therefore there were fewer demands to manage large numbers of patients.

"It's better in the beginning of the practice or the career, because that's when you're slower, you're not as busy… so have them when you have time for [children] because they need you; they always need you." - D

The disadvantages of this stage were the lack of financial stability which precluded hiring an associate to cover during a maternity leave. Furthermore, there was a pressure to build up one's name in the community and taking a maternity leave was seen to potentially affect referrals. Choosing to associate

was one suggestion to help reduce these business stresses, however, all of the women had strong desires to start their practice and felt that associating for an extended time delayed this professional aspiration. Therefore, even for the women who took this route, it still presented conflict of the maternal and professional roles. One woman chose to put her career on a different track to accommodate family by associating for several years prior to purchasing. Although she was below the average age of this sample at the birth of her first child, she still found the timing difficult.

"I'm not sure there is any good time to start a family. I think you just have to jump in at some point and hope for the best. I guess ideally I would have liked to been a little more established in my current job, and a little younger (wishful thinking), before I had a baby. Although I'm just an associate for now, because I'm thinking of buying into the practice, I would like to be able to dedicate more time to its development/practice building. At the end of the day, when I should be going out to meet referrals, I need to go home and see my son before he goes to bed. So, that's a struggle. If I had waited, however, to have children, there is obviously the risk that it becomes harder to conceive as you get older." - K

Another woman also had her first child younger and earlier in her career but chose not to associate. As she struggled with balancing a start-up practice and motherhood, she reflected on her decision and contemplated her other options.

"I tell you there's no good time I don't think…There might be slightly harder times than others; I really don't know if there is an ideal time. If I had my child in school would that have been okay? I don't know; or if I waited 10-15 years? …I just don't know whether I really wanted to wait; do you wait to have your family and then you're 40? I didn't want to be an older mum…lots of women are having babies later in life, but there's always inherent risks with that, and I value family. After 10 years of school, you want to get started with your life… I think we just have to

incorporate it into our lives whenever and then just go with the flow, but it is very difficult. It is very difficult." – A

Maternity Leave

Maternity leave duration was the greatest source of role-conflict for the women interviewed. The demands to be back practicing within a short time-frame were clearly understood by the women and the length of their maternity leaves reflected this. The conflict between needing to be at work to fulfill the professional role, and not being ready physically or emotionally from the maternal side caused a lot of stress and negativity for these women.

"Sometimes I feel I'm working too much because I did go back to work relatively shortly after I had my baby…or maybe it's just the guilt you know; it's just you feel it's a newborn and it's not natural." - A

One woman reflected on her maternity leave, and although her children were now teenagers, it was clear her feelings towards the topic were still strong.

"I took 6 weeks off and I was very resentful…resentful for not having enough time and very resentful that there were no accommodations no concessions whatsoever…Six weeks is not enough to recover: emotionally; mentally; sleep-wise; kid's not on a schedule; nothing's good." - D

Another woman described her experience with being back to work 3 weeks after giving birth and the impact it had on her well-being.

"With the second one I had a C-section and even still, I was back in the office after 3 weeks seeing emergencies. Then I was back practicing full time, and that was way too soon; it was too soon for me, and too soon for the baby. It was definitely the most stressful time in my entire life." - L

One participant, whose husband was her partner in practice, described the transformation of her opinion on maternity leaves as she had more children.

"I found it difficult, and mostly it was sleep deprivation. Getting up a couple times a night with the baby, and then having to get up for work, and trying to have a clear head. Your body is still recovering at that time too and everything is still really fuzzy. Yeah, it was a bad idea all around. I remember a parent saying to me, 'what are you doing here? You need to go home and rest'. It was a mother saying this to me, and she was right. With my first, I took a lot less time off than I did with my third. But then I realized that the practice wasn't going anywhere when I had a baby. I had someone really good to look after my patients" - M

Some women discussed that despite their already short maternity leaves, work demands still interfered during that time.

"I never really had very much time off because I was back to work. And even when I was home with the baby I was always trying to manage the new office, and people were asking me questions. Being a business owner, it wasn't just "okay, I'm here with my baby and that's it", so it is challenging." - A

"I had about 6 weeks off, well plus or minus. I mean off isn't totally off. Off meant paperwork, and phone calls, and all that sort of thing. But no, I didn't see patients." – F

One young woman without children already recognized that her maternity leave was going to be a challenge in balancing her roles.

"When you're home, it's not the same stress-free period that someone who's an employee might have; because your mind to some extent is always going to be on work; is always going to be on what's happening to your patients; or how are staff doing; should I pop in and check on things; should I call today. So, I don't think I'll fully be able to leave work, and that will be a challenge." - C

One of the main reasons sought for returning so soon were accountability to patients and the community. Many or the women discussed reassuring both

their patients and referrals that their impending maternity leave would be short and that returning to work was a priority for them.

"I think it's just the fact that we run a business; and so we're accountable to employees, we're accountable to our patients, and we're accountable to the community…Talking to your patients and reassuring them that 'yes, I built this office, I plan on being here'. - A

One woman described her unique situation in that she had to undergo a practice transition just prior to her pregnancy and how this influenced her decision about the length of maternity leave she would take.

"People already had to make so many accommodations to get to me as is, I just didn't feel right saying…'now I'm going to disappear all this time'. I didn't want to lose my patients, and I wanted to keep the routine of treating them, without passing that on to somebody else. So I had to juggle that." - I

At the time of the interview, she was only a few weeks into her maternity leave and weighed in on her decision with respect to timing.

At the 2-week mark I wish I had decided I was going to stay home for 16 weeks instead of 8; but you do what you've got to do…I knew it was going to be too short…ideally, if I had a second one, I'd probably take 16 weeks. For this one, I just couldn't swing it…I mean, my ideal was 3 or 4 months…minimum I would say would be 3 months…and ideal would've been 4 months; but that being said I'm doing 8 weeks; so clearly the minimum can be 8 weeks if needed." – I

Although it wasn't mentioned by all participants, a couple of women also discussed the financial consequences of taking time off for maternity. Even when patients were no longer being seen, staff still had to be paid during this time.

"You lose a lot of income when you're off that time. Plus you're at the beginning of your career, so every bit of income matters." - D

Breastfeeding

The desire to breastfeed also caused a lot of role-conflict for these women. Although almost all of the women scheduled time to pump milk, they had difficulty in preserving that time. The transition from their professional role to their maternal role within the workplace was a struggle. One woman described how she tried to combine her roles during this time:

"Typing on the computer with one hand and expressing milk with the other."- L

Another participant provided an introspective view of her personal strife with taking time away from her practice to allow for pumping.

"I just blocked out 15 minute times that I could just run back and pump, once in the morning, and once in the afternoon I did that. And that sounds ideal, and it sounds rosy, but it's not an easy thing to do. Because, if you are running behind, what are you going to do? You've got that 15 minute chunk that you can catch up on; are you still going to run and pump? Not necessarily always. It was a choice. It was not like I enjoyed pumping, it was a big effort. And it's just pulling yourself away from the clinic, sitting there [with a breast pump on] when you know there are patients waiting" - M

One respondent, who failed to breastfeed as long as she had wanted, shared her difficulties with managing her two roles and how ultimately her maternal role gave way to the demands of her professional role.

"*It got very difficult for me to continue pumping at work. I meant to do it at lunchtime, instead I was doing paperwork, seeing referrals, and so I stopped pumping as much...Unfortunately my supply went down, and therefore, even breastfeeding while I was at home became difficult" - K*

Caring for a Sick Child

Managing having a sick child at home was a significant area of role conflict for these women. The maternal instinct was such that they felt that they

should be the one taking care of their child in lieu of another parent or childcare provider. One woman with a young baby projected to how she would handle having a sick child at home despite having a nanny.

"I'm sure like in every house, when the little one gets sick, or something happens, it's always the mum that takes care of that, so I'm sure that's going to lead to some issues with scheduling, and having to take time off, and then having to reschedule" - I

Although several women approached this topic with the understanding that a sick child would take precedence over work and scheduling changes would have to be made, a greater number of women considered it nearly impossible to cancel their patients and saw it as a consequence of the profession.

"Being an orthodontist there is a terrific amount of pressure on you to show-up to work every day regardless of what the situation is…I mean for me to cancel my whole day and have to reschedule 60 plus people, it puts so much pressure on the staff, and so much pressure on me, that I pretty much always have to go to work, it really doesn't matter [what the reason]" - L

"When you decide to go into a profession whether it's medicine, or dentistry, or law, or whatever, as a female, that's a huge responsibility, and it's going to take away some of you, and your personal time, and that's just the way it is...you'd be very naïve to think, 'well, gee you know, my kid's sick, I'm going to stay home today', we don't have that luxury right?" - J

Being involved in a group practice was seen to offer some flexibility in this type of situation and "having a sick child" was the most commonly cited example of when having someone "cover" for you would be beneficial.

SUMMARY

The above sections outline the main themes that emerged from the interviews with female orthodontists across Canada who shared their experience

of balancing a career in orthodontics, and family. They were able to identify 4 key areas in the practice of orthodontics that challenged balance: scheduling issues, dependence on referrals, large amounts of paperwork and lack of professional support. In their own words they defined balance as having success and satisfaction in both their personal role and professional role, yet were aware that to achieve this, they must make compromises within each role, and this involved prioritizing. Adaptations to the maternal role came in the form of alternative timing of children, taking short maternity leaves, making adaptations to breastfeeding practices, employing a support system for childcare and household help, being segregated from other mothers, and accepting decreased personal and relationship time. Adaptations to the professional role came in the form of changes to practice structure, modifications to practice during maternity leaves, cutting back days, and reassuring referrals. Finally, the areas where women felt the most conflict were with family planning, maternity leaves, breastfeeding, and caring for a sick child. As this is the first study of its kind, the data generated is unique, however, the following section will serve to integrate the findings of this study with the literature where relevant.

TABLES

Table 1. Demographic Information of Survey Respondents

ID	Age Group	Marital Status	Children	Province	Practice
1	25-35	S	N	AB	Group
2	25-35	S	N	BC	Solo
3	25-35	E	N	BC	Group
4	25-35	M	Y	ON	Group
5	25-35	M	P	ON	Group
6	25-35	M	Y	BC/NWT	Solo/Group
7	25-35	M	Y	ON	Solo
8	25-35	M	Y	ON	Solo
9	25-35	M	Y	ON	Solo
10	25-35	M	Y	ON	Solo
11	36-45	D	N	ON	Group
12	36-45	S	N	ON	Solo
13	36-45	S	N	ON	N/S
14	36-45	S	N	NS	Group
15	36-45	M	N	BC	Group
16	36-45	C/L	N	ON	Solo
17	36-45	M	Y	ON	Solo
18	36-45	M	Y	AB	Solo
19	36-45	M	Y	AB	Solo
20	36-45	M	Y	ON	Solo
21	36-45	M	Y	ON	Solo
22	36-45	M	Y	NFLD	Solo
23	36-45	C/L	Y	AB	Group
24	36-45	M	Y	AB	Group
25	36-45	M	Y	BC	Group
26	36-45	M	Y	BC	Group
27	36-45	M	Y	ON	Group
28	46-55	S	N	AB	Solo
29	46-55	S	N	BC	Group
30	46-55	D	Y	ON	Group
31	46-55	M	N	ON	Solo
32	46-55	M	Y	NS	Solo
33	46-55	M	Y	BC	Solo
34	46-55	M	Y	BC	Solo
35	46-55	M	Y	ON	Solo
36	46-55	M	Y	ON	Solo
37	46-55	M	Y	ON	Solo
38	56+	S	N	BC	Solo
39	56+	D	Y	AB	Solo
40	56+	M	N	ON	Solo
41	56+	M	Y	ON	Solo

Key

S - Single

M - Married

E – Engaged

D - Divorced

Y - Yes

N - No

P - Pregnant

Table 2. Demographic Information of Study Sample

ID	Age Group	Marital Status	# Of Children	Practice Type	Age at Graduation	Age at Birth of First Child	Years in Practice	Days per Week Worked
A	26-35	M	1	Solo/Group	29	32	3.5	4-5
B	56+	M	2	Solo	32	36	25	4
C	26-35	S	0	Group	29	N/A	1.5	4
D	46-55	M	2	Solo	30	33	18	4.5
E	26-35	M	1	Solo	26	28	3	3
F	36-45	M	2	Group	33	41	5	3
G	46-55	M	2	Group	28	33	27	3
H	56+	S	0	Solo	29	N/A	27	2.5
I	36-45	M	1	Solo	30	38	8	4
J	46-55	D	0	Solo	37	N/A	17	4
K	26-35	M	1	Group	32	34	2	3.5
L	36-45	M	2	Solo	33	36	10	4
M	36-45	M	3	Group	28	33	12	3.5-4.5

Table 3. Maternity Leave Information of Study Sample

Participant	Child	Time off before due date	Length of Maternity Leave	Duration of part-time status following maternity leave	Minimum Recommended Maternity Leave
A	1	2 days	4 weeks	4 weeks	16 weeks
B	1	0 days	2 weeks	0 weeks	2-6 weeks (as soon as physically possible)
	2	0 days	6 weeks		
C*	N/A	N/A	Plans for 16 weeks	Undecided – hopes to start part-time	24 weeks
D	1	4 days	6 weeks	Started back part-time	16 weeks
	2	4 days	6 weeks	Started back part-time	
E	1	1 day	3 weeks	Still part time at 7 months	12 weeks (if part-time)
F	1	0 days	6 weeks	0 weeks (hired associate)	12 weeks
	2	0 days	6 weeks	0 weeks (with associate)	
G	1	1 day	8 weeks	40 weeks (9 months)	8 weeks (if part-time)
	2	14 days	8 weeks	40 weeks (9 months)	
H*	N/A	N/A	N/A	N/A	N/A
I	1	5 days	8 weeks	0 weeks	12-16 weeks
J*	N/A	N/A	N/A	N/A	N/A
K	1	0 days	10 weeks	20 weeks (5 months)	10 weeks (if part-time)
L	1	14 days	5 weeks	52 weeks (12 months)	6 weeks (if part-time)
	2	0 days	3 weeks	0 weeks	
M	1	0 days	8 weeks	52 weeks (12 months)	16 weeks
	2	10 days	16 weeks	72 weeks (18 months)	
	3	3 days	40 weeks	20 weeks (5 months)	

*Denotes women without children

Table 4. Breastfeeding Practices of Study Sample

Participant	Child	Exclusive Breastfeeding	Part-time Breastfeeding
A	1	8 months	8 months*
D	1	4 months	12 months
	2	4 months	12 months
E	1	6 months	7 months*
F	1	6 months	7-8 months
	2	6 months	30 months
G	1	6 months	9 months
	2	6 months	9 months
I	1	Currently exclusively breastfeeding*	
K	1	2.5 months	4.5 months
L	1	12 months	12 months
	2	4 months	6 months
M	1	1 week – minor supplementation	4 months
	2	12 months	12 months
	3	12 months	18 months

*Denotes Still Breastfeeding

CHAPTER 5: DISCUSSION AND CONCLUSIONS

INTRODUCTION

Female orthodontists expressed the challenges to achieving work-family balance in relation to their orthodontic practice: scheduling issues; dependence on referrals; large amounts of paperwork; and lack of professional support. They considered satisfaction in the personal and professional roles, as well as the need for compromising and prioritizing, to be essential to the achievement of work-family balance. Finally, adaptations to both the maternal role and professional role were identified, as well as areas where the women experienced the most role-conflict.

This chapter integrates the results of this study with the available literature on work-family balance. Limitations of the study are identified and the chapter concludes with recommendations for future study.

CHALLENGES TO WORK-FAMILY BALANCE IN ORTHODONTIC PRACTICE

Orthodontics is commonly thought of as being accommodating to work-family balance. Compared with hospital-based specialties such as pediatric dentistry and oral surgery, which require hospital time and significant on-call demands, orthodontic practice offers apparent flexibility. The results of this study, however, highlight some specific challenges to work-family balance that are inherent with orthodontic practice. Four areas identified by female orthodontists that impede work-family balance were: scheduling issues; dependence on referrals; large amounts of paperwork; and lack of professional support.

Scheduling Issues

Scheduling issues included length of treatment, frequent recalls, and large number of patients scheduled per day. Length of treatment in orthodontics is often in excess of two years and having a long relationship with the patient meant that breaks in career for maternity leave were potentially disruptive to

this relationship. Some specialties do not have a continuous-care component, and therefore might facilitate a break in practice more easily. Collins et al. (2009) also identified the longitudinal nature of orthodontic treatment as a challenge making it difficult for orthodontists to take lengthy breaks.

Frequent recall appointments meant that in order to maintain treatment flow some women felt that they could not take maternity leaves longer than a typical recall interval. Even women who had someone cover for them in their absence felt pressure to return to work so that patients would have continued care by their primary practitioner.

A final factor with scheduling issues was the large number of patients scheduled each day. With 40-100 or more patients seen each day in an orthodontic practice, cancelling and rescheduling that number of patients is a logistical issue, particularly in a practice booking several weeks in advance. The women felt that other specialties afforded more flexibility in this regard with fewer patients seen in a day, making cancellation somewhat more feasible.

Dependence on Referrals

Another challenge of orthodontic practice on work-family balance was the dependency on referrals. With a large number of practices operating on referrals from general dentists, the women felt significant time demands in fostering relationships with these referrals sources. Some women also commented on the need to market their practice to the public and that this aspect of their business required significant time outside of regular hours. These activities often conflicted with time that could have been spent with family.

Large Amounts of Paperwork

A majority of the orthodontists commented on the large amounts of paperwork that they had to complete and the time required for this. Although this study did not investigate the contributing sources of this paperwork, charting, treatment planning, and correspondence with referring dentists are all

common requirements of orthodontic practice. The participants often worked less than full-time in direct patient care, however, time spent on paperwork was often in addition to the days of work reported. Due to this, the perception was that paperwork often infringed on family time.

Lack of professional support

For a specialty that is considered amenable to work-family balance, perhaps a surprising theme was the lack of professional support as a challenge to work-family balance in orthodontics. This lack of support was divided into three areas: limited number of orthodontists; lack of female professional mentors; and lack of guidance from professional organizations.

Limited Number of Orthodontists

Despite orthodontics being the largest specialty in Canada, the orthodontic population is still relatively small. This was seen as a challenge when female orthodontists looked for a locum to replace them during their maternity leaves. Collins et al. (2009) found a similar issue among female orthodontists looking for a locum in the UK. Within the small population of orthodontics was an even smaller pool of female orthodontists. The following section discusses the effects of this as it relates to having female mentors or role models.

Lack of Female Professional Mentors

As women reflected on their training, the vast majority had not had the opportunity to interact with other female orthodontists that could provide an example of work-family balance. Very few felt that they had been influenced by a female they would describe as a mentor with respect to work-family balance. Most commented that their professional mentors were male. This trend continued in private practice. Most women commented that they did not know many other female orthodontists whom they could model themselves after in terms of work-family balance. Despite this, the majority of respondents felt that

having a female mentor would have been beneficial, particularly as a resource for the challenges of balancing family with a career in orthodontics.

The importance of female mentors for female students is discussed in the literature on physicians and work-family balance. Carroll et al. (1995) differentiated between mentors and role models. Mentors provided technical back-up and supervision, and role models provided an example that one could model their own life after. Many of the women in that study reported having mentors, but none had role models for the personal and professional lives they were leading and wished to know more people in this capacity. Gordinier et al. (2000) found that only 35% of gynecologic oncologists reported having a female mentor, whereas 71% felt having a female mentor was of moderate to great importance. The study found that the most important quality sought in a female mentor was having achieved a successful balance between career and family; and the ideal mentor would be able to define realistic goals in both of these areas. Finally, Caniano et al. (2004) found that 75% of respondents listed a lack of positive female faculty role models as one of the most important reasons women were not choosing careers in surgery. The importance of a female mentor or role model is a strong theme across a variety of specialties. Although the literature does not address the need for female mentors or role models once in practice, the findings of the current study suggest the importance of this relationship as well.

Lack of Guidance from Professional Organizations

In addition to the need for mentors or role models, the need for support from professional organizations was often mentioned by the study participants. They commented on the value of simple measures: a series of lectures; pamphlets; and mail-outs on information regarding work-family balance. Some made reference to the need for a formalized system that would allow women the option to take a longer maternity leave and have a locum replace them

during this time. The majority of the women felt they would have benefitted from some type of assistance from their professional organizations.

The above sections addressed the specific challenges women identified with orthodontic practice and work-family balance. Although some of these challenges are inherent to the practice of orthodontics, and are not easily changed, awareness of these issues is important for women planning how they will balance their career and family.

WORK-FAMILY BALANCE DEFINED BY FEMALE ORTHODONTISTS

Achieving work-family balance is a top priority for female orthodontists. They defined balance as having satisfaction or success in both their personal role and professional role, and understood this required compromising and prioritizing.

Satisfaction

The relationship between work-family balance and satisfaction is not unique to this study. Ayers et al. (2008) studied career satisfaction in a group of female dentists and dental specialists and found that work-family balance was a prominent theme. Similarly, Caniano et al. (2004) surveyed pediatric surgeons regarding the keys to determining career satisfaction to encourage recruitment of incoming residents. A key factor to career satisfaction was the promotion of balance between professional and personal obligations. Danesh-Meyer et al. (2007) studied gender differences in attitudes toward career and family in a group of ophthalmologists. Although they did not find a significant difference in career satisfaction between men and women, women were more likely to report that they felt frustrated by the amount of time they had to devote to their career. They felt that they had to choose between career and family.

These studies concluded that having work-family balance is an important part of career satisfaction. Interestingly, the findings of the current study suggest that having satisfaction in both family life and career is necessary to achieve

work-family balance. These findings highlight an important interdependence between career satisfaction and work-family balance.

Compromising and Prioritizing

In defining work-family balance, the study participants also felt that work-family balance involved compromising and prioritizing. All of the women in this sample accepted the need for compromise as the reality of choosing a professional career. Similarly, Mobilos et al. (2008) found that female physicians recognized that achieving balance necessitated sacrifices in one or both elements, and were accepting of this fact due to their choice to pursue a career in medicine.

The importance of prioritizing as a strategy for achieving work-family balance was a common theme among the respondents of this study. Bray (2007) reported that prioritizing was an essential element in attaining work-family balance.

Although the majority of women in the current study felt they had achieved some level of balance, there was a sense of frustration in the challenges they faced with work-family balance. All of the respondents communicated that work-family balance was of extremely high importance to them and they made it a priority to try and achieve a healthy balance. The significance of work-family balance in orthodontics has been identified in previous studies. Cohen et al. (2004) identified work-family balance as the most important problem faced by women orthodontists today. Bray (2007) also found work-family balance as the number one challenge, mentioned by 83% of the respondents. Ayers et al. (2008) found that female dentists faced substantial challenges with family responsibilities, like child-bearing and child-rearing, that impacted career potential and satisfaction. Similarly in medicine, Mobilos et al. (2008) found that achieving balance between the conflicting demands of professional and personal roles was the main struggle of family physicians.

Gjerberg (2003) found that over half of doctors reported that the ability to combine work and family responsibilities had been of great importance in their choice of specialty. Interestingly, of those who did not specialize, 70% emphasized work-family balance issues as a reason for not specializing.

The participants of this study defined work-family balance as satisfaction in both personal and professional roles. They understood achieving a balance involved compromising and prioritizing. These results support the literature that work-family balance is a significant concern for both female dentists and physicians. The following section discusses: the adaptations female orthodontists made to their maternal and professional roles, the areas where they experienced role conflict, and how the literature relates to these role adaptations and role conflicts.

ROLE ADAPATIONS AND ROLE CONFLICT

The interviews revealed that the female orthodontists in this study made adaptations to both their maternal and professional roles. These adaptations helped to facilitate a balance. Despite these adaptations, there were areas where the women demonstrated role conflict.

Adaptations to Maternal Role

In an effort to achieve work-family balance, the study participants made many adaptations to their maternal role. Areas commonly adapted were: timing of children; maternity leaves; breastfeeding; employing a support system; segregation from other mothers; and personal and relationship time.

Timing of Children

Timing of children is a significant factor in work-family balance for dentists and physicians. The window of opportunity for a professional woman to bear children often coincides with the timing of her training. Dumelow et al. (2000) found that one fifth of the respondents of their study fell in a “career dominant” category and felt that their family or personal life had been restricted

to benefit their career. The women in this group had wanted children but felt that constraints from their careers had influenced them to not have children.

There was no consensus among the women in this study on the ideal time to start a family. Mobilos et al. (2008) also found there was no general agreement among physicians on the ideal time to get pregnant. Verlander (2004) stated that this may be an even greater issue for women who specialize due to increased duration of training.

Women tended to suggest that having children earlier on in a career, when practice demands weren't as great, was the best option. However, both younger and older women recognized the financial strains of early career were an impediment. Verlander (2004) also acknowledged that this period in life corresponds to higher work demands and constrained finances.

All of the women (100%) delayed having children until their postgraduate education was complete and felt that having a baby while in residency would have been difficult. Although many other studies reported the majority of women postponing childbearing until after training, the percentages were not as high as in this study. Ayers et al. (2008) found that 60.7% of dental specialists delayed having their children until after their postgraduate training. Of the same sample, 17.9% did not have any children. In the medical literature, Potee et al. (1999) found that only 49.6% of women had their first child after their medical training was complete. Danesh-Meyer et al. (2007) reported that 55% of female ophthalmologists postponed the timing of their first child until after completion of training, compared with only 23% of males. Females in that study were also more likely to report that given another chance, they would have children at a different point in their career. Caniano et al. (2004) reported a much higher statistic with 83% of female pediatric surgeons having their first child after completion of all training. Gordinier et al. (2000) found that 88% of the female gynecologic oncologists surveyed felt that their training had a moderate to great

effect in determining timing of children and 74% felt the ideal time to have children was following completion of training. Mobilos et al. (2008) did not report a statistic but did find that some study participants dismissed residency as an appropriate time to start a family due to curriculum demands. Although the participants of this study did not have their first child until after their post-graduate training, this could be a limitation of the small sample. Despite this, the literature supports our findings of a trend to delay pregnancy until after completion of training. With long training programs, the effects of delaying childbearing are especially important to understand.

In this study, the average age of women at the birth of their first child was 34 years. One woman, who was in her forties by the time she had her children, commented that physically it was more draining than if she had been younger. Biologically, several women related that having children at a younger age was better, as they had experienced fertility difficulties. Blasius and Pae (2005) reported the average age of female orthodontists at the birth of their first child was 32 years. Similarly, Caniano et al. (2004) showed that 46% of pediatric surgeons were 35 years of age or older at the birth of their first child and many of the women commented on the stress of getting pregnant at an older age. Potee et al. (1999) reported that of women without children, 25% had problems with fertility. In her article, Verlander (2004) also addressed the increased risks of infertility and congenital abnormalities if childbearing is delayed too long. The age at birth of first child for female physicians in Norway, reported by Gjerberg (2003), was much younger: 28 years for women in primary care specialties; and 30.5 years for those in hospital-based specialties. Similarly, Potee et al. (1999) found that of women with children, the average age at which they had their first child was 31.1 years.

The risk of increased fertility difficulties is inherent with increased maternal age. The results of these studies show that the majority of women

delay childbearing until completion of their training. The longer duration of specialty programs suggests these women will be older at the time of their first child and therefore, at an increased risk for fertility problems.

Maternity leaves

Maternity leaves in both the pre-partum and postpartum period were a major issue for the women in this study. Almost all of the women worked right up until their due date to minimize their time away from the office and maximize their limited maternity leave postpartum. The American College of Obstetricians and Gynecologists published guidelines (as cited in American College of Physicians, 1989) indicating a "window" of disability starting 2 weeks prior to an expectant mother's due date and ending 6 weeks postpartum.

In this study maternity leaves ranged from 3 weeks to 9 months postpartum. One participant was able to take extended maternity leaves due to her husband practicing as an orthodontist in the same office. Excluding her maternity leaves, the average was found to be just under 6 weeks. This contrasted significantly with the minimum amount of leave these women suggested as a minimum, which was approximately 11 weeks. Grice et al. (2007) found women demonstrated better mental health at 11 weeks postpartum than 5 weeks postpartum, suggesting the value of time away from work for rest and recovery. The American Academy of Pediatrics (1995) states that a resident is entitled to 12 weeks of unpaid parental leave and recommends that the resident (male or female) who acts as primary caregiver of the child be given 2 months of paid parental leave following the birth of the child. Although the section on employing a support system indicates that many of the women tried to have one parent caring for the child when it was in the first 6 months of life, the short maternity leaves often meant this was not possible for all women, and instead a nanny became the primary caregiver.

Much of the dental literature reports career breaks for dentists and dental specialists as opposed to specific breaks for maternity leave. Collins et al. (2009) reported on career breaks for male and female orthodontists with the average length being 10.77 months. Women were found to take 4-6 months longer per career break than men and the most common reason for a break was maternity leave. These findings differ significantly from the current study as maternity leaves reported by the participants were much shorter. This is perhaps a difference between orthodontic practice patterns in Canada and the UK. Blasius and Pae (2005) also studied work patterns of orthodontists and found that there was a statistically significant difference between men and women in the total weeks of leave taken in a respondent's lifetime. They reported that women with 1-2 children took 11 weeks of leave. They found that women with 3 or more children took 52 more weeks of leave than men with any number of children, and 41 more weeks than women with 1-2 children. The most common reasons women took leaves of absence were childbearing and maternity. Duration of maternity leaves was more similar between our study and Blasius and Pae (2005), indicating less of a difference in maternity leave length between Canadian and American orthodontists. Blasius and Pae (2005) also found that a third child caused a significant increase in length of maternity leave. Although the findings of the current study demonstrate the same trend, caution must be used in placing any value on this. In our study, there was only one woman with 3 or more children and she explained that having her husband as her partner in practice enabled her to take longer maternity leaves. Whether or not the addition of a third child is causative for a significant increase in weeks of leave taken cannot be determined from our results.

Ayers et al. (2008) surveyed dentists and found that females' work life was more likely to be interrupted by career breaks for child-bearing and child-rearing than males and that following these career breaks females worked reduced hours when returning to their career. They also found that almost one

third of the women on breaks had been off for more than a year and that one third of those on breaks either did not intend to return to work or were unsure.

These findings are in sharp contrast to the findings of our study. Although female orthodontists did take career breaks, the results showed that these career breaks were short. Furthermore, although a number of women returned to work on a part-time basis, this was typically only a temporary adjustment and almost all of the women returned to full-time work. Finally, there were no cases in our study where a participant did not intend to return to work or was unsure about her future career intentions.

We can speculate as to why there was such a difference in these results. Potentially our study failed to interview a female orthodontist who did not intend to return to her career. Another possible explanation is that the training and expenditure in pursuing postgraduate education are both increased. Therefore, there is perhaps more incentive to work, to pay off education-related debt, or to justify the length of training. Based on the comments of the participants, it is apparent that they were keen to build their careers simultaneous with starting their families. This required a prompt return to work following childbirth. Robinson, Willmot, Parkin & Hall (2005) had a similar hypothesis that women who undergo extended specialist training may be less inclined to reduce their workload than women in general dental practice. Finally, it is possible that job satisfaction is higher for orthodontists than general dentists, which also influences the desire to return to work. Ayers et al. (2008) reported higher levels of satisfaction among specialists than the general practitioners. There was no measure of satisfaction used in our study, however, overall the women interview conveyed enjoyment and satisfaction with their careers. Although there was strong tendency for maternity leaves being shorter than what they considered to be ideal, several women did wish to return to work after a short leave, providing it was on a part-time basis. Several other women identified the need to return to work for financial reasons and many discussed

the need to return due to the longitudinal nature of orthodontics and demand of frequent recalls as well as the difficulty in finding a replacement. Collins et al. (2009) also identified difficulties in finding a locum, and the ongoing nature of orthodontic treatment, as potential reasons female orthodontists were found to take shorter career breaks than general practitioners.

In the medical literature, Mobilos et al. (2008) identified maternity leave as the most difficult challenge of family and career planning in physicians and Caniano et al. (2004) found that maternity leave was characterized as inadequate by 41% of respondents. Gordinier et al. (2000) reported that the majority of female gynecologic oncologists took 3-7 weeks for maternity leave. None of the respondents wanted less time than they had taken and 62% said they would have taken more time in retrospect. In comparison, Potee et al. (1999) reported that 36.6% of women took 6 weeks or less for maternity leave; 20% took 6-10 weeks; and 18.6% took 10-16 weeks. Over 10% of respondents took one year or more to stay home with their first child. Of interest was the trend for increased duration of maternity leave over the decades. Of women graduating prior to 1970, nearly half of women took 6 weeks or less for maternity leave; almost a third took between 7 weeks and 8 months. The opposite pattern was seen for women graduating between 1970 and 1999. Of those women, a third took less than 6 weeks, while over half took between 7 week and 8 months. Despite having longer maternity leaves than their predecessors, the more recent graduates were less satisfied with their maternity leaves with almost half reporting that their maternity leave was too short.

These results suggest that taking a maternity leave is difficult in both dentistry and medicine and especially difficult for specialists. The concurrent timing of childbearing and launching of one's career necessitates that women return to work quickly to continue establishing their careers. Along with the career demands, financial need is also a factor. An overall higher level of career satisfaction may also increase the speed with which a specialist returns to work.

Furthermore, in this study, it would appear that these same factors were responsible for the fact that none of the women were unsure about their return to work following their maternity leave. This study also brings awareness to the particular challenges of taking an extended maternity leave in orthodontics. These challenges include the continuous nature of orthodontic treatment; the frequent recall schedules; and decreased availability of a locum due to the limited pool of orthodontists. Despite the reasons, there is a common feeling of dissatisfaction among many female physicians and dentists with respect to the length of their maternity leaves and this was a significant threat to work-family balance.

Breastfeeding

Breastfeeding was an important topic in the experiences described by the women interviewed. Verlander (2004) mentions breastfeeding as a challenge to work-family balance but interestingly, none of the other literature on work-family balance discussed breastfeeding. There are, however, a small number of studies that have looked at breastfeeding practices of physicians. These provide a comparison with the breastfeeding practices of orthodontists.

Of the 10 participants that had children, 9 breastfed their babies. Therefore, the rate of initiation of breastfeeding for this study was 90%. The US Public Health Service (2000) Healthy People 2010 target was to have 75% of women initiate breastfeeding in the early postpartum period. Frank et al. (1998) showed that physicians generally have better health habits compared to other women and typically exceeded goals outlined by Healthy People Reports. Arthur et al. (2003) found that the rate of initiation for breastfeeding among physicians was 94.2%. Duke et al. (2007) reported that 96.2% of physician mothers in Newfoundland and Labrador initiated breastfeeding. High rates of initiation of breastfeeding seem to be a trend for physicians as well as the orthodontists in this study.

In the current study, the one participant who bottle-fed was in the 56+ age group. This may be significant in that there is a trend for increased initiation of breastfeeding in society today. Duke et al. (2007) found that the decade in which physicians graduated played a role in duration of breastfeeding but did not comment on whether initiation rates were influenced as well. Their results showed that physicians who graduated more recently than 1980 breastfed for longer periods of time.

The mean duration of breastfeeding was 10.8 months (43 weeks). This mean was taken from 14 breastfeeding events and is an underestimation because two of the women were still breastfeeding. One woman was excluded from duration and exclusivity findings because she had not yet completed one month of breastfeeding. Arthur et al. (2003) reported that the mean duration of breastfeeding was 14.5 weeks, which is significantly less than our study. In 85% of the cases in our study infants were breastfed for 6 months or longer. The US Public Health Service (2000) stated that the Healthy People 2010 Targets were to have 50% of women still breastfeeding at the 6 month mark. Arthur et al. (2003) found that only 21% of the physicians in that study reached that goal. Duke et al. (2007) reported that 54.5% of physicians breastfed for 7 months or longer. They also found a significant difference between specialists and family doctors with 33.3% of specialists breastfeeding for 7 months or longer, compared with 65.5% of general practitioners.

Exclusivity of breastfeeding is also an important consideration. Gartner et al. (2005) reported that the American Academy of Pediatrics (AAP) recommends that exclusive breastfeeding is ideal nutrition and sufficient to support optimal growth and development for the first 6 months of life, and provides continuing protection to the infant, as well as health benefits to the mother. Furthermore, they recommend that breastfeeding continue to 12 months. Similarly, the WHO (2002) recommends exclusive breastfeeding for the first 6 months of life with

breastfeeding continuing to 2 years of age. The mean duration of exclusive breastfeeding in this sample was 6.3 months and in 64% of cases, women exclusively breastfed for 6 or more months. Arthur et al. (2003) found that the mean age of a baby at the time for the first supplemental feeding was 8 weeks, which is considerably earlier than in our study.

Despite having relatively good breastfeeding practices, the women in the study felt breastfeeding was an area of role conflict and not all women were able to breastfeed as long as they had wanted. Difficulty pumping at work and a resultant decreased supply was often cited as a reason for needing to supplement with formula or to cease breastfeeding altogether. The majority of women felt that breastfeeding was challenging due to their short maternity leave and rapid return to work. Arthur et al. (2003) described the factors most commonly cited by female physicians as reasons to wean children from breastfeeding: 45% felt their return to work influenced them to cease breastfeeding; 31% had a diminishing milk supply; and 18% had a lack of time to pump. Similarly, Duke et al. (2007) reported that the most common reasons to stop breastfeeding were: return to work; baby losing interest; and time constraints. Interestingly, the following factors were considered, but found to not have a significant effect on duration of breastfeeding: age; length of maternity leave; benefits; type of remuneration; income level; practice setting; solo or group practice; part-time or full-time work; and rural or urban practice.

With respect to standards set by the AAP and WHO, these results suggest that the current sample of females demonstrated excellent breastfeeding practices with initiation rates and durations similar to physicians. Furthermore, female orthodontists demonstrated superior efforts with respect to exclusivity of breastfeeding.

Employing a Support System

The participants of this study were unanimous in their view of the importance of a support system. Although the individuals each had their own interpretations of a support system, they felt that to achieve work-family balance, support was essential. Quality childcare, help with household chores, and general spousal support were commonly mentioned. Cohen et al. (2004) similarly identified support as a critical component to achieving work-family balance and specified the importance of hired help and spousal support. Bray (2007) identified having a housekeeper, nanny, or cook, and having a supportive husband, as solutions for achieving balance.

Quality and flexible childcare was an essential component of work-family balance for female orthodontists. Verlander (2004) described childcare options in her paper and stressed that having a high degree of confidence and trust in the quality of childcare could dramatically reduce the stress of balancing parenthood and career. This was particularly important for the women of this study as they often were leaving young infants at home when they returned to work. Although some had family to help with childcare, the large majority of respondents hired nannies; most were live-in at some point during their employment. Only 1 respondent reported using daycare. Gordinier et al. (2000) found a similar distribution of childcare: 78% of respondents employed a nanny; 8% relied on a relative; and another 8% relied on a partner or spouse, for childcare. Only 6% of respondents used daycare. Of those with a nanny or a relative providing childcare, an equal number were live-in as live-out. Potee et al. (1999) found that 60.1% of women used a live-in nanny or childcare provider. Their results showed a decrease in use of daycare over the decades. Caniano et al. (2004) reported that three quarters of the women hired in-home childcare help.

Verlander (2004) described a live-in nanny as the most expensive option with the most flexibility. She also noted that a live-in nanny could reduce family privacy, although none of the women in this study commented on that. There were some women, however, who expressed that their preference was to have a family member as a primary caregiver as opposed to a nanny. This was especially true for the younger women, with and without children. Similarly, Gordinier et al. (2000) found that 52% of women with children considered a nanny their ideal preference for childcare compared with only 29% of women without children. Another 29% of this latter group considered a spouse or partner to be the ideal caregiver. These results support the concept that hiring a nanny for childcare is perhaps necessitated by the difficulties in balancing family and career, as opposed to being the ideal preference of these women.

Danesh-Meyer et al. (2007) considered the percentage of time spent looking after children under 5 years of age. They found that females reported contributing the greatest amount of time (45%) and relied on nannies and daycare for secondary childcare. Males, in contrast, contributed 10% themselves and relied on their partner for 80% of the contribution. Although specific details about time spent on childcare were not sought in the current study, the majority of women commented on the involvement of their spouses in raising and caring for their children. This supports the results of Potee et al. (1999), which showed that spousal involvement was seen to increase across the decades.

Many of the study participants also mentioned support for the home as an important element for achieving work-family balance. Women employed nannies who shared duties of childcare and household care, or had housekeepers to handle household duties. Household support was a central theme in the medical literature as well. Carroll et al. (1995) found that all women had arranged support that included household help for laundry, cleaning and meal preparation. Dumelow et al. (2000) stated that just over half of their

female respondents fell into a segregated relation between work and family. This relation was characterized by having family responsibilities highly organized to accommodate more time for career and involved full time domestic support. Caniano et al. (2004) reported that 90% of respondents employed routine housecleaning help.

Our results are consistent with the literature that having a support system is essential to attaining work-family balance. Support for the childcare and for the home is important as well as spousal support. The most common choice of childcare is a nanny, although the evidence suggests that some women feel that a partner or relative is the ideal caregiver.

Segregation from Other Mothers

Segregation from other mothers was commonly mentioned by women in this study. Several participants gave examples of feeling that their short maternity leave and rapid return to work had prevented them from participating in the normal activities for new mothers. Therefore, they felt they had missed out on that network of support. The literature does not present any research discussing this phenomenon, therefore, it is an area of interest for professions where maternity leaves are at a minimum and new mothers are more prone to isolation from other mothers.

Personal and Relationship Time

The women commonly decreased personal and relationship time in an effort to facilitate work-family balance. Bray (2007) reported that women suggested 'being selfish with personal time' as a means to achieve work-family balance. While taking time for oneself may be a solution to achieving work-family balance, in reality the women in this study did not practice this. Instead, the women reported their personal and relationship time ranged from limited to non-existent. Similarly, Carroll et al. (1995) reported that women reported having very little time for themselves. Caniano et al. (2004) found that when

pediatric surgeons were asked what they would change about their personal life, 44% would have more time for their spouse and 35% desired more time for personal hobbies. Although not widely discussed in the literature, these studies support the findings of the current study that adequate personal and relationship time is a challenge to work-family balance.

The above section described the adaptations to the maternal role that were common among the female orthodontists in this study and how these adaptations compared to strategies of dentists and physicians in previous studies. Timing of children and maternity leave are significant challenges to work-family balance, and are common to dentists and physicians. Specialists appear to be impacted more negatively by these challenges. Breastfeeding was also a significant challenge mentioned in the literature, although not in conjunction with work-family balance research. Employing a support system is an adaptation that is mentioned across the literature and of great importance to achieving work-family balance. Although the women in this study felt segregation from other mothers, this is not something that has been researched in other professions. Finally, lack of personal and relationship time seems to be a challenge in achieving work-family balance.

Adaptations to the professional role identified by female orthodontists will be discussed in the following section. Similar adaptations among female dentists and physicians, described in the literature, will be discussed.

Adaptations to Professional Role

The above section discussed adaptations to the maternal role in an effort to achieve work-family balance. Similar adaptations were also made to the professional role. The results of this study identified four main areas where adaptations to the professional role were made: changes to practice structure; modifications to the practice during maternity leaves; cutting back days; and reassurance of referrals. Although some of these areas are specific to the practice of orthodontics, connections to the literature will be made where possible.

Practice Structure

Ownership of one's practice is a common goal among orthodontists and all of the women in this study shared this goal. Despite this ambition, women chose to start their careers by associating in an orthodontic practice. A major reason for this decision was to be able to better integrate family and career early on, before career demands increased. The financial rewards of associateship are significantly less than ownership, however, the practice management responsibilities are also decreased, which allows more time for family. Women looking back on their careers were in agreement that associateship early on in one's career was the best way to establish a balance between work and family. This was especially true during the stages of childbearing and the need for maternity leaves. Blasius and Pae (2005) found that although female orthodontists were slightly less likely than males to own their practice, only 20% of the women in that study were not in an ownership position. The results also showed that females in non-ownership positions were more likely to take extended leaves of absence. Ayers et al. (2008) also reported that more females than males were employed as an associate in a practice rather than owning their own practice. These results are in concurrence with our findings that associateship offers females more flexibility with respect to work-family balance.

This may help explain why females are more likely than males to associate. This is an area where differences occur between dentistry and medicine because private practice is an inherent part of dentistry, and structuring that practice is a challenge when it comes to work-family balance.

Another practice adaptation was to choose a group or partnership practice over a solo practice. The majority of women were in solo practice. However, they felt that group or partnership practices offered flexibility and support for women, with respect to work-family balance. Blasius and Pae (2005) found that solo practices were far more common than group practices, however, females were slightly more likely than males to be involved in a group practice. This finding could be explained by the fact that group practice offers some flexibility, to facilitate work-family balance, which solo practice does not. In the medical literature, Carroll et al. (1995) also found that women physicians felt that a positive work environment included a call group of physicians with similar practice styles and good back-up for work problems.

Modifications to Practice During Maternity Leaves

The specific challenges to orthodontics, such as lengthy treatment, frequent recalls, and a large number of patients per day, have already been addressed. These challenges necessitated that female orthodontists return to work soon after giving birth to their children and therefore maternity leaves were kept to a minimum. Despite this, modifications to practice were necessary during maternity leaves. Having someone cover during the maternity leave was common and the range of this coverage varied from full-coverage of patients to emergency-only coverage. Even in the case of full-coverage, modifications were often made to decrease patient load during this time. A common strategy was increasing time between recalls. Many of the women also started back to work on a part-time basis during a time, when they would normally be on their maternity leave, in order to help maintain uninterrupted patient care. Although

most women gradually increased the days worked per week, some women maintained a shorter work week while raising their children. The adaptation of cutting back days is discussed in the following section.

Cutting Back Days

Cutting back days was a common action for women to achieve work-family balance. Orthodontics offered the women the flexibility to decrease the number of days per week while having and raising their children. As a strategy for achieving balance, Mobilos et al. (2008) found that female physicians also chose specialties that offered flexible work schedules to accommodate family needs.

Commonly, the women in our study returned to work on a part-time basis following their maternity leave and then increased the number of days over time. Bray (2007) reported that female orthodontists suggested working part-time as a way to achieve work-family balance and Ayers et al. (2008) found that dentists worked reduced hours upon return to work, after having a baby. Dumelow et al. (2000) reported that one-third of participants had an accommodating relationship between career and family and that all of these women had either worked part-time or taken a career break at some point in their career. Similarly, Potee et al. (1999) reported that women with children were more likely to work part-time than women without children. Gjerberg (2003) also examined part-time work in physicians. Their results showed that being a specialist decreased the probability of changing to part-time work, however, they found that more females than males worked part-time. Furthermore, women doctors who had given birth within the past year were more likely to change from full-time to part-time work and cited “caring responsibilities” as the reason for doing so. As women increased the number of children in their family, the probability of changing from full-time to part-time work also increased. Blasius and Pae (2005) also found that the number of

children was a good predictor of days worked per week, with an increase in children yielding a decrease in days worked per week. They found that females worked on average a half day per week less than males. In addition, they found that 89% of the women had spouses who were employed full-time and that over 80% of these spouses were professionals (dentists, physicians, or non-health-care professionals). They concluded that because female orthodontists are more likely to be married to another working professional, their family income was likely to be greater. With this increased financial security they speculated that female orthodontists might choose to work fewer hours or retire earlier.

In the current study, 10 of 13 participants were currently married. Of these 10, 6 were married to a professional and in all cases this professional was another dental health-care professional. Our study did not seek to obtain information on the full or part-time status of these spouses. The average days worked per week was 3.7 and there was no apparent trend of decreased days per week with an increased number of children. There was only one female with 3 children, and although she was married to another dental specialist, she reported working 3.5-4.5 days per week. On the opposite end of the spectrum, the fewest days per week worked was 2.5 days and was reported by a female in the 56+ age group who was unmarried and had no children. The majority of women fell in the mid-range (3-4 days), regardless of the number of children or spousal occupation. Murphy et al. (2006) found that female orthodontists worked the equivalent of 3.5 days per week compared to men who worked on average 4 days a week. Collins et al. (2009) also reported that females worked on average a half-day less per week than males. Neither of the studies reported on occupation of spouses.

The results of our study are consistent with the findings of the literature, which suggest that on average female orthodontists work 3.5 days per week. Although our study did not include data on male orthodontists, the literature

suggests that females work a half-day less than their male counterparts. Blasius and Pae (2005) concluded that the increased incidence of female orthodontists being married to another full-time professional might influence the decision to work part-time. Our study did not find this trend to be true. There was no apparent difference in the number of days worked per week for female orthodontists based on whether or not their spouse was a healthcare professional. It is therefore proposed, that females in healthcare fields are more likely to marry another healthcare professional but that this does not necessarily impact their work patterns. Instead, across dentistry and medicine, the trend is for women to cut back days or work part-time in an effort to facilitate work-family balance.

Reassurance of Referrals

The final adaptation to the professional role that was articulated by the women in this study was the need to reassure referral sources of their commitment to the profession. Many believed that there was a preconceived notion that a female orthodontist is less committed to her career when she has family responsibilities as well. Due to this, some women worked to reassure their referral sources of their intentions during and following their maternity leaves. The topic of referrals in orthodontics or other dental specialties is not discussed in the literature in conjunction with females and work-family balance. A better understanding of the practice patterns of female orthodontists during the childbearing and childrearing years may help dispel the belief that women are less committed to their careers at this time, and instead draw awareness to the fact that although they seek balance, their careers continue to be of high importance to them.

The four adaptations to the professional role, common among the participants of this study, have been described. Although some of these adaptations are specific to orthodontic practice, the literature supports the

concept that dentists and physicians require similar adaptations to their professional role to facilitate work-family balance. The final section will describe the areas where female orthodontists experienced role conflict despite adaptations to both roles.

Areas of Role Conflict and Role Conflict Theory

The results of this study are the first to investigate work-family balance in female orthodontists. The participants of this study defined work-family balance as having satisfaction in both their maternal and professional roles, understanding that compromises have to be made. The above section discussed the adaptations made to both the maternal role and the professional role to help achieve work-family balance. There were, however, areas where the participants felt the adaptations to a role were better described as sacrifices. The concept of having success or satisfaction in one role requiring sacrifices in the other epitomizes conflict theory. The participants experienced significant role conflict in four main areas: timing of children, maternity leave, breastfeeding and caring for a sick child. Greenhaus and Beutell (1985) identified three types of conflict: time-based conflict, strain-based conflict, and behavior-based conflict. The areas of role conflict identified in the current study were easily characterized into these three types of conflict.

Time-based conflict was a significant factor for these women and the adaptations they made to both their maternal and professional roles illustrated this. Timing when to start a family was a significant time-based conflict as the duration of training and the day-to-day demands caused women to delay having their children. Another example of time-based conflict was the stress of needing to return to work soon after having a baby. This meant spending less time on maternity leave and leaving a newborn baby in the care of another provider. Time-based conflict was also evident with breastfeeding. The need to pump breast-milk during the day to maintain production required taking time out of

the workday to accommodate for pumping. The women expressed the stress of needing to sit and pump while knowing that patients were waiting in clinic. Finally, time-based conflict was also a factor in the issue of caring for a sick child. Being unable to be in two places at once, the participants felt a great deal of time-conflict with having to choose between time at home or time at work in the event of a child becoming ill.

Edwards and Rothbard (2000) discussed how time-based conflict leaves the needs of one role unmet. With timing of children, the most poignant example of leaving a domain unmet was the situation where females delayed childbearing until an age where they experienced fertility difficulties. With reference to maternity leaves, the women often mentioned the guilt of leaving a newborn baby to return to work and in this way were leaving the needs of this domain unmet. Many women communicated that they wished they had been able to breastfeed longer but were unable to maintain their supply of breast-milk due to limitations on pumping during the day. This could also be seen as leaving the needs of this maternal domain unmet. Finally, when caring for a sick child, the majority of women felt they would be unable to cancel patients at the last minute in order to stay home with their child and in this way were failing to meet the demands of the home domain.

Strain-based conflict was not as common as time-based conflict although it was a significant factor in the experience of most of the women when returning to work shortly after having a baby. The major strain symptom of fatigue was mentioned by several of the women and this strain generated by having a newborn baby affected the ability of some women to perform their professional role.

Finally, behavior-based conflict was a factor for the participants of this study. Dierdorff and Ellington (2008) identified several factors of a work-role that can lead to behavior-based conflict. Increased interaction with other people and

increased responsibility for others were two factors correlated with increased work-family conflict. The results of the current study support this interpretation of behavior-based conflict. The participants readily discussed their accountability as an orthodontist to the community, patients, referring dentists, and their staff. Interaction with these groups and the sense of accountability or responsibility was a central factor in their decisions to return to work soon after having a baby. As a result this caused them increased work-family conflict.

Frone (2003) proposed another way to divide areas of conflict: into work interfering with family (WIF), or family interfering with work (FIW). Taking time off from career for maternity leave was considered to be FIW. However, many of the women discussed that despite having a minimum amount of time off, work interferences were common and they therefore experienced WIF. Grice et al. (2007) applied Frone's theory of WIF and FIW in their study of women in the postpartum period. They found that women demonstrated better mental health at 11 weeks postpartum than 5 weeks postpartum, suggesting the value of time away from work for rest and recovery. They did, however, find that a number of women on leave at 5 weeks reported high levels of WIF. The reason for this was explained by the finding that 10% of the women agreed to participate in limited work-related duties, such as answering emails and responding to emergencies, and this contact with work was enough to generate WIF.

Another example using this classification relates to the difficulties the participants faced with needing to allocate time to pump breast milk at work. This could be interpreted as FIW. However, the fact that the women had to return to work so soon after having a baby (and therefore needed to pump) could be seen as WIF. Although the findings of this study can be categorized according to this classification, the amount of inherent interpretation fails to adequately characterize work-family conflict of the study population.

Aside from role conflict, there was some evidence that having two or more roles was beneficial for these women. Frone (2003) described the concept

of work-family facilitation as follows: having the skills, experience, and opportunities of one role translating to ease the obligations of the other role. Similarly, Barnett and Hyde (2001) described the potential benefits of multiple roles. Although the current study did not delve into the positive effects of having multiple roles, the participants communicated the importance of having both the maternal role and the professional role. Several women discussed that their career allowed them an independent identity, while one woman described increased patience at home as a result of time away at work. These findings support the theory that having multiple roles can be beneficial, although further study is required to properly investigate this theory.

Finally, although work/family border theory, proposed by Clark (2000), explains some aspects of work-family balance in orthodontists, it contrasts with some of the findings. There was merit in the description of borders and the concept of permeability with respect to breastfeeding. Some participants discussed that their career afforded them the opportunity to pump during the day, which allowed them to continue with their breastfeeding. The theory also discussed the importance of having "other-domain" awareness by the domain-members such as supervisors and spouses. One could argue that an accommodating business partner or principal orthodontist is in essence a domain member, aware of the demands of home life, which was seen to help facilitate work-family balance.

Several of the main propositions of the theory, however, were not supported by the current study. Work-family border theory proposes that with unlike domains, strong borders facilitate work-family balance, and vice versa when domains are similar weak borders facilitate a balance. Despite the domains of orthodontics and home being quite different, having strong borders was not seen to facilitate work-family balance. Conversely, being able to pump at work or taking paperwork home to enable one to leave the office were both examples where a weak border, instead of a strong border was a benefit.

Another proposition of work-family border theory is that having identification and influence within one's domains facilitates work-family balance. Although the women in this study had both identification and influence in both of their domains, they did not demonstrate satisfaction with work-family balance. In contrast, those who associated, and had less identification and influence, actually had better work-family balance.

The fact that this newer theory fails to classify the issues with work-family balance in orthodontics is possibly a reflection of the orthodontic profession itself. The independent nature of an orthodontist as a central component of her business is perhaps a root cause for why these women demonstrated identification with and influence upon their work role, yet experienced work-family conflict. Work/family border theory may be more appropriate in larger institutions where employees are working in a hierarchical structure as opposed to being a business owner.

Several theoretical frameworks for work-family balance have been discussed. The results of this study strongly support the concept of work-family conflict, particularly as defined by Greenhaus and Beutell (1985) as being time-based, strain-based, and behavior-based. Furthermore, there is evidence that in addition to role-conflict, having multiple roles can have a benefit as well. Although work/family border theory can describe some elements of work-family balance in orthodontics, it is perhaps less appropriate for this type of industry and more applicable to larger corporate settings. The results of this research suggest the need for a new theory, using a health-based model, to explain the experience of female health professionals and their achievement of work-family balance.

In the previous sections, the specific challenges female orthodontists faced with respect to work-family balance were described. The women made adaptations to both their maternal and the professional roles to facilitate work-

family balance. Furthermore, the areas where they experience the most role conflict were identified. As a result of this study, there are recommendations for improving work-family balance for female orthodontists and minimizing the challenges they face. Guest speakers could be invited to the local and national dental conferences to discuss key issues with respect to orthodontics and work-family balance. Provision of a medium to connect female orthodontists would encourage support and exchange of ideas. Networking could occur face-to-face at a conference or virtually, using web-based communication. An online resource could also offer information on common issues raised with respect to work-family balance. Furthermore, there is a need for a central registry of locums to aid the matching of potential locums with female orthodontists seeking a maternity leave. Recommendations at the graduate education level include practice management courses, including a discussion on the practice structuring options available to female orthodontists and the implications of each option. Additionally, to supplement the graduate education, female graduate students could be mentored by a practicing female orthodontist, to gain practical advice on combining work and family.

LIMITATIONS OF THIS STUDY

Although the findings of our qualitative study are not intended to be representative of the whole population, on their own they represent the characteristics of a small group of Canadian orthodontists. The demographic information that was obtained is the first of this type of research. One limitation of this study is that the demographic information comes from a very small sample of women, therefore cannot be considered representative of the entire population. The goal of this research study was to provide a rich description of the phenomenon of female orthodontists and the challenges they face with work-family balance. Therefore, the demographic information that was collected was used to enrich this description. Because of this, details of some of the demographics were not critical. For example, although there was interest on the

days per week each woman worked, specific information as to the hours per day or per week was not sought.

Another limitation of this research is the narrow definition used for "work" and "family". Although they served the purpose of this study, it could be argued that important aspects of the work-family balance equation were overlooked, such as eldercare or career-related responsibilities such as serving on committees. These were considered beyond the scope of the current study, but could be incorporated into future research.

RECOMMENDATIONS FOR FUTURE STUDY

With this study being the first of its kind, it provides the first glimpse into the issues female orthodontists face with respect to work-family balance. Given that the nature of the study was qualitative and the sample was small, there certainly are opportunities to obtain quantitative data on the whole of the female orthodontic population in Canada. This type of demographic information would be useful in several ways. First, it would facilitate licensing bodies in determining the characteristics of their audience. As mentioned by many women, having increased support from these membership organizations would be of huge value and quantitative data to support this qualitative study would provide further evidence in support of this need. Second, it would provide feedback concerning the impact of an increase in the number of women entering the profession and the impact this change will have on orthodontic supply and demand which continues to be a concern in the literature. Finally, the more literature that exists on a topic, the better the understanding and awareness of an issue that is of paramount importance to female orthodontists.

CONCLUSION

Work-family balance is a significant concern for female dentists and physicians. With an increasing number of females entering these professions the topic is of central importance. The results of this study describe the rich

experiences of female orthodontists in achieving work-family balance. Their definition of balance, the specific challenges to orthodontic practice, and their strategies for adapting their maternal role and professional role to achieve balance, are presented and compared to the literature. Finally, the areas where the women felt the most role conflict were discussed and explained in relation to supporting theories on work-family balance. With this research being the first of its kind in orthodontics, the results provide a useful resource for female orthodontists at various stages of their career concerning the challenges with work-family balance and orthodontics. Furthermore, the information can act as a guide for graduate programs and professional organizations to understand areas where changes can be made to minimize the effects of these challenges, and to establish a support system for women to help them achieve work-family balance.

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APPENDIX A: INFORMATION LETTER

Women in Orthodontics and the Issues They Face with Work-Family Balance
Information Sheet

Principal Investigator: Dr. Louanne Keenan
University of Alberta
Faculty of Medicine and Dentistry
Email: lkeenan@ualberta.ca

Background: My name is Dr. Sarah Davidson and I am currently a second year student in the 3-year graduate orthodontics program at the University of Alberta. For my master's thesis I am conducting a study to determine female orthodontists' perceptions about work-family balance, the strategies they employ to manage these issues, and any solutions they may propose to minimize these issues.

Procedures: Participating in this study will involve filling out the attached questionnaire. If you are selected for the study, you will be contacted for an interview for approximately 30 minutes, using a series of open-ended questions. The interviews would be conducted over the phone for your convenience and will be audio-taped. You can request that the taping be discontinued at any time. Following the interview, a summary of main points will be provided to you and you will be given 2 weeks to agree or disagree that the main points are accurate.

Possible Benefits: All participants who participate in the research study will be assisting in the gathering of information about women in orthodontics and how they strive to achieve work-family balance.

Possible Risks: We do not anticipate any risks. Even after you start to answer the questions, you may decide that you no longer wish to participate. You can stop answering the questions at any time, without penalty.

Confidentiality: All information obtained from the questionnaires and interviews will be kept confidential. Any research data collected about you during this study will not identify you by name, only by your initials and a coded number. The list cross-referencing your name to the identification number will be stored in a secure place by the principal investigator for five years after the study is completed, according to university policy. The information gathered from this research study may be presented at conferences or published in the future, but participants' names will not be used in written analysis or publications.

Voluntary Participation: You are free to withdraw from the research study at any time and may request that the telephone interview taping be discontinued at any time. If selected for a telephone interview, you will receive a summary of main points derived from the interviews to ensure the interpretation was accurate. You will be given 2 weeks to review this summary and can agree or disagree that the main points are accurate. You will have this last opportunity to clarify or withdraw any statements from the study data. If any knowledge gained from this or any other study becomes available which could influence your decision to continue in the study, you will be promptly informed.

Reimbursement of Expenses: There will be no reimbursement for study participation.

Contact Names and Telephone Numbers: If you have concerns about your rights as a study participant, you may contact the Health Research Ethics Board, at (780) 492-0302. This office has no affiliation with the study investigators. If you have any other questions or concerns, please contact: Dr. Sarah Davidson, Masters student and co-investigator: (780) 298-1648

APPENDIX B: DEMOGRAPHIC QUESTIONNAIRE

Women in Orthodontics and the Issues They Face with Work-Family Balance Questionnaire

Please circle all that apply.

1. Age range: a) 25-35, b) 36-45, c) 46-55, d) 56+
2. Family status: a) single b) married c) children
3. Type of practice: a) solo b) group
4. Province(s) where you practice:_____

Please provide an email address and telephone number so that you can be contacted to make arrangements for a date and time for the phone interview.

Email address_____
Phone number_____

APPENDIX C: CONSENT FORM

Women in Orthodontics and the Issues They Face with Work-Family Balance
Consent Form

Investigators

Principal Investigator: Dr. Louanne Keenan, Division of Studies in Medical Education
Tel. 780-492-1418
Email: lkeenan@ualberta.ca

Consent Please circle your answers:

Do you understand that you have been asked to be in a research study?
Yes No
Have you read and received a copy of the attached information sheet?
Yes No
Do you understand the benefits and risks involved in taking part in this research study?
Yes No
Have you been given a number to call to ask questions and discuss this study?
Yes No
Do you understand that you can quit participating in this study at any time without penalty?
Yes No
Have our confidentiality procedures been explained to you?
Yes No
Do you understand who will be able to see or hear what you said?
Yes No
Do you know what the information you provide will be used for?
Yes No
I agree to take part in this study.

_____ _____
Signature of Participant Date

_____ _____
Printed Name Phone Number

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

_____
Signature of Investigator or Designee

APPENDIX D: INTERVIEW SCHEDULE

Women in Orthodontics and the Issues They Face with Work-Family Balance
Interview Guide

A. Demographic Information:

1. Number of children
2. Age at time of graduation
3. How many years in practice
4. Type of practice (solo/group)
5. Days per week in practice

B. Qualitative Interview Guide:

1. How would you define work-family balance?
2. How important is work-family balance to you?
3. Do you feel you have achieved a balance in your orthodontic career and family?
4. What strategies have you employed to achieve this balance?
5. What issues/barriers (if any) have you faced in achieving a balance?
6. How have you managed any issues/barriers?
7. What are your suggestions for solutions to minimize these issues/barriers?