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By

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ABSTRACT

ANTICIPATED WORK-FAMILY CONFLICT: THE CONSTRUCT, ITS ANTECEDENTS AND CONSEQUENCES

By

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The study described here examines the constructs of anticipated work-family conflict and anticipated work-family positive spillover. In particular, a focus on the extent to which demographics, personality, and attitudes predicted these constructs is central to the research presented here. Results indicate that core self-evaluations, knowledge about how to plan for future roles, and the importance that individuals place on their careers were shown to be particularly influential in the prediction of these constructs. This study also investigated the relationship between anticipated work-family conflict and positive spillover and the personal and professional choices that individuals plan to make in the future. Directions for future theory development and empirical research are discussed.

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INTRODUCTION

In the past 25 years, the number of dual-earner couples has markedly increased as has the total number of hours that couples are working (Bond, Thompson, Galinsky, & Prottas, 2002). Women are working more than ever before, while men are taking on increased responsibility for domestic responsibilities and childcare (Bond et al., 2002). These facts highlight the importance of research on work-family conflict, defined by Greenhaus and Beutell (1985) as a type of inter-role conflict in which the competing demands of work and family roles are incompatible and participation in one role makes participation in the other role more difficult. The effects of work-family conflict have been shown to be severe, including higher depression, increased alcohol use, increased psychological burnout, greater reporting of psychosomatic symptoms, decreased job satisfaction, and increased intention to turnover at work. (cf., Burke, 1988; Hammer, Brockwood, & Neal, 2001; Frone, Russell, & Cooper, 1993).

While considerable research attention has been paid to the construct of work-family conflict, surprisingly little attention has been paid to the concept of *anticipated* work-family conflict. Adopting the Greenhaus and Beutell (1985) definition leads to the following definition of anticipated work-family conflict*: the belief that participation in one's future work-role will interfere with participation in one's future family-role (and vice versa).* This anticipated work-family conflict could be experienced, for example, as individuals prepare to enter the workforce after college, when a new child is expected, when they plan career changes, when a spouse changes jobs, or when considering re-entering the workforce. In any situation where individuals expect their work or family

roles to change, they can anticipate work-family conflict between these two roles in the future. To be clear, anticipated work-family conflict can exist when only one role (work or family) changes and the other stays the same or when both are changing simultaneously.

Research on future life roles has tended to examine career and non-work choices separately. Barnett, Gareis, James and Steele (2003) note that most of the literature on college students' plans for the future focuses on choice of career and or course of study, with little attention paid to the interaction between non-work and work decision-making. Yet, thoughts about the interaction and potential conflict between these roles may be related to important life decisions such as the choice of job or career, and the timing of marriage and childbirth. Importantly, research on anticipated work-family conflict may provide insight into how to effectively prevent actual work-family conflict (and hopefully the negative outcomes associated with it) before it even occurs. By studying the process by which individuals think about and plan for conflict between work and family, there is the potential to develop interventions to reduce such conflict. This study will examine the nature of anticipated work-family conflict and a number of potential correlates of this construct.

I begin by clarifying the construct of anticipated work-family conflict. To do this, I review the literature on actual work-family conflict and on constructs conceptually similar to anticipated work-family conflict (e.g., attitudes towards multiple role planning). The goal of this portion of the paper is to more thoroughly understand what is meant by anticipated work-family conflict by reviewing conceptually related literature on how individuals think about and plan for their future roles and the literature on actual

work-family conflict. I highlight how related constructs are similar to and distinct from anticipated work-family conflict. While these related constructs have significant value in their own right, the focus of this paper is how or why they relate to anticipated work-family conflict, rather than their unique predictive potential. Next, a model is presented that describes some potential correlates of anticipated work-family conflict. Each component of this model is then discussed in more detail. This includes a review of possible predictors of anticipated work-family conflict, including demographics, personality, and attitudes. Then, I discuss the possible reciprocal relationship between anticipated work-family conflict and personal and professional plans for the future. Finally, I discuss the relationship between anticipated work-family conflict and actual work-family conflict (even though this relationship is not empirically tested in this study).

Defining Anticipated Work-Family Conflict

Because research on anticipated work-family conflict is in its infancy, it is vital that a fuller understanding of what this construct really means is reached. The few articles that have specifically discussed anticipated work-family conflict as a construct have offered only a basic definition of anticipated inter-role conflict. For example, in one anticipated work-family conflict article, the author states that "In contrast to previous studies on current perceptions of work-family conflict, this study examined future expectations for work-family conflict" (Burley, 1994, p.116). This first study on anticipated work-family conflict does not mention how the author adapted the work-family conflict scale that was used to assess future work-family conflict (Burley, 1994).

A 1996 follow-up article on the same topic also does not provide much detail regarding the meaning of anticipated work-family conflict in a similar fashion to the 1994 paper (Livingston, Burley, & Springer, 1996). In this article, however, the authors elaborate on the measurement of anticipated work-family conflict in which they take a traditional work-family inter-role conflict scale (Kopelman, Greenhaus, & Connolly, 1984) and translate the sentences into a future tense. That is, a sample survey item reads "My future work *will* take up time that I *would* like to spend with my family and friends" (Livingston et al., 1996, p. 184, italics added).

Despite the lack of development of the anticipated work-family construct in prior literature, this is not to say that there has been no research about how individuals feel that they will manage their future work and family roles. A discussion of related constructs in the literature can shed led onto how we think about anticipated work-family conflict and what its causes and consequences might be. Specifically, I will discuss the concepts of career-marriage conflict, work-family balance self-efficacy, attitudes towards role-planning, attitudes towards role-sharing, perceptions of future difficulties, and anticipated identity importance, highlighting how these constructs are similar to or different from the construct of interest.

Related Literature

One recent study by Barnett et al. (2003) examines concern about *career-marriage conflict*. This construct reflects the fact that career plans must be integrated with the expected and ideal age of marriage. The authors assessed how much college students worried about their future career conflicting with their partner's career, their

career conflicting with their romantic relationship, their partner's career conflicting with their own career, and their partner's career conflicting with their romantic relationship. This is quite similar to the concept of anticipated work-family conflict and yet does not capture it in its entirely, due to the fact that it does not incorporate all aspects of the family life, only those related to marriage. In this examination of anticipated work-family conflict, conflict is addressed from a broader perspective on family-life, not only conflict between work and marital roles.

Killian et al. (2003) discuss a concept they call *work-family balance self-efficacy*, which is the belief that individuals hold about their ability to balance future work and family roles. This individual difference construct may be related to the construct of anticipated work-family conflict. That is, individuals who believe that they will be able to balance their future work and family roles may be less likely to anticipate conflict between the two roles. The authors provided two sample survey items that were used to measure work-family balance self-efficacy. They were, "I could integrate job and family roles without too much difficulty" and "If I had family problems on my mind, I don't think I could concentrate at work" (Killian et al., 2003, p.6-7). These items certainly seem to reflect an anticipation of work-family conflict as a form of conflict between the work and family roles. However, a conceptual distinction that needs to be made regarding work-family balance self-efficacy is whether it refers to the ability to avoid conflict or the ability to manage conflict well if it occurs. If defined as beliefs regarding one's ability to avoid work-family conflict in the future, work-family balance self-efficacy is likely a predictor of anticipated work-family conflict, how much conflict individuals anticipate experiencing. If work-family balance self-efficacy is considered an

ability to manage conflict when it arises, it is probably less predictive of anticipated work-family conflicts and probably more closely associated with the use of coping strategies to manage work-family conflict once it arises. Due to the fact that this construct is not well defined, its specific relationship with anticipated work-family conflict remains unclear. Therefore, it will not be examined in this initial investigation of anticipated work-family conflict. However, generalized self-efficacy (not specific to work-family issues) will be discussed further in this paper.

A number of researchers have addressed the *attitudes* that young adults hold towards their future roles. One such construct is called *attitudes towards multiple role planning* (ATMRP; Weitzman, 1994). Multiple role planning reflects intentions to balance work and family in the future. ATMRP is considered the general orientation that an individual holds regarding planning for the combination of career and family roles, such as confidence in the ability to integrate work and family roles, commitment towards having multiple roles, and feelings of autonomy regarding the ability to make choices regarding family and work roles for oneself. McCracken and Weitzman (1997) created a new name for the ATMRP construct, ***multiple role realism***, which they define as the "recognition that simultaneous work and family involvement is a complex and potentially stressful lifestyle" and found that individuals with greater multiple role realism are more aware of the need to consider and carefully plan for the interaction between work and family roles (p.149). It is measured using the same ATMRP scale that Weitzman (1994) used. Conceptually, attitudes towards multiple role planning (or multiple role realism) are distinct from anticipated work-family conflict. However, they may be related. Perhaps individuals who have a positive attitude towards planning for the future roles that they

will hold anticipate less work-family conflict because they feel prepared for the challenges that they will face. Thus, *attitudes* towards multiple roles (i.e., ATMRP) are not the same as beliefs about the conflict that will be experienced between them (i.e., anticipated work-family conflict). That is, the attitudes that individuals hold about their future roles and how they will be managed may influence the anticipation of experiencing conflict, but are conceptually distinct from it.

Another related issue concerns the attitudes that individuals hold towards *future role-sharing*. For example, a study by Hallett and Gilbert (1997) examines the expectations that career-oriented women in a university setting who plan to have a career, marriage, and children have regarding how they will manage these multiple roles. The authors compared women who plan to manage these roles conventionally (e.g., the female is primarily responsible for managing the home and parenting – in addition to having a career) to those who espoused a preference for greater role-sharing, in which both spouses have careers and help with housework and parenting. Thorn and Gilbert (1998) also examined attitudes towards role-sharing to understand how male students believe that they will integrate their work and family lives (e.g., sharing household responsibilities and childcare with spouse). These two articles focused on attitudes towards sharing domestic obligations with one's spouse. Similarly to the previously mentioned attitudinal constructs, it is likely that attitudes towards role-sharing are related to anticipated work-family conflict. However, the nature of these relationships is unclear. It may be that individuals who expect to share household responsibilities with their spouse anticipate less conflict because they will not have to manage all of these responsibilities alone. However, it is also possible that people who only have major

responsibilities in one role (either work or family) anticipate less conflict between roles because they only have to focus their efforts on a single role. Again, while attitudes towards role-sharing may be related to anticipated work-family conflict, it is a conceptually distinct construct.

Hallett and Gilbert (1997) also offer a *future difficulties* scale which was developed by Gilbert, Dancer, Rossman and Thorn (1991). It assesses the perceptions that young adults hold regarding the challenges and realities associated with having a dual-career marriage. It assesses anticipated difficulties associated with finding childcare, sharing family work with a spouse, and career advancement. This future difficulties scale is similar to the construct of anticipated work-family conflict in that it assesses future challenges, yet distinct in that it does not directly address inter-role conflict. That is, it focuses on challenges within a domain (work or family) but does not reflect challenges that arise from conflict *between* roles (i.e., the interference of family life with work or vice versa). Presumably, more challenges within a single role make it more likely that it will interfere with performance in another role. For example, the more time spent arranging childcare, the more likely it is to interfere with obligations in the work domain. Thus, the relevant effects of perceived future difficulties are likely to manifest themselves within the assessment of anticipated work-family conflict. Perceptions of future difficulties may relate to anticipated work-family conflict, yet they are distinct conceptually.

Another relevant construct, as discussed by Kerpelman and Schvaneveldt (1999), is that of *anticipated role importance*, the relative level of importance that the individual plans to place on career, marriage, and parental roles once they are accumulated.

Individuals in this study were rated as balance-oriented (placing equal importance on all three roles), family-oriented, career-oriented, or career-marriage oriented (placing heavier weight on career and marriage than on the parental role). These attitudes towards future roles may be related to anticipated work-family conflict. Similar to the attitudes towards role-sharing discussed above, individuals who place a heavy weight on a particular role may anticipate experiencing less conflict than individuals who place equal weights on all roles. That is, individuals who are very dedicated to their role as a parent may anticipate experiencing little work-family conflict because of the relatively little importance that they plan to place on work obligations. Alternatively, individuals who place equal weight on all roles may experience less anticipated work-family conflict because they will not anticipate being as disturbed or frustrated when one role demands attention that would ordinarily be given to another. Having to forsake family time for work obligations may not be as conflicting for an individual with a more balanced identity importance as compared to a highly parentally-oriented individual because the associated perceived costs may be less. Thus, while it seems likely that anticipated role-importance is related to anticipated work-family conflict, these constructs are also conceptually distinct. Rather than being considered a component of anticipated work-family conflict, anticipated role importance is more aptly considered a predictor of it.

In sum, while there is little research on anticipated work-family conflict, per se, distinct yet related constructs can help us better understand the nature of anticipated work-family conflict. Specifically, a review of the literature suggests that career-marriage conflict, work-family self-efficacy, and future difficulties are constructs that are similar to anticipated work-family conflict yet do not encompass all of its characteristics.

For that reason, relevant aspects of these constructs (as discussed above) will be considered subsumed under anticipated work-family conflict. On the other hand, the research regarding role-planning, role-sharing, and role-importance suggest that they are useful and distinct concepts from anticipated work-family conflict and may be important attitudinal predictors of it.

Work-Family Conflict

Beyond the research related to future roles, it is worthwhile to examine research on current work-family conflict to discover how it has been defined and measured and how this may influence our understanding of anticipated work-family conflict. A 1985 article by Greenhaus and Beutell has largely been responsible for defining the work-family conflict construct. As mentioned earlier, they define work-family conflict as a form of inter-role conflict in which there are competing demands arising from an individual's participation in different roles (in this case, the work and family roles). Greenhaus and Beutell (1985) discuss three major forms of work-family conflict. The first is *time-based conflict.* This reflects the fact that individuals have a finite amount of time and that time spent at work cannot be spent with the family and vice versa. This form of inter-role conflict exists because time dedicated to one role makes it challenging to fill the requirements of a different role. Another type of work-family conflict that Greenhaus and Beutell (1985) discuss is *strain-based conflict.* This exists when strain in one role (e.g., tension, anxiety, fatigue, or irritability) makes participating in the other role more difficult. For example, stress from work may spillover into the family role and affect one's ability to have a healthy and satisfying family life. Finally, Greenhaus and

Beutell (1985) describe *behavior-based conflict.* This is when certain patterns of behavior within one role are incompatible with behaviors necessary for effective functioning in another role. For example, the authors discuss how managers may be expected to display aggressiveness and objectivity in the workplace and that they may be expected to be warm and nurturing in their home environments. The incompatibility of these two types of behaviors may cause behavior-based work-family conflict. Research has supported the existence of time- and strain-based conflict but behavior-based conflict has been difficult to operationalize and is less supported by research (Kelloway, Gottlieb, & Barham, 1999).

Furthermore, Greenhaus and Beutell (1985) discuss another key issue in the conceptualization of work-family conflict, the directionality of the conflict. The authors create a distinction between the perception that work is interfering with family and the perception that family is interfering with work. They propose that an individual's response to a situation with competing role demands will determine whether it is perceived as *family-interference-with-work* or *work-interference-with-family.* For example, if a person chooses to attend a meeting at work rather than his child's school performance, this situation will be perceived as work-interfering-with-family. However, if the opposite choice was made, it would be perceived as family-interfering-with-work. To this end, the authors argue that it is important to develop work-family conflict scales that contain items that reflect both directions of role interference.

Research in the work-family conflict area has attempted to predict the different types of conflict and the directionality of the conflict from different antecedents and examined the different outcomes expected from these types of conflict. For example, in a

longitudinal study of work-family conflict conducted by Kelloway et al. (1999), results showed that work-interference-with-family could be distinguished from family-interference-with-work and that strain-based conflict could be distinguished from time-based conflict. The authors found that only strain-based family-interference-with-work at Time 1 predicted stress and intent to turnover in a job at Time 2, while time-based work-interference-with-family at Time 2 was predicted by stress at Time 1. Similarly, Hammer et al. (2001) found that family-interference-with-work predicted depression while work-interference-with-family did not. Frone, Russell, and Cooper (1992) found that work-interference-with-family was predicted by job stressors while family-interference-with-work was predicted by family stressors and family involvement.

Thus, findings from the literature on work-family conflict suggest that these six dimensions are relevant to the nature of that construct. For this reason, they may also be relevant to the related construct of anticipated work-family conflict. The types of conflict anticipated and the perceived directionality of the conflict have not been addressed in the minimal literature on anticipated work-family conflict. Because anticipated work-family conflict is being defined as the belief that participation in one's future work-role will interfere with participation in one's future family role (and vice versa), it is important to recognize that individuals may anticipate time-, behavior-, and/or strain-based conflict in either direction (work-interference-with-family and/or family-interference-with-work) and to measure the construct accordingly. Thus, item content in the anticipated work-family conflict measure will incorporate the different types and directions of conflict, reflecting the six-dimensional Greenhaus and Beutell (1985) classification of work-family conflict. However, because there has been no research to date conducted on the

structure of anticipated work-family conflict construct, it is difficult to make predictions about how the six-dimensions of conflict will be related to the other constructs being measured here, given that their existence must be first established. Thus, in this initial study of anticipated work-family conflict, no predictions are made regarding how different types and directions of conflict are related to different predictors.

A Model of Anticipated Work-Family Conflict

The model that follows presents the predicted relationships between anticipated work-family conflict and the other focal variables in this study. The numbers along the paths in the model correspond to Research Questions in this study. First, I discuss the three sets of predictors (Research Questions 1 - 5). This is followed by a discussion of how relationship/family and job/career plans may relate to anticipated work-family conflict (Research Questions 6 – 7). Then, I discuss the possible relationship between anticipated work-family conflict and actual work-family conflict. Note that actual work-family conflict was not assessed due to the cross-sectional nature of this study. However, a longitudinal follow-up study is planned that will assess actual work-family conflict. Due to the fact that there is so little research on anticipated work-family conflict, the relationships in this study will be examined as exploratory questions, rather than as directional hypotheses.

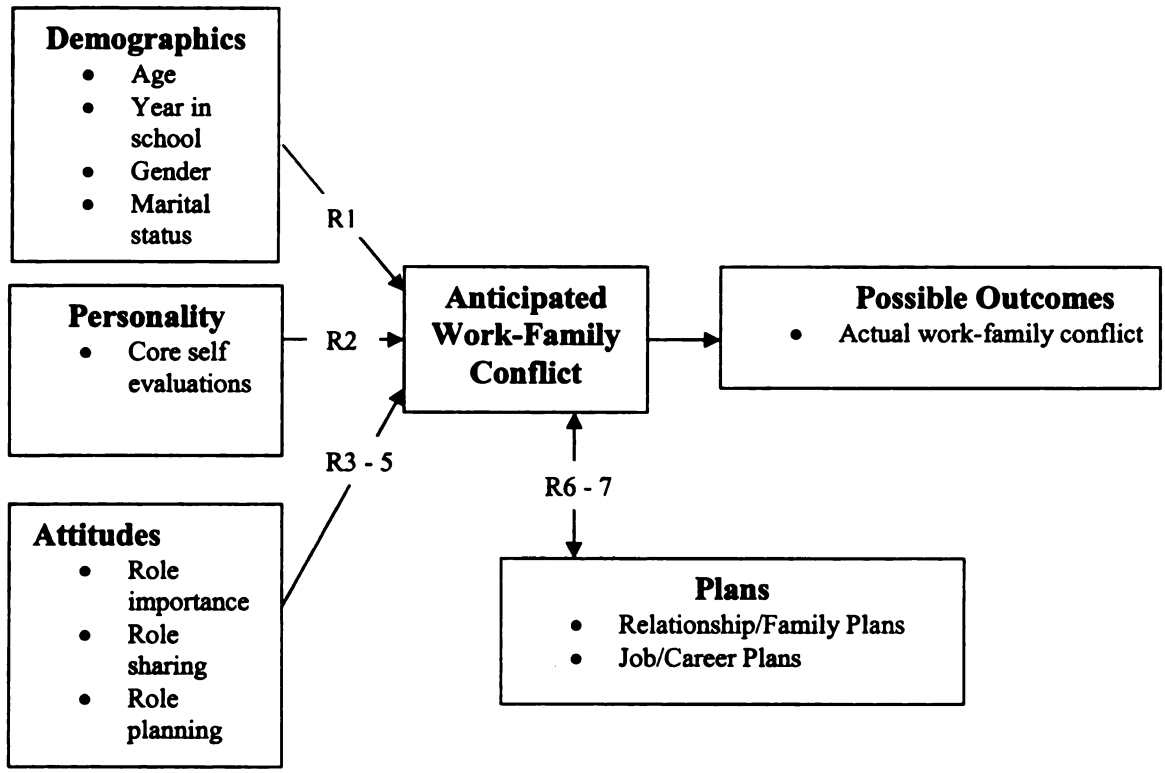

Figure 1. Model of Anticipated Work-Family Conflict

Predictors of Anticipated Work-Family Conflict

I will first discuss the left-hand side of the model which addresses possible antecedents of anticipated work-family conflict. It is important to note that there is no over-arching theory about what predicts actual work-family conflict (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005). Research studies on work-family conflict tend to incorporate only a few of the possible predictors of this construct and no set of predictors has been universally agreed upon by work-family researchers. However, three types of predictors that have received research attention in the work-family literature are demographics, personality, and attitudes. A recent review of the IO/OB literature on

work and family examined predictors in work-family research (Eby et al., 2005). The authors report that 24.1% of this research has focused on demographics and background characteristics as predictors. 20.0% of the research has considered attitudes towards work and family as a predictor. 4.7% of research has focused on individual differences as a relevant predictor of work-family outcomes (with 24.4% of that research focused on personality; Eby et al., 2005). Despite the somewhat limited focus on personality as a predictor to date, researchers have recently begun to call for increased attention to dispositional influences on work-family conflict (e.g., Carlson, 1999; Sumer & Knight, 2001; Wayne, Musisca, & Fleeson, 2004). No other type of predictor (e.g., stress, coping strategies) was used as a predictor in more than 10% of studies on work-family conflict. Based on the popular inclusion of demographic and attitudinal predictors in the work-family literature and the recent call for more research on personality as a predictor, it was determined that the inclusion of demographics, personality, and attitudes was appropriate for this initial investigation of the predictors of anticipated work-family conflict. I will discuss research supporting the inclusion of these three categories in more detail in turn.

Demographics

The following demographics are included in this study: age, year in school, gender, marital status, and parental status. These demographics are often the focus of research on future roles. Unfortunately, in most studies, these demographics are controlled for (either statistically or by limiting the sample) and thus their direct effects on outcomes of interest are unknown. For example, McCracken and Weitzman (1997) controlled for education level in their study of attitudes towards multiple role-planning

because they found it to be correlated with the construct. Also, the McCracken and Weitzman (1997) study only included women while Hallett and Gilbert's (1997) study included only female, never-married, upper-classmen thus controlling for year in school, gender, and marital status through the selection of the sample. While Kerpelman and Schvaneveldt (1999) included both men and women in their study, they only included participants who were never married, never a parent, and were within the age range of 18 to 25. Many studies assess the race of the participants, controlling for its effects on the outcomes of interest. (cf., Livingston et al., 1996).

Research conducted on actual work-family conflict also tends to consider demographics, yet limited conclusions have been reached regarding their influence on work-family conflict. As mentioned previously, demographics and background characteristics have been shown to comprise almost 25% of the predictors included in research on the work-family interface (e.g., age, race, gender, and marital status). Lockwood, Casper, Eby and Bordeaux (2002) note that questions about children were "almost non-existent in this research" (p. 16). As one example of an investigation of demographics as a predictor of work-family conflict, Burke (1988) found that being married was associated with increased work-family conflict but that age, gender, education level, and years on the job were not. However, parental status was not assessed in this study. Other studies have also examined the influence of demographic variables with mixed results (cf., Frone et al., 1992). For example, different researchers have found that women experience greater conflict (e.g., Behson, 2002), less conflict (e.g., Parasurman & Simmers) and no differences in conflict (e.g., Duxbury & Higgins, 1991) as compared to men.

The demographics included in this study reflect commonly used demographics from the literature on actual work-family conflict as well as those relevant to the population examined in this study. In this study, five demographic characteristics are examined. The reasoning behind the inclusion of these demographics in this study is presented below.

Age. This study will examine the relationship between age and anticipated work-family conflict. Individuals who are older are likely getting closer to an age at which they plan to have children or may already have children. This proximity of having children may encourage individuals to think differently about how they will balance their future work and family roles and they may therefore experience more anticipated work-family conflict (because it is in the forefront of their minds) or less (because they feel that they have thought about parenthood and made plans for it).

With regards to this particular sample, older medical students may have had more exposure to relationship/family demands that they should expect in the future (e.g., by having children themselves or having friends or perhaps through interactions with former students who have children). Therefore, older medical students may have a different perspective regarding the demands of balancing work and family. Despite the fact that it is difficult to predict whether older students will anticipate more or less conflict, it is nonetheless valuable to investigate the relationship between age and anticipated work-family conflict.

Year in school. In a similar vein, students who are farther along in school are closer to actually having a job than those who are earlier in their education. The reality of balancing their work and non-work lives as professionals is looming closer in the

future. While age and year in school are likely to be correlated, there may be particular insights that are gained through progressing through medical school that are unrelated to age. For medical students, those who are further along in school will have had greater exposure to the different career options that lie ahead of them. They will have learned more about the different specializations formally in the classroom as well as had more exposure to informal education from other students about the demands of different medical careers (e.g., through knowing other students who have graduated already and begun their residency programs). Therefore, we also examine the relationship between year in school and anticipated work-family conflict.

Gender. In today's society, women are still taking on the primary role of providing childcare (Bond et al., 2002). And yet, although still working fewer hours outside of the home than men, women in the workforce are more educated than men and are more likely to be managers and professionals than men (men are more likely to hold blue-collar jobs than women; Bond et al., 2002). Also, mothers have been shown to have less time to themselves than men, according to the 2002 Highlights of the National Study for the Changing Workforce (Bond et al., 2002). These societal-level differences between the lives of men and women may mean that women anticipate different amounts of work-family conflict than men because males and females tend to have somewhat different expectations and experiences in the home and at work domains.

With regards to medical students, in the 2001-2002 academic year, 47.6% of new entrants to medical school were women (Women in U.S. Academic Medicine, 2004, para. 3). The women in this study are entering into a challenging profession and yet will likely assume the primary responsibility for childcare in their households (see above).

Women may also have different values than men, thus influencing the extent to which they anticipate feeling conflict between the multiple roles that they hold. Therefore, we consider the extent to which gender is associated with anticipated work-family conflict.

Marital status. Marital status may also affect the anticipation of work-family conflict. Similar to the predicted effects of age, those individuals who are married or have long-term partners may be more likely to have children in the near future (as compared to those who have not yet found a spouse). Further, those individuals who are married or have long-term partners may have had important discussions with their partners about how the couple will manage work and family responsibilities, whereas single individuals may have spent considerably less time thinking and talking about this issue. Again, this attention placed on future balance may lead to an awareness of the challenges of balancing work and family, and therefore an increased reporting of anticipation of work-family conflict. Alternatively, married/partnered individuals may be more likely to make plans for how the responsibilities will be managed. Therefore, as compared to single individuals who are unsure of how they will balance their work and family roles, married/partnered individuals might be more prepared and calm about the future roles and experience less anticipated work-family conflict.

With regards to medical students, the reasoning above is likely to apply. Further, because of the specific constraints associated with the completion of medical school (e.g., paying off large debt from schooling, choosing a residency program, etc.), these married/partnered students may be especially likely to have to plan for and discuss work and family roles following medical school. Therefore, the relationship between marital status and anticipated work-family conflict is considered in this study.

Parental status. Parents (as compared to non-parents) may anticipate different amounts of work-family conflict because they may be more aware of the demands that children place on their time or may have already developed plans or coping strategies to deal with the demands of parenthood and medical school. Because prior research on future roles has tended to exclude parents from their samples, this relationship will be particularly interesting and informative.

In the case of medical students, medical school is an extremely challenging environment that may equal (if not exceed) the rigors of actually practicing medicine. Because medical student-parents are already managing the demands of their school and family lives, they may be more aware of the challenges that lie ahead and anticipate more conflict. Or, perhaps they are more confident in their ability to cope with the work and family demands that lie ahead because of their experiences in medical school and therefore anticipate less conflict. Based on the potential for parental status to influence anticipated work-family conflict, we investigate this relationship in this study. For individuals who are already parents, we consider whether the age of their youngest child is associated with their anticipated work-family conflict, because children of different ages may place different types and amounts of demands on these individuals once they become doctors.

In sum, there will be diversity along these five demographic dimensions (i.e., age, year in school, gender, marital status and parental status) in the sample of medical students, providing an opportunity to examine the influence of demographic variables that have heretofore generally been controlled for via sample selection. Again, there is too little information at this point to pose well-informed directional hypotheses.

Research Question 1: What are the relationships between age, year in school, gender, marital status, and parental status and anticipated work-family conflict?

Personality

Because the research on personality and future roles is so limited, research from the literature on actual work-family conflict can be useful in understanding which personality variables may predict anticipated work-family conflict. Recently, researchers have begun to consider the role of personality in the experience of work-family conflict. For example, research has addressed the role of negative affectivity (cf., Carlson, 1999; Stoeva, Chiu & Greenhaus, 2002) and the "Big Five" (cf., Bruck & Allen, 2003) in the experience of work-family conflict. A book chapter by Friede and Ryan (2004) argues that core self-evaluations will predict work-family conflict and that people with more positive core self-evaluations will experience less work-family conflict. Core self-evaluations are considered the fundamental premises individuals hold about themselves, or the extent to which individuals possesses a positive self-concept (Judge, Erez, & Bono, 1998). The four traits that comprise this higher level construct are self-esteem, generalized self-efficacy, locus of control and emotional stability. Core self-evaluations are a latent, multivariate construct or a compound personality variable in that it is comprised of four more specific traits (Judge et al., 1998).

This study will focus on core self-evaluations as the personality trait of interest. One reason for this is that it includes generalized self-efficacy, which is related to work-family balance self-efficacy, the only personality-like factor considered in the literature on future roles (Killian et al., 2003). The work of Friede and Ryan (2004) argues that

individuals who have more positive core self-evaluations will experience less work-family conflict. They suggest that individuals with positive core self-evaluations may select environments for themselves that are more supportive of demands in other domains, such as selecting a job that is flexible and allows the individual to meet family demands (Diener, Larson, & Emmons, 1984; Judge et al., 1998). Thus, they experience less work-family conflict than individuals with more negative core self-evaluations. It is also possible, according to Friede and Ryan (2004), that individuals simply perceive their environments differently based on their core self-evaluations. That is, individuals with negative core self-evaluations perceive the environments from their multiple life domains more negatively and as less supportive of obligations in other domains (Fogarty et al., 1999; Larsen, 1992; Moyle, 1995). Therefore, they feel as though they have more conflict in their lives. Further, individuals with positive core self-evaluations may use more effective coping styles to handle the demands of their work and non-work lives, and in doing so, decrease the amount of conflict that they experience (Aryee, Luk, Leung, & Lo, 1999).

One study has examined the relationship between core self-evaluations and the conflict that student-parents experience between their school and parental roles. Results indicate that student-parents with more positive core self-evaluations experience less conflict between these roles (Friede & Ryan, unpublished manuscript). However, no research has been conducted relating core self-evaluations to conflict between *work* and family roles. Because of the limited research on these relationships, it is difficult to surmise what the relationship between core self-evaluations and anticipated work-family conflict will be. While the theoretical argument put forth by Friede and Ryan (2004) and

the research conducted by Friede and Ryan (unpublished manuscript) suggest that the relationship may be negative (i.e., more positive core self-evaluations are associated with less anticipated work-family conflict), it is also possible that individuals who perceive themselves as capable and able to control their futures might be willing to accept that they may face conflict between work and family in the future. Less self-efficacious individuals who do not feel in control of their environments may be less willing to admit that balancing work and family will be a challenge in the future. Based on the global nature of core self-evaluations and their prior linkage with actual work-family conflict, the relationship between this personality construct and anticipated work-family conflict is explored in the study presented here.

Research Question 2: What is the relationship between core self-evaluations and anticipated work-family conflict?

Attitudes towards Future Roles

There are three relevant types of attitudes towards future roles that emerged from the literature review on anticipated work-family conflict and related constructs. Each is now discussed in turn.

Role-importance. One type is *role-importance,* or how much importance individuals place on the roles of parent, spouse/partner, worker, or a combination of these. In the small literature on future roles, role-importance has emerged as a popular attitudinal construct. For example, Kerpelman and Schvaneveldt (1999)compare the importance that males and females placed on their career, marital, and parental roles. Rajadhyaksha and Bhatnagar (2000) examined gender and age differences in role-

importance in married dual-career couples in India. Bu and McKeen (2000) investigated differences between Canadian and Chinese business students in the importance that they placed on the three life roles. With regard to actual work-family conflict, Cinamon and Rich (2002) examined the conflict experienced by men and women who placed the highest role importance on work, family, or a combination of the two and found that, when controlling for gender, there was no difference between groups in the amount of work-family conflict experienced. Because the majority of research has examined role-importance descriptively, rather than as a predictor of work-family conflict, it is difficult to surmise what the relationship between the three types of role-importance and anticipated work-family conflict will be. Overall, the limited literature suggests that it is essential to examine the importance that individuals place on their future roles as a possible predictor of anticipated work-family conflict.

In this study, the importance that individuals place on each of three main roles (work, marital/partner, and parental) is assessed. Again, predicted directionality of the relationship between how much importance individuals place on each of the three roles and their anticipated work-family conflict is unclear. Individuals who place a large emphasis on a particular role may experience less conflict because demands outside of this role are not seen as having primary importance. Therefore conflict between roles may be reduced. Alternatively, those who balance the importance that they place on the different roles may feel less conflict because demands from all roles are seen as important. Based on the fact that role-importance is conceptually related to anticipated work-family conflict and has emerged as an important attitudinal construct in the literature on how young adults think about their future roles (e.g., Kerpelman &

Schvaneveldt, 1999), it will be examined in this study as a possible predictor of anticipated work-family conflict.

Research Question 3: What is the relationship between work, marital/partner, and parental role-importance and anticipated work-family conflict?

Role-sharing. A second type of attitude towards future roles is *attitudes towards role-sharing*. This concept consists of whether individuals plan to share role responsibilities with a spouse or significant other. Hallett and Gilbert (1997) examined attitudes towards role-sharing and found that women who preferred a lifestyle in which domestic responsibilities were shared with a spouse had higher self-esteem, greater vocational commitment, and more liberal views than those who ascribed to a traditional family arrangement with women taking on the majority of the responsibility for domestic life. Thorn and Gilbert (1998) found that young adult males who were more committed to role-sharing were more liberal but also found that role-sharing attitudes were not related to self-esteem or vocational identity.

Research has not addressed whether attitudes towards role-sharing are related to anticipated work-family conflict nor what the relationship might be, if found. It is unclear whether individuals who plan to share domestic responsibilities (e.g., childcare, chores, and financial management) will anticipate more or less conflict. There is limited evidence which suggests that role-sharing among couples can have beneficial effects. For example, a study of fully-employed Israeli mothers showed that those mothers who had spouses who were emotionally and/or practically supportive (e.g., helping with household chores) experienced less anxiety and dysphoria than those with less supportive

husbands (Rosenbaum & Cohen, 1999). While this suggests that expecting to share responsibilities may be associated with less anticipation of work-family conflict, it is also possible that those people who expect their partners to take on greater responsibility expect this because they anticipate having great demands on themselves. At this point, it is unclear whether role-sharing attitudes and anticipated work-family conflict will be related, and if they are, what the nature of this relationship will be. A general investigation of this relationship, therefore, will be valuable.

Research Question 4: What is the relationship between attitudes towards role-sharing and anticipated work-family conflict?

Role-planning. The third type of attitude towards future roles is *attitude towards multiple role-planning* (ATMRP; Weitzman, 1994). ATMRP is considered the attitude that an individual holds regarding planning for the combination of career and family roles. It consists of confidence in the ability to integrate work and family roles, commitment towards having multiple roles, and feelings of autonomy regarding the ability to make choices about family and work roles for oneself (Weitzman, 1994). While aspects of the ATMRP construct overlap with attitudes towards *role-importance* and *role-sharing*, the attitudinal construct being discussed here, *role-planning*, will be represented by the belief that one knows how to plan for holding multiple roles (role-planning knowledge) and that it is important to begin to do so (role-planning involvement). Having the attitude that it is important to prepare for holding multiple roles may be related to anticipated work-family conflict in both positive and negative ways. Feeling like one knows how to plan for holding multiple roles may be associated

with less anticipated work-family conflict because individuals feel that they know how to start planning to balance those future roles. Alternatively, individuals who know more about how to plan for multiple roles may in fact anticipate more conflict because they have a heightened awareness of the complex demands associated with balancing work and family. Individuals who see a more urgent need to begin planning for holding multiple roles (role-planning involvement) may anticipate less conflict because they believe that they will be prepared for the demands of each role by the time that they enter them. On the other hand, individuals who feel the need to plan for their multiple roles might feel this way because they anticipate a great deal of conflict between their work and family roles.

Research Question 5: What is the relationship between attitude towards role-planning and anticipated work-family conflict?

Personal and Professional Plans and Anticipated Work-Family Conflict

In this portion of the paper, I consider how anticipated work-family conflict may be related to the plans that individuals make for their personal (e.g., when to marry, how many children to have) and professional (e.g., what medical specialization to enter) lives. First, I discuss the social cognitive theory of career development and how it provides a useful framework for thinking about why and how anticipated work-family conflict and future plans are likely to be related. I then discuss job/career choices and relationship/family choices separately in more detail, highlighting previous findings about their relationship to actual work-family conflict.

The social cognitive theory of career development sheds light onto why and how anticipated work-family conflict may relate to the career-related (and family-related) choices that individuals make (Lent et al., 1994). Before describing the theory in more detail, it is important to point out that the focus of this study is not on career and family decision-making, but rather on the potential correlates of anticipated work-family conflict. Therefore, the social cognitive theory of career development is presented as a rationale for why anticipated work-family conflict and plans may be related, rather than as a model to be tested.

The social cognitive theory of career development suggests that self-efficacy for certain careers and outcome expectations interact to predict the career paths that individuals will eventually select for themselves. Individuals will gravitate towards careers that they think they will be able to be successful in (self-efficacy) and that will lead to the outcomes that they desire (outcome expectations; Lent, Brown, & Hackett, 1994).

According to Lent et al. (1994), the outcome expectations that individuals hold are comprised of the outcomes that are expected to result from the participation in a given activity and the relative value of these outcomes for individuals. To the extent that individuals expect certain career paths to cause conflict between work and family and to the extent that individuals value avoiding conflict between work and family, the outcome expectations of different individuals will vary. According to the social cognitive career development theory, these differing outcome expectations will interact with self-efficacy to influence individuals' interests and their eventual career path (Lent et al., 1994). It is possible that such outcome expectations influence the family-related choices that

individuals make, as well. If individuals expect that certain family-related choices will increase their future work-family conflict and they value a lack of conflict, the logic of social cognitive theory suggests that they may also be likely to select particular personal paths for themselves.

The social cognitive theory of career development argues that a reciprocal relationship between choices and outcome expectations exists. As individuals proceed through the process of career development, they will adjust their outcome expectations in accordance with their experiences and select new experiences on the basis of their revised outcome expectations. Therefore, it is possible that the relationship between anticipated work-family conflict and work/family decisions will also be reciprocal. An example of this process might be a medical student who plans to become an Obstetrician and decides to talk to an Obstetrician about the pros and cons of this specialization. Upon talking with the Obstetrician, the medical student learns about the demanding and unpredictable hours of this specialization, and therefore anticipates work-family conflict. Because the medical student values having balance between work and family, she might (a) revise her career-related plans and consider entering Family Medicine because it has less demanding hours or (b) decide not to have children in order to avoid having conflict between being an Obstetrician and parenting. If she decides to enter Family Medicine instead, the medical student might pursue more information about this specialization which would then lead to a further revision of her outcome expectations, and so on. Thus, the reciprocal process between outcome expectations and career- and family-related decision-making starts over again.

Job/career plans. Anticipated work-family conflict may influence the choices that individuals make regarding their careers and jobs. Greenhaus, Callanan, and Godshalk (2000) have discussed the importance of work-family conflict in career decision-making throughout the lifespan. Researchers have shown that the employment expectations of students can influence their choices of courses and majors (Barnett et al., 2003). Additionally, attention to future work conditions (such as support for child care) may affect the career and job choices that students make (Barnett et al., 2003; Arnold, 1993; Covin & Brush, 1991; Levy, Sadovsky, & Troseth, 2000; Wheeler, Candib, & Martin, 1990). Individuals may choose specific jobs with certain features or they may select their career because of their overall compatibility with their goals in terms of the management of work and family lives.

Professional choices have also been shown to be related to actual work-family conflict. Individuals who are self-employed experience greater work-family conflict than those who are not (Parasurman & Simmers, 2001). Individuals who work non-traditional hours (e.g., weekends) and those who work irregular hours experience greater amounts of work-family conflict than individuals who work traditional and/or regular hours (Staines & Pleck, 1984). Lee, MacDermid, Williams, Buck and Leiba-O'Sullivan (2002) found that managers and professionals who worked a reduced-load experienced less conflict between work and family than those who did not.

Because the sample for this study consists of medical students, specific research that demonstrates a relationship between doctors' career-related choices and work-family conflict points to the importance of considering these variables in this study. Barnett and Gareis (2002) showed that doctors who worked longer hours experienced greater work-

family conflict. Some research has also investigated choice of medical specialization and the work/non-work interface. Schwartz et al. (1990) reported that medical students were more likely to select specializations that required fewer hours of work per week, allowed more time to pursue leisure activities, and had a decreased number of nights on call. These lifestyle-related decisions were found to predict choice of specialization more strongly than traditional influences on specialization choice, including prestige and income (Schwartz et al., 1990). Jarecky, Schwartz, Haley, and Donnelly (1991) found that physicians who changed specializations listed time to pursue leisure activities and family activities as an important factor in this decision. Dorsey, Jarjoura, and Rutecki (2003) found that more medical students selected specializations with a controllable lifestyle (i.e., greater control over work hours) as their first choice in 2002 than in 1996.

Based on the social cognitive theory of career development, evidence that thoughts about future roles influence career-related decision-making, and evidence that professional choices have been shown to be associated with actual work-family conflict, it is important to examine the relationship between anticipated work-family conflict and job/career choices. Research suggesting that choice of medical specialization may be influenced by factors associated with non-work life (e.g., time for leisure activities) provides a particularly compelling argument for the incorporation of work-related decisions in a study of the anticipated work-family conflict of medical students. In order to do this, this study investigates whether anticipated work-family conflict is related to the medical specializations and settings that individuals choose to enter and the demands of these specializations and settings (as perceived by the individuals who choose to go into them and as rated by medical doctors)

Research Question 6: What is the relationship between anticipated work-family conflict and job/career choices and levels of demand?

Relationship/family plans. According to the logic of social cognitive career development theory, anticipated work-family conflict may also have important implications for numerous non-work-related decisions. With regard to marital decisions, Livingston et al. (1996) write that "it is likely that young people may make life decisions such as the timing of marriage based on whether they anticipate conflict between work and family situations" (p.180). It is possible that other important decisions, such as the timing of child-bearing and the number of children desired may also be influenced by anticipated work-family conflict.

Research on actual work-family conflict has highlighted the importance of relationship- and family-related choices and work-family conflict. For example, Friedman and Greenhaus (2000) found that women who were parents felt that their family interfered with their career more than women who were not parents. Also, both men and women with children in pre-school experienced more conflict between career and family than individuals who did not have children in pre-school (Friedman & Greenhaus, 2000). Women in dual-earner couples were more likely to feel that their family-life interferes with work than both men in dual-earner couples and women not in dual-earner couples (Friedman & Greenhaus, 2000)

In this study, the relationship between relationship plans (e.g., whether or not to marry/partner, anticipated age of marriage/partnership), family plans (e.g., whether or not

to have children, anticipated age of childbearing), and childcare-related plans (e.g., who will provide childcare) are examined in relation to anticipated work-family conflict. Again, this relationship is likely to be reciprocal over time, according to the social cognitive career development theory described above. Relationship/family plans will influence anticipated work-family conflict and anticipated work-family conflict will influence relationship/family plans, as well. As discussed earlier, the purpose of this study is an initial investigation of how plans and anticipated conflict are related, rather than a test of the process by which they influence one another over time.

Research Question 7: What is the relationship between anticipated work-family conflict and relationship/family plans?

Anticipated and Actual Work-Family Conflict

One possible outcome of anticipated work-family conflict is actual work-family conflict. No research to date has examined whether individuals who anticipate more conflict actually experience it. The nature of this relationship is unclear and may depend on the time span between the two measures. It is possible that individuals do not have an accurate sense of how much work-family conflict they will actually experience. There may, in fact, be no relationship between anticipated work-family conflict and subsequent actual work-family conflict for a given job. Young adults may not have a sense of the challenges that they will face integrating their future roles. For example, Hallett and Gilbert (1997) note that the college-aged women in their study thought that "neither combining work and family...nor advancing their careers would be particularly conflictual for them" and point out that this may be due to the fact that these challenges

are too distinct from the issues that they face on a daily basis (p.319). Thinking about work and family is not yet a concern for these individuals so they experience little anticipation of conflict. They may not realize the difficulties associated with parenting while working full-time, arranging reliable and satisfactory childcare, or the challenges of being in a dual-career couple. Therefore, they may not actually anticipate conflict, although it may be a significant challenge for them in their future.

Additionally, if there is a relationship, theory at this point does not tell us whether anticipated work-family conflict it is likely to be positively or negatively related to actual work-family conflict. It is possible that individuals are accurately assessing the amount of conflict they will experience in the future, such that individuals who anticipate more conflict will actually experience more conflict. Alternatively, it is possible that individuals who anticipate more work-family conflict make family- and work-related choices that will reduce the conflict they experience. Individuals who anticipate a high degree of conflict may choose to delay childbirth or work part-time in order to eliminate the conflict that they anticipate and thus may experience less actual work-family conflict. In this scenario, anticipated conflict is acting like a "wake-up call" that work-family issues need to be considered when making important decisions. Therefore, individuals who anticipate more conflict may actually experience less of it.

Further, the relationship between anticipated work-family conflict and actual work-family conflict may be different for different individuals. For example, individuals considering a job change within a particular field might be better "anticipators" of future conflict than those who are entering into the job market for the first time. This nature and direction of this relationship is important to understand because of the negative outcomes

that have been associated with actual work-family conflict, such as increased depression (Frone, Russell, & Cooper, 1991), decreased general life satisfaction (Kossek & Ozeki, 1998), psychological distress (Allen, Herst, Bruck, & Sutton, 2000), self-reported poor physical health (Grzywacz & Marks, 2000) and increased alcohol use (Frone et al., 1993). Unfortunately, the cross-sectional nature of this study will not allow for analysis of this research question. However, a longitudinal follow-up of study participants is planned in order to examine if and how anticipated work-family conflict translates into actual work-family conflict.

Future Research Question: What is the relationship between anticipated work-family conflict and actual work-family conflict?

Anticipated Work-Family Positive Spillover

Recent research on actual work-family conflict has begun to explore the possibility that engaging in work and family roles may actually enhance one's ability to meet obligations in the other domain (often called work-family enrichment, facilitation, or positive spillover (cf., Hammer et al., 2001; Rothbard, 2001; Grzywacz & Bass, 2003)). Rothbard (2001) writes that, "The enrichment argument suggests that a greater number of role commitments provide benefits to individuals rather than draining them. In fact, the enrichment argument directly challenges the notion that people have fixed resources and proposes, instead, that attention and energy can expand" (p.656). Some researchers have chosen to examine this work-family positive spillover from a bidirectional perspective, in a similar fashion to the directionality used in the work-family conflict literature (cf., Grzywacz & Marks, 2000). Work-to-family positive spillover is

when positive aspects of the work domain "spillover" in to the family domain while family-to-work positive spillover is the opposite.

Researchers have found that work-family positive spillover has a number of important predictors and consequences. For example, greater decision latitude at work, more supportive coworkers, and more hours at work have been associated with more work-to-family positive spillover while having a more supportive spouse and being married were associated with more family-to-work positive spillover (Grzywacz & Marks, 2000). Researchers have also shown the positive outcomes that can result when individuals experience positive spillover between their work and family lives. For example, Brockwood (2002) found that individuals with higher levels of work-to-family positive spillover experienced greater family satisfaction. Stephens, Franks and Atienza (1997) found positive spillover from work-to-family to be associated with greater psychological well-being. Grzywacz (2000) also found that individuals with greater positive spillover from family-to-work experienced fewer chronic health problems and more positive well-being.

Kirchmeyer (1993) suggested that work-family conflict and work-family positive spillover are most likely two separate constructs that can occur at the same time. In accordance with this, Grzywacz and Marks (2000) found that positive spillover from work-to-family and positive spillover from family-to-work were uncorrelated with both directions of work-family conflict. To date, limited research has examined whether there may be multiple types of positive spillover similar to the types of work-family conflict (time-, behavior-, and strain-based conflict). One study to do so was conducted by Hanson et al. (2003). The authors suggested that positive spillover may result from the

transference of positive moods from one domain to another, when the values adopted in one domain guide behavior in the other domain, when the skills learned in one domain are useful in the other domain, and when the behaviors utilized in one domain increase effectiveness in the other domain (Hanson, Colton, & Hammer, 2003). These four sub-types of possible anticipated work-family positive spillover have not yet been widely addressed in the literature on work-family engagement nor has a measure of them been validated, unlike the three types of work-family conflict. Recently, a measure of work-family positive spillover was developed by Carlson, Kacmar, Wayne, and Grzywacz (in press). These authors provide a validated six-dimensional measure of positive spillover. Although the Carlson et al. (in press) study was conducted after data was collected for this study, their findings have implications for the results of the current study. The Carlson et al. (in press) study is discussed in more detail in the Discussion section of this paper.

The concept of work-family positive spillover might also have an "anticipated" parallel. That is, do people believe that engagement in the work role will enhance their ability to be successful in the family role (and vice versa)? For example, do medical students feel that by having a career that they enjoy and by helping others they can be more loving and happy family members? Further, do they believe that satisfying family lives will spillover into their ability to be a successful doctor? Due to the fact that the existence of different types of positive spillover were not well-researched prior to the data collection in this study, a more general measure of anticipated work-family positive spillover that includes both directions of spillover which have been more widely

supported by the literature (work-to-family and family-to-work) but not distinct types of spillover was used.

It is interesting to consider how the antecedents discussed (attitudes, demographics, and personality) are related to anticipated work-family positive spillover. Do individuals with positive core self-evaluations anticipate more positive spillover than others? Do individuals who place a large importance on having multiple roles anticipate more spillover? Further, the relationship between anticipated positive spillover and relationship/family and job/career plans is considered. Is choice of medical specialization associated with degree of anticipated positive spillover? Do individuals who plan to delay marriage or child-bearing anticipate greater or less positive spillover? Importantly, what is the relationship between anticipated work-family conflict and anticipated work-family positive spillover? Because this construct has never been studied before, it is difficult to make directional hypotheses regarding the nature of these relationships. However, all analyses conducted for anticipated work-family conflict will be replicated with anticipated work-family positive spillover.

Research Question 8: How is anticipated work-family positive spillover related to the predictors and outcomes in the model presented?

METHOD

Procedure

The sample for this study was comprised of medical students of all years at Michigan State University in the College of Human Medicine (CHM; 433 students enrolled at the time of data collection) and the College of Osteopathic Medicine (COM; 526 students enrolled at the time of data collection). Medical students were selected as the target sample for this study because they are required to make concrete career decisions prior to leaving medical school (i.e., which medical specialization to enter). Further, there are a limited number of discrete specializations available for selection. For these reasons, medical students are a practical sample for examining career decision-making, as opposed to undergraduates or working employees who select jobs and careers from a broader range of options, thus limiting the ability to make comparisons across participant career choices.

For the 1st year medical students, one sit-down, paper-and-pencil data collection session was conducted during Orientation for each of the medical schools. Attendance at these events was not mandatory, but highly recommended. Survey completion was voluntary and anonymous.

A link to a web-based questionnaire was sent via email to 2nd, 3rd, and 4th year medical students from both the COM and CHM. This email was also sent to COM 1st students. The email described the nature of the study and explained how students could participate. Participation in the survey was voluntary and confidentiality of responses

was assured to the participants. The recruitment emails, study consent form, and survey introduction can be found in Appendices A, B, and C, respectively.

Both the web-survey and paper-and-pencil version took approximately 10-20 minutes to complete. Time to complete the web-based survey was tracked. The mean time to complete the survey was 17.62 minutes (SD = 11.55). The median completion time was 15 minutes. The mean may be skewed upwards because some participants may have left their computers for an extended period of time and returned to take the survey later without logging out of the survey system.

A raffle for a $50 gift certificate to a medical textbook store was conducted. Everyone who completed the survey was entered into the raffle. At the end of the survey, students were asked for permission to re-contact them in the future for longitudinal follow-up (not part of this research proposal). The permission to re-contact form can be found in Appendix D.

Method of Administration (Paper-and-Pencil vs. Web-Based)

Method of administration is confounded with year in school since only 1st year students completed the paper-and-pencil version of the survey. Because of the high response rate expected through these sit-down administrations during Orientation sessions, it was determined that the benefits of confounding method of administration and year in school outweighed the potential costs. The extent to which the method of administration was associated with responses to the main study variables was examined (1 = paper-and-pencil, 2 = web-based survey). Method of administration was correlated with role-sharing regarding childcare (r = .15, p < .01), occupational role importance (r = -.18, p < .01), role-planning involvement (r = .11, p < .05), the belief that one's

specialization helps with work-family balance ($r = .10, p < .05$), and time-based work-interference-with-family ($r = .11, p < .05$). Because method of administration and year in school are confounded in this study, an examination of whether method of administration explained incremental variance in the variables above when controlling for year in school was conducted. For role-sharing childcare, method of administration explained a small but significant amount of incremental variance above and beyond the effects of year in school ($R^2\Delta = .01, p < .05$). For occupational role-importance, role-planning involvement, the belief that one's specialization will help/hinder their ability to achieve balance, and time-based family-interference-with-work, method of administration did not explain incremental variance above and beyond the effects of year in school. These results suggest that, for the most part, the relationships between method of administration and the key study variables were due to the fact that method was correlated with year in school. Therefore, the effects of method of administration are not likely to be problematic in this study and are not considered further.

Participants

A total of 470 medical students participated in this study. In the COM, 122 1st year students completed the paper-and-pencil survey (out of a total of 148 1st year students; 82.4%). In the CHM, 103 participants (out of a total of 106 1st year students; 97.2%) completed the paper-and-pencil survey.

In the CHM, 75 students who were not in their 1st year took the web-based survey (out of a total of 327 2nd, 3rd, and 4th year students; 22.9%). In the COM, 169 participants took the web-based survey (out of a total of 378 2nd, 3rd, and 4th year students, 44.7%). 32 COM students and 1 individual who did not identify his/her school who took the web-

based survey identified themselves as first-year students. The web-survey data for these individuals was dropped from further analysis because it was not possible to determine whether or not all of these 1st year students also took the paper-and-pencil version of the survey (at least 16 people can be identified as having taken the survey twice since they included their name on their web-survey). Therefore, the final number of COM students completing the web-survey is 137. The final total sample size is 437.

Demographic information is presented for each of the schools and for the total sample in Table 1.

Table 1

Demographic Information by Medical School

	COM	CHM	Total
Final number of participants	259	178	437
Percentages			
Overall response rate	49.2	33.8	45.6
1st year participants	47.1	57.9	51.5
2nd year participants	22.4	17.4	20.4
3rd year participants	13.5	13.5	14.6
4th year participants	17.0	11.2	17.8
Age: 22 or younger	16.6	19.7	17.8
Age: 23 – 24	32.4	30.9	31.8
Age: 25 – 26	22.0	25.3	23.3
Age: 27 – 28	9.3	13.5	11.0
Age: 29 or older	19.7	10.7	16.0
Female	56.6	62.4	58.9
Currently married	29.0	32.0	30.2
Having one or more children that live with them	13.2	10.1	11.9
Of parents, % with child under age 5	76.3	85.0	79.3
African-American, Black	2.7	7.3	4.6
Asian	4.7	9.6	6.7
Hispanic	2.3	6.7	4.1
Caucasian, White	81.0	69.7	76.4

Measures

Measures were administered in the order they are described. Scale reliabilities are along the diagonal of Table 3. When used, item/scale abbreviations are presented in italics in parentheses next to the construct they represent.

Demographics. The demographics assessed were: age, year in school (*year*), gender, ethnicity, marital status (*marriage*) and parental status (*parent*), and age of youngest child. Demographic items are presented in Appendix E. Age and year are

continuous variables. Gender was coded as 0 = male, 1 = female. Due to small numbers of minorities from distinct ethnic subgroups, minority (non-White) and multiethnic individuals were categorized together and analyses were conducted comparing White and non-White participants (0 = White, 1 = Minority/Multiethnic). 23 individuals who self-identified as "other" for ethnicity or did not respond to this question were not included in these analyses. For marriage, responses were coded as either not currently married/partnered (0) or currently married/partnered (1). Parent was coded into two categories: individuals who never had children (0) and individuals who have children living with them (1). Because only 6 individuals had children who were not living with them (e.g., given up for adoption, other parent has full custody), these individuals were not included in further analyses using this variable. Age of youngest child was requested for participants who had children. Because only 57 participants have children, this variable was not included in further analyses.

Relationship and family plans. Participants indicated whether they planned to marry or have a life-long partnership. This variable (*marry*) was coded as 0 = yes and 1 = other (no, unsure, or haven't thought about it). Participants were also asked to indicate at what age they plan to marry/partner (*age marry*). This was treated as a continuous variable and only those individuals who identified an age of expected marriage were included ($N = 244$).

For parenting-related plans, individuals were asked whether they plan to have children (0 = other (no, unsure, haven't thought about it), 1 = yes; *children*) and how many children they plan to have (*n children*). Number of children planned was treated as a continuous variable with the responses of only those individuals who indicated the

number of children that they plan to have included ($N = 384$). Participants were also asked at what age they plan to start having children (*age children*). Again, this was treated as a continuous variable with only those individuals who indicated the age at which they plan start having children included ($N = 244$). Participants were asked to indicate whether they expect to have other people besides themselves and their spouse provide regular childcare (*other care*). This was coded as 0 = yes, 1 = other (no, unsure, or haven't thought about it; $N = 426$). The type of childcare that participants intend to use during the hours that they work was also requested. Participants were able to select more than one option and each option was recoded as 0 (participant does not plan to use this form of childcare) or 1 (participate does plan to use this form of childcare). When analyzing these results, we considered individuals who do not plan to have their spouse provide childcare (0) versus those that do (1; $N = 437$; *spouse care*). Participants were asked how much they expected themselves and their partner to work once they had children. Responses were coded to indicate whether the individual planned to work full-time (0) or did not plan to work full-time (1; $N = 299$). Individuals who did not specify whether they planned to work full-time were not included in these analyses. Participants were also asked to indicate their certainty that the relationship (*relate. certain*) and family plans (*family certain*) they identified will actually happen (on a 5-point scale from "very unsure" to "very sure"). See Appendix F for relationship and family plan items.

Job/career plans. Participants were asked which specialization they plan to go into (rating their top two most likely choices) and which setting they plan to practice in. Participants were also asked to indicate what setting they plan to work in. Certainty

regarding medical career plans was also rated on a 5-point scale from "very unsure" to "very sure"). See Appendix G for job plan items.

Specialization ratings. Participants were asked to respond to nine questions about the specialization that they rated as their first choice. These questions assessed the work-family balance demands of the specialization. Response options for eight out of the nine items were on a 5-point scale ranging from "less" to "more." For one item, the response option was on a 5-point scale from "slower than" to "faster than". Specialization rating items can be found in Appendix H.

An exploratory factor analysis using principal axis factoring with a varimax rotation yielded two factors. The first factor includes items referring to the time-based demands (i.e., hours per week, predictability of hours, control over hours, and hours on call) of the specialization. The second factor includes items referring to demands on-the-job, including behavioral- (i.e., following protocols, behavioral control) and strain-based demands (i.e., emotional challenges, difficult decisions, and pace of work) of the specialization. Therefore, two scales were created reflecting demands on time (4 items; *hours demands (self-ratings);* $\alpha = .82$) and the physical and psychological demands at work (5 items; *on-the-job demands (self-ratings)*; $\alpha = .75$). The intercorrelations among items and factor loadings from the exploratory factor analysis can be found in Appendix I.

Participants were also asked to answer a single item regarding the extent to which the specialization that they chose as their first choice will help them or hinder them from experiencing an ideal balance between work and family life (*help/hinder*). Response

options were on a 5-point scale from "it will hinder my ability to have balance a lot" to "it will help my ability to have balance a lot".

Anticipated work-family conflict. The 18-item work-family conflict scale created by Carlson, Kacmar, and Williams (2000) was altered to reflect the measurement of "anticipated" conflict. Therefore, all items were rewritten in a future tense. Six types of anticipated work-family conflict were measured including anticipated behavior-based work-interference-with-family (*behavior WIF*), anticipated behavior-based family-interference-with-work (*behavior FIW*), anticipated strain-based work-interference-with-family (*strain WIF*), anticipated strain-based family-interference-with-work (*strain FIW*), anticipated time-based work-interference-with-family (*time WIF*) and anticipated time-based family-interference-with-work (*time FIW*). See Appendix J for the anticipated work-family conflict scale.

Carlson et al. (2000) found that a structural equation model with six correlated latent factors fit their data best. A confirmatory factor analysis was conducted to examine whether a six factor structure fit the data collected for this study best, as well. Listwise deletion was used to remove 25 participants who had missing data from the data-set. A six factor model was compared to a three factor model (which reflected time-, strain-, and behavior-based conflict – ignoring direction of conflict), a two factor model (work-interference with family and family-interference-with-work – ignoring type of conflict), and a unidimensional model (all work-family conflict items). Factors were allowed to correlate. Table 2 shows the fit statistics of the four models. Results indicate that the six dimensional model of anticipated work-family conflict fit the data significantly better than the alternative models ($p < .01$ for all comparisons). This CFA

uses the same methods as Carlson et al. (2000) and replicates their findings for the anticipated work-family conflict scale.

Table 2

Estimates of Fit Indices for Anticipated Work-Family Conflict

	χ^2	*Df*	*P*	Comparative Fit Index (CFI)	Root mean square error of approximation (RMSEA)
6-dimensional model	202.87	120	.00	.98	.04
3-dimensional model	676.63	132	.00	.83	.10
2-dimensional model	1742.75	134	.00	.51	.17
Unidimensional model	1871.96	135	.00	.47	.18

Based on the findings from the confirmatory factor analysis, scale scores for each of the six dimensions were created. The reliability of the six scales range from $\alpha = .75$ (time FIW) to $\alpha = .88$ (strain FIW).

Anticipated work-family positive spillover. The work-family positive spillover scale was adapted from Sumer and Knight (2001). Items were rewritten in the future tense to reflect an "anticipated" scenario. The original scale consisted of nine items, four reflecting positive spillover from work-to-family and five items reflecting spillover from family-to-work. An additional three items were added to counter-balance the direction of the existing items and to hopefully raise the alpha levels of the two sub-scales (both of which were $\alpha = .68$ in the original study). Therefore, the final scale consisted of 12 items (6 reflecting each direction of spillover). See Appendix K for work-family positive spillover items. Response options were on a 5-point scale ranging from "strongly disagree" to "strongly agree."

An exploratory factor analysis using principal axis factoring with a varimax rotation yielded three factors. It was not possible to discern any content differences across factors. Importantly, the first factor explained more than three times the variance of the second or third factor. Based on these findings, a unidimensional scale was created (*positive spillover*). The reliability of the final scale was $\alpha = .86$. See Appendix L for the intercorrelations among items and the factor loadings from the exploratory factor analysis.

Role-importance. The measure of role-importance was adopted from Amatea, Cross, Clark, and Bobby (1986). Their Life Role Salience Scale (LRSS) was used by Kerpelman and Schvaneveldt (1999) and is one of the more prominent measures of role-importance. According to the Amatea et al. (1986) article, two aspects of role expectations were assessed by the scales: (a) the personal importance or value attributed to participation in a particular role and (b) the intended level of commitment of personal time and energy resource to enactment of a role. The attitudinal construct assessed here (as presented earlier) is focused on role-importance (not role-commitment). Participants were asked about their plans for engaging in future roles in a separate section and their certainty of these decisions was assessed. It would have been redundant to include a measure of role-commitment here and thus only role-importance is measured by this scale. Further, the LRSS addresses four major life roles – the occupation, the marital, the parental, and the homecare roles. However, the literature on work and non-work conflict focuses mainly on the conflict between work and family roles and does not address those associated with homecare. Therefore, in keeping in line with current research, role importance associated with homecare was not measured. The LRSS was designed to

assess the role importance of men and women currently engaged in and those anticipating the different life roles.

Participants completed a role-importance scale for each of the 3 relevant roles, the occupational (5 items), relationship (e.g., marriage/partnership; 5 items), and parental (5 items) roles. Response-options were on a 5-point scale ranging from "strongly disagree" to "strongly agree". See Appendix M for role-importance items.

All 15 items were entered into an exploratory factor analysis using principal axis factoring with a varimax rotation. Five factors were extracted. The first factor consisted of items reflecting relationship importance. The second factor consisted of items reflecting the importance of the parental role. The third factor consisted of items reflecting relationship and parental role importance, with high cross-loadings on the first and second factors. The fourth and fifth factors consisted of items reflecting occupational role importance. Because items in the third factor had high cross-loadings with items in the first and second factor, a second exploratory factor analysis was conducted using principal axis factoring with a varimax rotation forcing four factors. In this case, those items that had high cross-loadings onto the third factor loaded onto the first (relationship role-importance) and second (parental role-importance) factors only. Therefore, two scales reflecting these two constructs were created. One item (relationship role-importance item 1) had had high cross-loadings on the first and second factor. Because its content was related to the first factor and it had a slightly higher loading onto the first factor, it was included in the relationship role-importance scale. The third factor included the two items focused on career satisfaction while the fourth factor included the three items focused on career achievement/status. Because the two career satisfaction

importance items (factor 3) are most similar to the importance items for the other roles and because the two item scale using just the career satisfaction importance items has a reliability of $\alpha = .73$ while scales using the other occupational importance items have inadequate reliabilities, this scale was used for further analyses examining occupational role importance (*RI – occupational*). Mean scale scores were also created for the parental (*RI – parenting;* $\alpha = .80$) and relationship role importance (*RI – relationship*; $\alpha = .88$) items (5 items each). See Appendix N for the intercorrelations among items and the factor loadings from both exploratory factor analyses.

Role-sharing. The scales used to measure role-sharing were adapted from the Orientation to Occupational-Family Integration (OOFI) Scale developed by Gilbert et al. (1991). The complete measure consists of three separate scales that reflect three types of orientations towards the combining of occupational and family roles. The sub-scale of interest is the role-sharing scale (the OOFI-RS). Items in this scale reflect the degree to which an individual plans to share responsibilities with a prospective partner. This scale was altered for the purposes of this study. First, the original scale asks the same items multiple times reflecting different scenarios (after marriage with children and after marriage before or with children). This distinction seems unnecessary and repetitive due to the fact that the second scenario is inclusive of the first. Also, items were re-worded to include both spouse and partner rather than just spouse to reflect the possibility of participants having long-term same-sex relationships. Importantly, original items confounded the issue of having both partners work full-time and sharing responsibilities. Because a question about how much each partner will work is included as a relationships/family plans item, this part was eliminated from each question. Also, rather

than listing a domain of responsibilities (e.g., childcare) and then having a number of examples of responsibilities from that domain, the questions were rewritten such that each responsibility became its own item and participants are asked to rate how they intend to share that role with their spouse/partner.

Items were rescored for data analysis. Response options 1 and 2 were rescored to be equal to 1, 3 was rescored to be equal to 2, 4 and 5 were rescored to be equal to 3, and 6 was scored as missing data. This results in a continuous variable ranging from 1 (participant will take the majority of the responsibility for this) to 3 (participant will take the minority of the responsibility for this) A score of 2 indicates equal role-sharing. See Appendix O for the role-sharing items.

An exploratory factor analysis of the recoded items was conducted using principal axis factoring with a varimax rotation and three factors were extracted. The first factor consisted of six items associated with doing daily chores and two negatively loading items (bringing in income and maintaining our home/apartment – e.g., painting, yard work). The second factor consisted of four items associated with child involvement (e.g., supporting our children emotionally). The third factor consisted of items about maintaining the finances (e.g., managing the household budget). Based on these results, we created three scale scores (daily chores, child involvement, and finances). The two items that loaded negatively on the first factor (income and maintenance) were not included in these scales. The reliability of the daily chores scale is (*RS – chores*) adequate ($\alpha = .84$). However, the reliabilities for the child involvement (*RS – childcare*) and finances scales (*RS – finances*) were lower than is generally acceptable ($\alpha = .58$ and α

= .57, respectively). See Appendix P for the item intercorrelations and factor loadings from the exploratory factor analysis.

Role-planning. The role-planning items were adopted from the Attitudes Towards Multiple Role Planning (ATMRP) Scale created by Weitzman and Fitzgerald (1996). The ATMRP Scale includes five sub-scales: knowledge/certainty, commitment to multiple roles, independence, involvement, and flexibility/compromise. As discussed previously, role-planning in this study was conceptualized as the belief that it is important to think about and plan for having multiple roles. Two of the subscales of the ATMRP scale reflect this attitude towards role-planning. First, the "knowledge/certainty" subscale is defined as "self-perceptions regarding the degree of knowledge about multiple role planning and certainty of one's ability to plan for multiple roles in a realistic fashion." The second relevant scale is "involvement" and it is defined as "perceptions of the immediacy of the need to engage in multiple role planning" (Weitzman & Fitzgerald, 1996). The other scales do not directly tap into the issue of planning, but instead reflect being committed to having multiple roles rather than planning for them, making decisions about future roles independently or with the advice of others, and being willing to compromise around future roles. They are not reflective of intent to plan for future roles, but instead are more peripheral to this issue. These are issues related to planning but do not reflect planning behaviors in and of themselves. Therefore, only the knowledge/certainty scale (10 items) and the involvement scale (10 items) were included in this study. Items were rated on a 5-point scale from "strongly disagree" to "strongly agree." See Appendix Q for role-planning items.

An exploratory factor analysis using principal axis factoring with a varimax rotation yielded three factors. No items had their highest loading on the third factor. The first factor consisted of all of the knowledge/certainty items and the second factor consisted of all of the involvement items. Therefore, the two subscales were created as the mean of the scores on the items that comprise them (*RP – knowledge* (α = .90) and *RP – involvement* (α = .87), respectively). See Appendix R for the item intercorrelations and factor loadings from the exploratory factor analysis.

Core self-evaluations. Core self-evaluations were measured using the Core Self-Evaluations Scale (CSES) developed by Judge, Erez, Bono, and Thoresen (2003). The CSES is a unidimensional 12-item measure representing four more specific core traits (generalized self-esteem, self-efficacy, neuroticism, and locus of control). Appendix S for the core self-evaluations scale.

An exploratory factor analysis using principal axis factoring with a varimax rotation was conducted. It yielded two factors. These factors represent items that were positively word (factor 1) and negatively word (these items were recoded; factor 2). Because the scale has been demonstrated to be unidimensional in prior research, and the reliability of the unidimensional scale is adequate in this data set (α = .80), and the two factors were not related to item content, a single scale was created of all core self-evaluation items. See Appendix T for the item intercorrelations and factor loadings from the exploratory factor analysis.

*Definition of family.*At the end of the survey, participants were asked to identify those types of individuals that they included in their definition of family. 38.4% of participants defined family as the nuclear family (including themselves, a spouse, and

children – or the possibility of children). For 49.9% of participants, their definition of family included extended family, such as the participants' parents, grandparents, or siblings. 11.7% of participants provided a different type of answer such as "a group of people who share their lives by choice and support each other thru thick and thin" or did not answer this question. This item was included to gain insight into what individuals had in mind when responding to the other survey items. Because participant responses were very similar and reflected, for the most part, traditional conceptualizations of family, this item was not incorporated into any further analyses. This item can be found in Appendix U.

Expert ratings of specializations/settings. This measure was given to expert raters (medical doctors). A total of 23 medical specializations and 4 work settings were rated by the doctors. Note that doctors rated the demands of specializations *and* settings whereas participants only rated the demands of their top choice of specialization (not setting). To clarify, doctors rated specializations and settings separately, not each specialization within each setting. Two surveys were created so that no rater had to rate all 23 specializations and 4 settings. One survey consisted of rating 12 specializations and 2 settings. The other survey consisted of rating 11 specializations and 2 settings.

12 experts fully completed the 12-specialization survey while 15 experts fully completed the 11-specialization survey. Only the data from raters who completed the entire survey were included for analysis. Experts were recruited through informal contacts and emails sent to medical faculty at Michigan State University and the University of Michigan. The surveys were completed online. Participants were directed

to one of the two surveys based on an Access ID that they received in the recruiting email and entered upon visiting the study website.

Each specialization/setting was rated on nine items (the same nine items that the medical students used to rate their first choice of medical specialization). A scale score for the hours (4-items; *hours demands (expert-ratings)*) and on-the-job demands (5-items; *on-the-job demands (expert-ratings)*) of each specialization/setting was created by averaging the ratings provided by the doctors for the items that comprised each scale (see Specialization Ratings for participants above). The average internal-consistency reliability of the hours demands scale across the 23 specializations was $\alpha = .70$ and across the 4 settings was $\alpha = .76$. The average internal-consistency reliability of the on-the-job demands scale across the 23 specializations was $\alpha = .70$ and across the 4 settings was $\alpha = .70$.

Each participant received an expert rating score for the hours and on-the-job demands that corresponded with their first choice of specialization and setting. See Appendix V for an example of an expert-rating task for a specialization and a setting. The avera

RESULTS

Results are organized according to Research Question. First, Research Questions 1 through 5 address the relationship between the predictors of anticipated work-family conflict (demographics, core self-evaluations, and attitudes) and the six forms of anticipated work-family conflict. Next, Research Questions 6 and 7 focus on the relationship between anticipated work-family conflict and medical specialization/setting and relationship/family plans. Finally, Research Question 8 replicates the analyses from Research Questions 1 – 7 using anticipated work-family *positive spillover* as the focal construct, rather than the six forms of anticipated work-family conflict.

Table 3 presents the means, standard deviations, and reliabilities for key study variables. Note that individuals anticipated a great deal of work-family positive spillover and that there was low variance on this scale. Also, participants had fairly high core self-evaluations (3.66 out of 5). Again, this scale also had low variance.

Table 3

Correlations Among Study Variables

	Mean	*SD*	1	2	3	4	5	6	7	8	9	10
1. Core Self-Evaluations	3.66	0.47	(.80)									
2. Role Sharing - Chores	2.13	0.49	**.15**	(.84)								
3. Role Sharing - Childcare	2.04	0.24	.01	.40	(.58)							
4. Role Sharing - Finances	1.93	0.51	**-.11**	-.08	**.12**	(.57)						
5. Role Importance - Parenting	4.24	0.69	.00	.00	-.03	.02	(.80)					
6. Role Importance - Relationship	3.77	0.86	.02	.09	**-.10**	.09	**.45**	(.88)				
7. Role Importance - Occupational	2.79	0.98	-.01	-.05	-.05	-.09	**-.22**	**-.15**	(.73)			
8. Role Planning - Knowledge	3.14	0.74	**.36**	.03	-.09	-.09	.06	.04	**-.11**	(.90)		
9. Role Planning - Involvement	3.35	0.70	.10	.08	**.10**	.02	**.26**	**.17**	**-.27**	**.13**	(.87)	
10. On-the-job Demands(self-ratings)	3.10	0.68	-.01	**.15**	.08	-.05	.06	.07	.06	-.01	.07	(.75)
11. Hours Demands (self-ratings)	2.77	0.90	-.04	**.12**	.07	-.04	.00	.02	**.13**	**-.19**	-.09	**.31**
12. Helps/Hinders	3.22	1.26	**.11**	**-.11**	**-.17**	.00	.04	.05	**-.14**	**.30**	.09	**-.23**
13. Behavior WIF[a]	2.30	0.78	**-.12**	.03	.01	-.03	.00	.01	.08	**-.15**	.02	.10
14. Behavior FIW[b]	2.21	0.72	**-.16**	-.03	.03	-.01	-.07	-.08	**.10**	**-.25**	-.09	**.11**
15. Strain WIF[a]	2.25	0.77	**-.31**	.09	.10	-.04	**-.10**	-.07	**.20**	**-.38**	-.03	**.14**
16. Strain FIW[b]	1.93	0.62	**-.32**	-.03	-.02	.04	-.07	-.02	**.14**	**-.27**	-.06	.05
17. Time WIF[a]	3.27	0.82	**-.15**	**.25**	**.24**	.01	.03	.07	.09	**-.34**	.07	**.21**
18. Time FIW[b]	2.86	0.75	**-.13**	.02	.03	.06	**.10**	**.12**	**-.17**	**-.14**	.09	.04
19. Positive Spillover	4.00	0.46	**.18**	-.03	.01	-.04	**.17**	**.14**	-.05	**.23**	**.16**	.04

Note. Ratings scale 1 – 5 for all variables above. When available, reliability (Cronbach's alpha) is presented in parentheses along the main diagonal. Ns > 392. Correlations that are significant at $p < .05$ are presented in bold. Correlations with $r \geq |.099|$ are significant at $p < .05$ and $r \geq |.130|$ are significant at $p < .01$.

[a]WIF = Work-Interference-with-Family. [b]FIW = Family-Interference-with-Work.

Table 3 (cont'd)

	11	12	13	14	15	16	17	18	19	20	21
20. Age	.01	.04	.07	.01	.06	**.10**	.01	.05	-.09	-	
21. Year in School	-.04	**.13**	-.04	-.03	-.04	-.06	-.05	.06	-.03	**.43**	-
22. Gender	-.05	.07	**-.12**	-.04	.00	-.04	**-.13**	-.02	.07	-.07	.07
23. Ethnicity	.04	-.04	.09	.07	.09	**.17**	-.01	-.04	-.05	.08	**-.17**
24. Marital Status	-.02	.03	-.02	**-.12**	-.06	-.09	.07	**.08**	.09	**.37**	**.27**
25. Parental Status	.00	.06	.08	-.05	-.06	.01	-.06	.04	.02	**.40**	**.22**

Table 3 (cont'd)

	Mean	*SD*	1	2	3	4	5	6	7	8	9	10
20. Age	2.76	1.31	-.05	**.11**	.01	-.04	-.06	-.07	-.00	**.12**	**.13**	.03
21. Year in School	1.91	1.11	-.03	-.00	**.10**	.03	-.00	-.07	**-.19**	.04	**.11**	-.03
22. Gender	1.59	.49	**-.11**	**-.52**	-.08	**.16**	-.09	**-.11**	.00	**-.10**	.09	**-.10**
23. Ethnicity	1.19	.40	-.05	-.01	-.04	.00	.04	-.01	**.11**	.03	-.01	.04
24. Marital Status	1.31	.46	.03	**.19**	**.14**	.07	**.12**	**.19**	**-.21**	**.18**	**.32**	.04
25. Parental Status	1.12	.33	.02	**.13**	.06	.04	**.22**	.08	**-.16**	**.21**	**.25**	.07

Table 3 (cont'd)

	22	23	24	25
20. Age				
21. Year in School				
22. Gender	-			
23. Ethnicity	.01	-		
24. Marital Status	-.08	-.10	-	
25. Parental Status	-.08	-.05	**.53**	-

Research Question 1: Demographics and Anticipated Work-Family Conflict

As can be seen in Table 4, demographics were largely uncorrelated with anticipated work-family conflict. Because year in school and parental status were uncorrelated with any of the six forms of anticipated work-family conflict, they were not considered in further analyses that include demographics. Female medical students anticipate less behavior-based work-interference-with-family and time-based work-interference-with-family than male students.

Table 4

Relationship between Demographics and Anticipated Work-Family Conflict

	Age	Year	Gender	Ethnicity	Marriage	Parent
Behavior WIF[a]	.07	-.04	**-.12**	.09	-.02	.08
Behavior FIW[b]	.01	-.03	-.04	.07	**-.12**	-.05
Strain WIF[a]	.06	-.04	.00	.09	-.06	-.06
Strain FIW[b]	**.10**	-.06	-.04	**.17**	-.09	.01
Time WIF[a]	.01	-.05	**-.13**	-.01	.07	-.06
Time FIW[b]	.05	.06	-.02	-.04	.08	.04

Note. Ns > 406. Correlations that are significant at $p < .05$ are presented in bold. Correlations with $r \geq |.10|$ are significant at $p < .05$ and $r \geq |.13|$ are significant at $p < .01$.

[a]WIF = Work-Interference-with-Family. [b]FIW = Family-Interference-with-Work.

Research Question 2: Core Self-Evaluations and Anticipated Work-Family Conflict

As can be seen in Table 3, core self-evaluations were negatively correlated with all six forms of anticipated work-family conflict (*r's* range from -.12 to -.32, $p < .05$ for all). In other words, individuals with more positive core self-evaluations expected to experience less work-family conflict in the future.

Research Questions 3 – 5: Attitudes toward Future Roles and Anticipated Work-Family Conflict

Research Questions 3 through 5 address the extent to which attitudes regarding role-planning, role-importance, and role-sharing are associated with anticipated work-family conflict. Since role-sharing finances and role-planning involvement were unrelated to any of the six forms of anticipated work-family conflict, these variables were not included in further analyses regarding the relationship between attitudes and anticipated work-family conflict.

Table 3 presents the zero-order correlations between attitudes towards future roles and the six forms of anticipated work-family conflict. Hierarchical regressions predicting each of the six forms of anticipated work-family conflict were conducted. Because demographics and core self-evaluations are considered more stable and immutable characteristics of individuals as compared to attitudes, demographics and core self-evaluations were entered as Step 1 and Step 2 of the hierarchical regressions, respectively. The analyses that follow examine the extent to which attitudes towards future roles explain variance in the six forms of anticipated work-family conflict above and beyond the effects of demographics and core self-evaluations.

Tables 5 through 10 show the results of the six hierarchical regression analyses. Results indicate that core self-evaluations explain a significant amount of incremental variance in all six forms of anticipated work-family conflict ($p < .05$ for all) above and beyond the effects of demographics. Further, attitudes explain a significant amount of variance in all six forms of anticipated work-family conflict above and beyond the effects of demographics and core self-evaluations. Results show that role-planning knowledge

emerged as a significant predictor of all six forms of anticipated work-family conflict when entered with the other attitudes as a set. Individuals with more knowledge about role-planning anticipate less of all six forms of work-family conflict.

The importance that individuals place on achieving job satisfaction (occupational role importance) was a significant predictor of three of the six forms of anticipated work-family conflict. It was positively correlated with both behavior-based and strain-based work-interference-with-family. In other words, a stronger emphasis on occupational importance was associated with a stronger believe that strain from work will interfere with effective functioning at home and that behaviors necessary for work will be ineffective at home. Interestingly, individuals who place more emphasis on their job also anticipate less time-based family-interference-with-work. For three of the six forms of anticipated work-family conflict, role-planning knowledge and occupational role-importance were the only two significant attitudinal predictors. For strain-based family-interference-with-work, only role-planning knowledge was a significant predictor when entered with the other attitudes as a set.

Two forms of role-sharing (role-sharing chores and role-sharing childcare) were also significant predictors of anticipated work-family conflict. Role-sharing chores was associated with both strain-based and time-based work-interference-with-family. Individuals who expected their spouse to take on more of the responsibility for chores anticipated more of each of these two forms of conflict. Also, individuals who expected their spouses to take on more of the childcare responsibility (role-sharing childcare) anticipated more time-based work-interference-with-family.

Table 5

Hierarchical Regression Predicting Behavior-Based Work-Interference-With-Family
(N = 374)

	R^2	ΔR^2	Unstandardized Coefficient	*p*
Step 1 – Demographics	.03	.03		.03
Age			.04	.22
Gender			-.21	.01
Marital Status			-.05	.60
Ethnicity			.16	.12
Step 2 – Core Self-Evaluations	.05	.02		.01
Step 3 – Attitudes	.08	.03		.04
Role Sharing – Chores			-.03	.78
Role Sharing – Childcare			.06	.76
Role Importance – Parenting			.02	.79
Role Importance – Relationship			.04	.49
Role Importance – Occupational			.09	.04
Role Planning – Knowledge			-.16	.01

Table 6

Hierarchical Regression Predicting Behavior-Based Family-Interference-With-Work
(N = 374)

	R^2	ΔR^2	Unstandardized Coefficient	*P*
Step 1 – Demographics	.02	.02		.06
Age			.02	.47
Gender			-.12	.13
Marital Status			-.19	.03
Ethnicity			.12	.20
Step 2 – Core Self-Evaluations	.05	.02		.01
Step 3 – Attitudes	.12	.07		.00
Role Sharing – Chores			-.11	.28
Role Sharing – Childcare			.08	.63
Role Importance – Parenting			-.04	.56
Role Importance – Relationship			-.01	.79
Role Importance – Occupational			.07	.08
Role Planning – Knowledge			-.26	.00

Table 7

Hierarchical Regression Predicting Strain-Based Work-Interference-With-Family (N = 374)

	R^2	ΔR^2	Unstandardized Coefficient	*P*
Step 1 – Demographics	.01	.01		.38
Age			.02	.56
Gender			.03	.70
Marital Status			-.07	.44
Ethnicity			.16	.10
Step 2 – Core Self-Evaluations	.09	.08		.00
Step 3 – Attitudes	.25	.16		.00
Role Sharing – Chores			.29	.00
Role Sharing – Childcare			.12	.49
Role Importance – Parenting			-.06	.33
Role Importance – Relationship			-.02	.72
Role Importance – Occupational			.13	.00
Role Planning – Knowledge			-.30	.00

Table 8

Hierarchical Regression Predicting Strain-Based Family-Interference-With-Work (N = 374)

	R^2	ΔR^2	Unstandardized Coefficient	*P*
Step 1 – Demographics	.04	.04		.00
Age			.05	.04
Gender			-.03	.67
Marital Status			-.14	.07
Ethnicity			.24	.00
Step 2 – Core Self-Evaluations	.15	.10		.00
Step 3 – Attitudes	.19	.04		.01
Role Sharing – Chores			-.01	.91
Role Sharing – Childcare			.04	.77
Role Importance – Parenting			-.06	.25
Role Importance – Relationship			.02	.61
Role Importance – Occupational			.05	.10
Role Planning – Knowledge			-.15	.00

Table 9

Hierarchical Regression Predicting Time-Based Work-Interference-With-Family (N = 374)

	R^2	ΔR^2	Unstandardized Coefficient	*P*
Step 1 – Demographics	.02	.02		.09
Age			-.02	.55
Gender			-.23	.01
Marital Status			.08	.45
Ethnicity			.01	.90
Step 2 – Core Self-Evaluations	.04	.02		.01
Step 3 – Attitudes	.24	.20		.00
Role Sharing – Chores			.30	.00
Role Sharing – Childcare			.50	.01
Role Importance – Parenting			-.05	.47
Role Importance – Relationship			.08	.11
Role Importance – Occupational			.07	.12
Role Planning – Knowledge			-.39	.00

Table 10

Hierarchical Regression Predicting Time-Based Family-Interference-With-Work (N = 374)

	R^2	ΔR^2	Unstandardized Coefficient	*P*
Step 1 – Demographics	.02	.02		.23
Age			.00	.90
Gender			-.02	.79
Marital Status			.17	.06
Ethnicity			-.08	.41
Step 2 – Core Self-Evaluations	.04	.02		.01
Step 3 – Attitudes	.09	.05		.00
Role Sharing – Chores			.00	.97
Role Sharing – Childcare			.10	.59
Role Importance – Parenting			-.01	.89
Role Importance – Relationship			.08	.14
Role Importance – Occupational			-.11	.01
Role Planning – Knowledge			-.19	.00

Research Question 6: Job/Career Choices and Levels of Demand and Anticipated Work-Family Conflict

Research Question 6 addresses the relationship between the demands of working in the different medical specializations and settings that individuals choose for themselves and anticipated work-family conflict. The demands of the medical specialization were rated by both the individual completing the survey him/herself and by expert raters. Both ratings (self and expert) are examined in relation to the amount of work-family conflict that individuals anticipate. First, descriptive information about the types of medical specializations that individuals plan to enter into and the average level of demands of these specializations (both as rated by the participants who plan to enter these specializations and the experts) is provided. Then, descriptive information regarding the settings that individuals plan to go into and expert ratings of the demands of these settings is presented. Next, correlational analyses regarding how the demands of specialization/setting relate to anticipated work-family conflict are presented. Finally, the extent to which specialization/setting demands explain incremental variance in the six forms of work-family conflict when controlling for the more proximal individual characteristics of demographics, core self-evaluations, and attitudes is examined.

Descriptive results for medical specialization/setting. Table 11 presents medical specializations for which at least 5% of participants indicate that it was their first or second choice (seven specializations). More than 5% of individuals indicated that they were unsure about their first or second choice. One-way ANOVAs were conducted to examine whether there were differences in self-rated on-the-job demands, hour demands, and perceptions that one's specialization will help/hinder balance based on which specialization individuals planned to go into (for the top seven specializations). Results indicate that there were significant mean differences in the ratings given by individuals who plan to enter the different specializations on all three of these dimensions ($p < .01$ for all). Post-hoc analyses were conducted which compared the specialization with the highest and lowest self-ratings (on hours demands, on-the-job demands, and help/hinder) to the other specializations. Results of a Tukey's HSD post-hoc test indicate that Emergency Medicine was perceived by participants to have higher on-the-job demands than all six of the other specializations ($p < .05$ for all comparisons). Family Practice was perceived by participants as having lower on-the-job demands than four out of the six other specializations considered (all except Internal Medicine and Pediatrics; $p < .05$ for all other comparisons). For hours demands, Obstetrics and Gynecology was found to have a significantly higher mean rating of demand than four out of the six other groups (all except Orthopedic Surgery and General Surgery, $p < .01$ for rest). Emergency Medicine was perceived as having lower hours demands than the other specializations except for Family Medicine and Pediatrics ($p < .01$ for rest). For perceptions that one's specialization helps/hinders balance, Emergency Medicine was perceived to help an individual achieve balance more than four out of the six other specializations (all except

Family Practice and Pediatrics, $p < .05$ for rest). General Surgery was seen as hindering the ability to find balance more than all specializations except for Obstetrics and Gynecology and Orthopedic Surgery ($p < .01$ for all other comparisons).

Table 11

Descriptives for Medical Specialization

Specialization	% 1st choice	% 2nd choice	On-the-Job Demands (self-ratings)	Hours Demands (self-ratings)	Help/Hinder (self-ratings)	On-the-Job Demands (expert-ratings)	Hours Demands (expert-ratings)
Emergency Medicine	9.5	8.2	4.06 (.44)	2.24 (.80)	3.85 (1.27)	4.18 (.49)	2.43 (1.23)
Family Practice	17.1	12.5	2.76 (.45)	2.44 (.69)	3.60 (1.21)	3.33 (.59)	3.35 (.98)
Internal Medicine	10.9	15.1	3.02 (.53)	2.80 (.61)	3.13 (1.20)	3.35 (.58)	3.45 (.79)
Obstetrics and Gynecology	6.6	7.5	3.39 (.48)	4.04 (.60)	2.22 (0.89)	4.13 (.65)	4.65 (.29)
Orthopedic Surgery	5.5	3.1	3.17 (.40)	3.63 (.62)	2.22 (0.80)	3.10 (.51)	3.85 (.43)
Pediatrics	10.7	8.9	2.86 (.52)	2.61 (.58)	3.56 (1.01)	3.61 (.51)	3.38 (.52)
Surgery – General	5.2	4.8	3.65 (.66)	3.81 (.60)	2.05 (.79)	3.89 (.48)	4.45 (.51)
Unsure	5.2	10.8	n/a	n/a	n/a	n/a	n/a

Note. Only those specializations for which more than 5% of the participants indicated that it was their first or second choice are listed above. For self-ratings, means listed reflect ratings by individuals who selected that specialization as their first choice. Standard deviations of mean ratings are provided in parentheses. Ratings were on a scale of 1 to 5, with 5 indicating greater demands.

Table 12

Descriptives for Medical Settings

Setting	% 1st choice	On-the-Job Demands (expert-ratings)	Hours Demands (expert-ratings)
Hospital	28.2	3.77 (.52)	3.40 (.76)
Private Practice	42.9	2.95 (.21)	3.02 (1.04)
Pharmaceutical Corporation	0.2	1.67 (.49)	1.49 (.59)
University Research Setting	1.9	2.93 (1.06)	3.05 (.84)
Unsure	19.8	n/a	n/a

Standard deviations of mean ratings are provided in parentheses. Ratings of demands were on a scale of 1 to 5, with 5 indicating greater demands.

Table 12 shows that almost half of all students plan to enter into a private practice, with working in a hospital as the second most popular choice.

Medical students were also asked to indicate how certain they are about their medical school plans. The mean level of certainty was 3.51 (out of 5; SD = .99).

Correlational analyses for medical specialization/setting plans. Table 13 includes the zero-order correlations between self-rated perceptions of specialization demands and the six forms of anticipated work-family conflict. Results indicate that individuals who perceived their medical specializations to have more on-the-job physical and psychological demands anticipated greater behavior-based family-interference-with-work, behavior-based work-interference-with-family, strain-based work-interference-with-family, and time-based work-interference-with-family ($p < .05$ for all). Self-ratings of hour demands of one's first choice of medical specialization were associated with five out of the six forms of anticipated work-family conflict (all except behavior-based family-interference-with-work; $p < .05$ for rest).

Table 13 also provides the zero-order correlations between expert-ratings of specializations and the six forms of anticipated work-family conflict. Individuals who were entering into specializations that experts rated as having more hours and on-the-job demands anticipated more time-based work-interference-with-family ($p < .05$ for both). Included in this table are also the correlations between expert-ratings and self-ratings of on-the-job and hours demands of specializations. Results show that the expert-ratings of on-the-job specialization demands were correlated $r = .49$ with the self-ratings of on-the-job specialization demands ($p < .01$). The expert-ratings of specialization hours demands were correlated $r = .57$ with participant ratings of the specialization hours demands of their first choice of medical specialization ($p < .01$).

Table 14 presents the correlations between expert-ratings of setting demands and the six forms of anticipated work-family conflict. Individuals planning to work in settings that experts rated as having more hours and on-the-job demands anticipated greater behavior-based family-interference-with-work and less time-based family-interference-with-work ($p < .05$ for both).

Also, as can be seen in Table 3, the perception that one's choice of specialization will help the ability to balance work and family was negatively correlated with strain-based conflict (both directions) and time-based conflict (both directions; $p < .01$ for all).

Table 13

Correlations between Specialization Ratings (Self and Expert) and Anticipated Work-Family Conflict

	On-the-Job Demands (self-ratings)	Hours Demands (self-ratings)	On-the-Job Demands (expert-ratings)	Hours Demands (expert-ratings)
Behavior WIF[a]	**.10**	**.11**	.08	.03
Behavior FIW[b]	**.11**	.04	.03	-.06
Strain WIF[a]	**.14**	**.12**	.06	.02
Strain FIW[b]	.05	**.13**	.02	.08
Time WIF[a]	**.21**	**.37**	**.12**	**.15**
Time FIW[b]	.04	**.16**	.04	.09
On-the-job Demands (self-ratings)	n/a	**.31**	**.49**	**.10**
Hours Demands (self-ratings)	**.31**	n/a	**.31**	**.57**

Note. Ns > 309. Correlations that are significant at $p < .05$ are presented in bold. Correlations with $r \geq |.103|$ are significant at $p < .05$ and $r \geq |.15|$ are significant at $p < .01$.

[a]WIF = Work-Interference-with-Family. [b]FIW = Family-Interference-with-Work.

Table 14

Correlations between Setting Ratings (Expert) and Anticipated Work-Family Conflict

	Setting On-the-Job Demands (expert-ratings)	Setting Hours Demands (expert-ratings)
Behavior WIF[a]	.10	.10
Behavior FIW[b]	**.14**	**.14**
Strain WIF[a]	.08	.09
Strain FIW[b]	.02	.02
Time WIF[a]	.06	.06
Time FIW[b]	**-.13**	**-.12**

Note. Ns > 309. Correlations that are significant at $p < .05$ are presented in bold. Correlations with $r \geq |.103|$ are significant at $p < .05$ and $r \geq |.15|$ are significant at $p < .01$.

[a]WIF = Work-Interference-with-Family. [b]FIW = Family-Interference-with-Work.

Table 15 shows the correlations between certainty regarding medical plans and the six forms of anticipated work-family conflict. Greater certainty regarding one's medical specialization plans was associated with less strain-based and time-based work-family conflict (both directions; $p < .05$).

Table 15

Correlations between Medical Plan Certainty and Anticipated Work-Family Conflict

	Medical Plan Certainty
Behavior WIF[a]	-.02
Behavior FIW[b]	-.05
Strain WIF[a]	**-.15**
Strain FIW[b]	**-.10**
Time WIF[a]	**-.15**
Time FIW[b]	**-.12**

Note. Ns > 429. Correlations that are significant at $p < .05$ are presented in bold. Correlations with $r \geq |.09|$ are significant at $p < .05$ and $r \geq |.11|$ are significant at $p < .01$.

[a]WIF = Work-Interference-with-Family. [b]FIW = Family-Interference-with-Work.

Hierarchical regressions for medical specialization/setting. As can be seen in Table 16, participant self-reported perceptions of medical specialization demands (hour and on-the-job demands) explain incremental variance in four out of the six forms of anticipated work-family conflict when controlling for demographics, core self-evaluations, and attitudes. For behavior-based family-interference-with-work and strain-based work-interference-with-family, perceived on-the-job demands were the significant driver of this relationship. For time-based work-interference-with-family and time-based family-interference-with-work, the perception that one's job had highly demanding hours explained incremental variance in conflict above and beyond the effects of demographics, core self-evaluations, and attitudes.

Table 16

Hierarchical Regressions for Medical Specialization Demands (Self-Ratings) Predicting Anticipated Work-Family Conflict (N = 368)

	R^2	ΔR^2	*Unstandardized Coefficient*	*P*
DV: Behavior WIF[a]				
Step 1 – Demographics	.03	.03		.04
Step 2 – Core Self-Evaluations	.05	.02		.01
Step 3 – Attitudes	.09	.04		.01
Step 4 – Medical Specialization Demands	.10	.01		.12
DV: Behavior FIW[b]				
Step 1 – Demographics	.02	.02		.07
Step 2 – Core Self-Evaluations	.05	.02		.00
Step 3 – Attitudes	.12	.08		.00
Step 4 – Medical Specialization Demands	.14	.02		.02
On-the-Job Demands			.16	.00
Hour Demands			-.05	.26
DV: Strain WIF[a]				
Step 1 – Demographics	.01	.01		.43
Step 2 – Core Self-Evaluations	.09	.08		.00
Step 3 – Attitudes	.25	.16		.00
Step 4 – Medical Specialization Demands	.27	.02		.02
On-the-Job Demands			.15	.01
Hour Demands			-.02	.65
DV: Strain FIW[b]				
Step 1 – Demographics	.04	.04		.00
Step 2 – Core Self-Evaluations	.14	.10		.00
Step 3 – Attitudes	.19	.05		.00
Step 4 – Medical Specialization Demands	.20	.01		.30
DV: Time WIF[a]				
Step 1 – Demographics	.03	.03		.05
Step 2 – Core Self-Evaluations	.05	.02		.01
Step 3 – Attitudes	.24	.19		.00
Step 4 – Medical Specialization Demands	.32	.08		.00
On-the-Job Demands			.08	.14
Hour Demands			.24	.00
DV: Time FIW[b]				
Step 1 – Demographics	.02	.02		.23
Step 2 – Core Self-Evaluations	.04	.02		.01
Step 3 – Attitudes	.09	.05		.00
Step 4 – Medical Specialization Demands	.11	.02		.01
On-the-Job Demands			.00	.94
Hour Demands			.13	.00

[a]WIF = Work-Interference-with-Family. [b]FIW = Family-Interference-with-Work.

A hierarchical regression was also conducted to examine the incremental validity of expert-ratings of medical specialization above and beyond the effects of demographics, core-self-evaluations, and attitudes. Because only time-based work-interference-with-family was correlated with expert-ratings of specialization demands, only one hierarchical regression was conducted. Results indicate that expert-ratings of demands do not explain a significant amount of incremental variance in time-based work-interference-with-family (see Table 17).

Table 17

Hierarchical Regressions for Medical Specialization Demands (Expert-Ratings) Predicting Time-Based Work-Interference-With-Family (N = 317)

	R^2	ΔR^2	p
DV: Time WIF[a]			
Step 1 – Demographics	.03	.03	.05
Step 2 – Core Self-Evaluations	.06	.03	.00
Step 3 – Attitudes	.23	.17	.00
Step 4 – Medical Specialization Demands (expert-rating)	.24	.01	.09

[a]WIF = Work-Interference-with-Family.

Two hierarchical regressions were conducted to examine the relationship between expert-ratings of the demands of one's planned medical setting and behavior-based and time-based family-interference-with-work (see Table 18). For both of these forms of anticipated work-family conflict, expert-ratings of setting demands explain a significant amount of incremental variance above and beyond the effects of demographics, core self-evaluations, and attitudes ($p < .05$ for both). However, neither of the beta-weights for on-the-job or hours setting demands were significant in either regression.

Table 18

Hierarchical Regressions for Medical Setting Demands (Expert-Ratings) Predicting Anticipated Work-Family Conflict (N = 276)

	R^2	ΔR^2	*Unstandardized Coefficient*	*p*
DV: Behavior FIW[a]				
Step 1 – Demographics	.02	.02		.28
Step 2 – Core Self-Evaluations	.04	.02		.01
Step 3 – Attitudes	.14	.09		.00
Step 4 – Medical Setting Demands	.16	.03		.02
On-the-Job Demands			3.08	.34
Hours Demands			-6.02	.39
DV: Time FIW[a]				
Step 1 – Demographics	.02	.02		.18
Step 2 – Core Self-Evaluations	.05	.03		.00
Step 3 – Attitudes	.12	.06		.01
Step 4 – Medical Setting Demands	.14	.02		.04
On-the-Job Demands			-5.76	.09
Hour Demands			12.00	.10

[a]FIW = Family-Interference-with-Work.

Research Question 7: Relationship/Family Plans and Anticipated Work-Family Conflict

Research Question 7 focuses on the relationship between relationship/family plans and anticipated work-family conflict. First, descriptive findings regarding relationship and family plans are presented. Then, the zero-order correlations between these plans and anticipated work-family conflict are examined. Finally, hierarchical regressions are presented examining the relationship between relationship/family plans and anticipated work-family conflict when controlling for other individual characteristics. Because relationship and family plans are considered choices that individuals make, they are considered distinct from more stable individual characteristics, including demographics, personality, and attitudes. Also, controlling for these characteristics ensures that the correlations that demographics, personality, and attitudes have with both

anticipated work-family conflict and relationship/family plans do not obscure the nature of the relationship between relationship/family plans and anticipated work-family conflict. Therefore, the hierarchical regressions control for demographics, core self-evaluations, and attitudes towards future roles when looking at the relationship between relationship/family plans and anticipated work-family conflict. It is important to note again here that relationship/family plans are considered to have a reciprocal relationship with anticipated work-family conflict. That is, feeling conflict can influence the plans that individuals make. However, the plans that individuals make can also influence how much conflict they anticipate experiencing.

Descriptive results for relationship/family plans. Table 19 presents descriptive information regarding the relationship and family plans of participants in this study. The vast majority of participants (95.7%) plan to marry/partner, with the majority of those individuals planning to marry/partner between the ages of 25 and 30 years old. Most participants also plan to have children. More than half of participants expect to have someone other than themselves or their partner provide childcare. The majority of participants also plan to work full-time once they have children.

Table 19

Descriptive Results for Relationship/Family Plans

Questions	%
Do you plan to marry/partner? (*marry*)	
Yes	95.7
Other (no, maybe, haven't thought about it)	3.9
At what age do you plan to marry/partner (for those who indicated an age)? (*age marry*)	
22-25 years old	11.9
25-30 years old	67.6
30-35 years old	18.0
35 years old or older	2.5
Do you plan to have children at some point in your life? (*children*)	
Yes	87.5
Other (no, maybe, haven't thought about it)	12.5
How many children do you plan to have (for those who plan to have children)? (*n children*)	
0	0.0
1	2.9
2	47.7
3	31.5
4	14.8
5 or more	3.1
At what age do you plan to start having children (for those who indicated an age)? (*age children*)	
21-23	0.6
24-26	6.0
27-29	30.2
30-32	42.3
33-35	15.7
35+	5.1
Do you plan to have others (besides you and your spouse/partner provide regular childcare? (*other care*)	
Yes	58.9
Other (no, maybe, haven't thought about it)	41.1
Do you plan to work full time? (*full time*)	
Yes	84.3
No	15.7
Do you plan for your spouse to provide childcare during your working hours? (*spouse care*)	
Yes	40.0
No	60.0

Note. Variable abbreviations are in italics in parentheses next to corresponding question.

The mean level of relationship plan certainty was 3.62 (*SD* = 1.08) and the mean of family plan certainty was 4.07 (*SD* = 1.17).

Correlational analyses for relationship/family plans. Table 20 provides the correlations between relationship/family plans and anticipated work-family conflict.

Table 20

Correlations Between Relationship/Family Plans and Anticipated Work-Family Conflict

	Marry	Age Marry	Children	N Children	Age Children	Full Time	Other Care	Spouse Care	Relate. Certain	Family Certain
Behavior WIF[a]	.05	.04	.02	-.02	.03	.03	-.01	-.01	.02	-.06
Behavior FIW[b]	**.12**	.04	-.04	-.08	-.01	.08	.01	-.03	-.08	**-.12**
Strain WIF[a]	.01	.10	-.04	-.07	.06	-.04	-.09	-.02	-.09	**-.12**
Strain FIW[b]	-.04	**.17**	-.02	-.02	.08	-.02	-.05	-.02	**-.12**	**-.10**
Time WIF[a]	.01	-.05	-.01	-.09	-.01	**-.19**	.03	**.14**	-.04	**-.10**
Time FIW[b]	-.07	-.02	.08	.01	-.09	.09	**-.11**	.03	.00	-.04

Note. Ns > 240. Correlations that are significant at $p < .05$ are presented in bold. Correlations with $r \geq |.10|$ are significant at $p < .05$ and $r \geq |.13|$ are significant at $p < .01$. Marry = Do you plan to marry/partner? Age Marry = At what age do you plan to marry/partner (for those who indicated an age)? Children = Do you plan to have children at some point in your life?. N Children = How many children do you plan to have (for those who plan to have children)? Age Children = At what age do you plan to start having children (for those who indicated an age)? Full Time = Do you plan to work full time? Other Care = Do you plan to have others (besides you and your spouse/partner provide regular childcare? Spouse Care = Do you plan for your spouse to provide childcare during your working hours? Relate. Certain = Certainty of Relationship Plans. Family Certain = Certainty of Family Plans.

[a]WIF = Work-Interference-with-Family. [b]FIW = Family-Interference-with-Work.

Because results of these correlational analyses indicate that whether individuals plan to have children, the number of children they plan to have, and the age at which they plan to start having children are unrelated to all six forms of anticipated work-family conflict, they are not included in hierarchical regression analyses that follow.

Hierarchical regression results for relationship/family plans. As discussed above, six hierarchical regressions were conducted in which the effects of relationship/family plans were considered above and beyond the effects of demographics (Step 1), core self-evaluations (Step 2), and attitudes (Step 3). Also, since the number of participants included in analyses when age of planned marriage/partnership and planning to work full-time are included is reduced (N is reduced from 366 to 166 due to the exclusion of some participant responses in the coding of these variables; see Methods section), the regressions are calculated without the inclusion of these variables. Table 21 provides the results of these analyses. Results indicate that when controlling for demographics, core self-evaluations, and attitudes, relationship/family plans do not explain incremental variance in any of the six forms of anticipated work-family conflict. Hierarchical regressions were also conducted in which age of planned marriage/partnership and planning to work full-time were included in order to compare the results. These regressions yielded similar results. That is, in both cases, relationship/family plans did not explain incremental variance in any of the six forms of anticipated work-family conflict.

Table 21

Hierarchical Regressions: Relationship/Family Plans Predicting Six Forms of Anticipated Work-Family Conflict (N = 367)

	R^2	ΔR^2	*p*
DV: Behavior WIF[a]			
Step 1 – Demographics	.03	.03	.02
Step 2 – Core Self-Evaluations	.05	.02	.01
Step 3 – Attitudes	.09	.04	.03
Step 4 – Relationship/Family Plans	.10	.01	.55
DV: Behavior FIW[b]			
Step 1 – Demographics	.03	.03	.04
Step 2 – Core Self-Evaluations	.05	.02	.00
Step 3 – Attitudes	.12	.07	.00
Step 4 – Relationship/Family Plans	.13	.01	.80
DV: Strain WIF[a]			
Step 1 – Demographics	.01	.01	.41
Step 2 – Core Self-Evaluations	.10	.09	.00
Step 3 – Attitudes	.26	.16	.00
Step 4 – Relationship/Family Plans	.27	.01	.71
DV: Strain FIW[b]			
Step 1 – Demographics	.05	.05	.00
Step 2 – Core Self-Evaluations	.16	.12	.00
Step 3 – Attitudes	.20	.04	.01
Step 4 – Relationship/Family Plans	.22	.02	.15
DV: Time WIF[a]			
Step 1 – Demographics	.03	.03	.05
Step 2 – Core Self-Evaluations	.04	.02	.01
Step 3 – Attitudes	.24	.19	.00
Step 4 – Relationship/Family Plans	.25	.01	.47
DV: Time FIW[b]			
Step 1 – Demographics	.02	.02	.24
Step 2 – Core Self-Evaluations	.04	.02	.01
Step 3 – Attitudes	.09	.05	.01
Step 4 – Relationship/Family Plans	.10	.01	.65

[a]WIF = Work-Interference-with-Family. [b]FIW = Family-Interference-with-Work.

Research Question 8: Anticipated Work-Family Positive Spillover

Research Question 8 addresses the relationship between anticipated work-family positive spillover and the other key study variables. First, the relationship between anticipated work-family positive spillover and anticipated work-family conflict is examined. Next, the relationship between anticipated work-family positive spillover and demographics, core self-evaluations and attitudes is explored. Then, the relationship between anticipated work-family positive spillover and relationship/family and medical specialization/setting plans is examined.

Anticipated work-family positive spillover and anticipated work-family conflict. The relationship between anticipated work-family positive spillover and anticipated work-family conflict was examined (see Table 3). Individuals who anticipated greater positive spillover between roles also anticipated greater behavior-based work-family conflict (both work-interference-with-family and family-interference-with-work; r = -.35 and -.38, respectively, $p < .01$ for both) and strain-based conflict (both work-interference-with-family and family-interference-with-work; r = -.23 and -.19, respectively, $p < .01$ for both). Neither direction of time-based anticipated work-family conflict was significantly correlated with anticipated work-family positive spillover.

Demographics and anticipated work-family positive spillover. As can be seen from Table 22, anticipated work-family positive spillover was not correlated with any of the demographics considered. Therefore, demographics are not statistically controlled in further analyses predicting anticipated work-family positive spillover.

Table 22

Relationship between Demographics and Anticipated Work-Family Positive Spillover

	Age	Year	Gender	Ethnicity	Marriage	Parent
Positive Spillover	-.09	-.03	.07	-.05	.09	.02

Note. Ns > 404. Correlations with $r \geq |.10|$ are significant at $p < .05$. Year = Year in School. Marriage = Marital Status. Parent = Parental Status.

Core self-evaluations and anticipated work-family positive spillover. As can be seen in Table 3, core self-evaluations were positively correlated with anticipated work-family positive spillover ($r = .18, p < .01$). Individuals with more positive core self-evaluations anticipate more positive spillover between work and family.

Attitudes toward future roles and anticipated work-family positive spillover. Table 3 presents the zero-order correlations between attitudes towards future roles and anticipated positive spillover. A hierarchical regression predicting anticipated work-family positive spillover was conducted (Table 23). Again, because core self-evaluations are considered more a more stable and immutable characteristic of individuals as compared to attitudes, core self-evaluations were entered as Step 1 of a hierarchical regression. Attitudes towards future roles were entered as Step 2. Note that since demographics were not correlated with anticipated work-family positive spillover, they are not being controlled for in this analysis. Also note that, as with anticipated work-family conflict, only those attitudes that were significantly correlated with anticipated work-family positive spillover were included in Step 2 (parenting role-importance, relationship role-importance, role-planning knowledge, and role-planning involvement). Results indicate that when controlling for core self-evaluations, attitudes explain a significant portion of the variance in anticipated positive spillover ($p < .01$). Role-planning knowledge and relationship role-importance have significant beta-weights in the

prediction of anticipated positive spillover when attitudes are entered as a set ($p < .01$ for both).

Table 23

Hierarchical Regression Predicting Anticipated Work-Family Positive (N = 421)

	R^2	ΔR^2	Unstandardized Coefficient	p
Step 1 – Core Self-Evaluations	.03	.03		.00
Step 2 – Attitudes	.10	.07		.00
Role Importance – Parenting			.07	.05
Role Importance – Relationship			.11	.00
Role Planning – Knowledge			.11	.00
Role Planning – Involvement			.06	.06

Job/career choice levels of demand and anticipated work-family positive spillover. Table 24 provides the zero-order correlations between perceptions of specializations demands and anticipated work-family positive spillover. Results indicate that individuals who expect their medical specializations to have demanding hours anticipate less positive spillover between work and family.

Table 24 also presents the zero-order correlations between expert-ratings of specialization and setting demands and anticipated work-family positive spillover. Expert-ratings regarding specialization were not significantly correlated with anticipated positive spillover. Individuals who plan to work in settings that experts rated as having more on-the-job demands and hours demands anticipate less positive spillover ($p < .05$ for both).

Table 24

Correlations between Medical Specialization and Setting Demands and Anticipated Work-Family Positive Spillover

Medical Specialization/Setting Demands	Positive Spillover
Specialization On-the-Job Demands (self-ratings)	.04
Specialization Hours Demands (self-ratings)	**-.11**
Specialization On-the-Job Demands (expert-ratings)	.04
Specialization Hours Demands (expert-ratings)	.03
Setting On-the-Job Demands (expert-ratings)	**-.12**
Setting Hours Demands (expert-ratings)	**-.12**

Note. Ns > 309. Correlations that are significant at $p < .05$ are presented in bold. Correlations with $r \geq |.11|$ are significant at $p < .05$.

Certainty regarding medical specialization and anticipated positive spillover was also examined. Results indicate that they are not significantly correlated. For perceptions that one's specialization will help/hinder balance, the belief that one's medical specialization will help the ability to find balance in the future was positively and significantly correlated with anticipated work-family positive spillover ($r = .10, p < .05$).

Table 25 displays the results of a hierarchical regression examining the incremental prediction offered by self-rated perceptions of medical specialization above and beyond the effects of core self-evaluations and attitudes. Since perceptions of on-the-job demands were not correlated with anticipated positive-spillover, that variable is not included in the following analysis. Results indicate that perceived medical specialization hours demands do not explain incremental variance in positive spillover when controlling for core self-evaluations and attitudes.

Table 25

Hierarchical Regressions: Medical Specialization Demands (Self-Ratings) Predicting Anticipated Work-Family Positive Spillover (N = 412)

	R^2	ΔR^2	*p*
Step 1 – Core Self-Evaluations	.04	.04	.00
Step 2 – Attitudes	.10	.07	.00
Step 3 – Medical Specialization Demands (Hours)	.11	.01	.14

Because neither of the expert ratings of medical specialization (on-the-job or hours demands) were significantly correlated with anticipated positive spillover, a hierarchical regression examining the extent to which these variables explain incremental variance in positive spillover was not conducted.

A hierarchical regression was conducted examining the extent to which expert-ratings of setting demands (both hours and on-the-job) explain incremental variance in positive spillover above and beyond the effects of core self-evaluations and attitudes (see Table 26). Results suggest that expert-ratings of setting demands do not explain a

Table 26

Hierarchical Regressions: Medical Setting Demands (Expert-Ratings) Predicting Anticipated Work-Family Positive Spillover (N = 303)

	R^2	ΔR^2	*P*
Step 1 – Core Self-Evaluations	.05	.05	.00
Step 2 – Attitudes	.12	.07	.00
Step 3 – Medical Setting Demands	.13	.02	.09

significant amount of incremental variance in anticipated work-family positive spillover.

Relationship/family plans and anticipated work-family positive spillover. Table 27 shows the relationships between relationship/family plans and anticipated work-family positive spillover. The only relationship/family plan significantly related to positive spillover is whether one plans to marry or not. Individuals who plan to marry anticipate greater positive spillover between work and family than those who do not.

Table 27

Correlations between Relationship/Family Plans and Anticipated Work-Family Conflict

Relationship/Family Plans	Positive Spillover
Marry[a]	**-.10**
Age Marry[b]	-.03
Children[c]	.05
N Children[d]	.10
Age Children[e]	-.07
Other Care[f]	.03
Full Time[g]	.00
Spouse Care[h]	.03
Relate. Certain[i]	.02
Family Certain[j]	.04

Note. N > 239. Correlations that are significant at $p < .05$ are presented in bold. Correlations with $r \geq |.103|$ are significant at $p < .05$. . [a]Do you plan to marry/partner? [b]At what age do you plan to marry/partner (for those who indicated an age)? [c]Do you plan to have children at some point in your life? [d]How many children do you plan to have (for those who plan to have children)? [e]At what age do you plan to start having children (for those who indicated an age)? [f]Do you plan to have others (besides you and your spouse/partner provide regular childcare? [g]Do you plan to work full time? [h]Do you plan for your spouse to provide childcare during your working hours? [i]Certainty of Relationship Plans. [j]Certainty of Family Plans. [k]Certainty of Medical Plans.

A hierarchical regression was conducted to examine whether plans to marry explain incremental variance in positive spillover above and beyond the effects of core self-evaluations and attitudes (Table 28). Note again that demographics were not

included in these analyses because of their non-significant relationships with positive spillover. Also, only attitudes that were significantly correlated with positive spillover were included. This regression indicates that plans to marry do not explain incremental variance in positive spillover above and beyond the effects of core self-evaluations and attitudes.

Table 28

Hierarchical Regressions: Relationship/Family Plans Predicting Anticipated Work-Family Positive Spillover (N = 408)

	R^2	ΔR^2	*p*
Step 1 – Core Self-Evaluations	.04	.04	.00
Step 2 – Attitudes	.10	.07	.00
Step 3 – Marry[a]	.10	.00	.89

[a]Do you plan to marry/partner?

Additional Analyses: Gender Differences in Other Study Variables

Results examining the relationship between gender and anticipated work-family conflict show that women anticipate less behavior- and time-based work-interference-with-family. There were no differences in anticipated positive spillover between men and women. Although analyses predicting anticipated work-family conflict statistically controlled for the effects of gender when examining the extent to which other study constructs related to anticipated work-family conflict, it is still interesting to examine gender differences in those variables examined as correlates of anticipated work-family conflict and positive spillover. Differences between genders are important in their own right because these findings add to the vast literature on gender differences in family and career attitudes and choices (particularly in this highly educated, pre-professional sample). Although that literature was not reviewed for the purposes of this study, a further consideration of the gender differences on some of these variables might be an interesting avenue for future research.

Results show that women have more positive core self-evaluations than men. With regards to attitudes towards role-sharing, women expect to take more of the primary responsibility for chores than their spouse while women are more likely to expect their spouse to take on more responsibility for financial obligations than men (see Table 29). For role-importance, there were no significant gender differences in the importance placed on parenting and occupational roles. Male participants placed a higher importance on their relationship than female participants. For role-planning, female students indicated less knowledge about how to plan for their future roles. There were no gender differences in involvement in planning for future roles.

Gender differences in relationship/family plans were also examined. Women plan to marry at a younger age and have fewer children than men do. Women are more likely to expect that they will have others (besides themselves and their spouse) provide childcare than men. Women were also significantly less likely to plan to work full-time than men. Men were more likely to think that their spouse would provide childcare than women.

For demands of specialization/setting, the only significant difference between males and females was that women rated their future specializations as having fewer on-the-job demands than men. There were no differences in the expert-ratings of the specializations that males and females planned to go into.

Table 29

Correlations between Gender and Other Study Variables

	Gender
Core Self-Evaluations	**.11**
Attitudes	
Role Sharing – Chores	**-.52**
Role Sharing – Childcare	-.08
Role Sharing – Finances	**.16**
Role Importance – Parenting	-.09
Role Importance – Relationship	**-.11**
Role Importance – Occupational	.00
Role Planning – Knowledge	**-.10**
Role Planning – Involvement	.09
Relationship/Family Plans	
Marry[a]	-.05
Age Marry[b]	**-.15**
Children[c]	-.09
N Children[d]	**-.12**
Age Children[e]	.01
Other Care[f]	**-.28**
Full Time[g]	**.37**
Spouse Care[h]	**-.21**
Relate. Certain[i]	-.01
Family Certain[j]	-.09
Specialization Levels of Demand	
Hours Demands(self-ratings)	-.05
On-the-Job Demands (self-ratings)	**-.10**
Help/Hinder	.07
Hours Demands (expert-ratings)	.09
On-the-Job Demands (expert-ratings)	.08
Setting Levels of Demand	
Hours Demands (expert-ratings)	-.02
On-the-Job (expert-ratings)	-.04
Medical Certain[k]	-.04

Note. 0 = male. 1 = female. Ns >273. Correlations that are significant at $p < .05$ are presented in bold. Correlations with $r \geq |.10|$ are significant at $p < .05$ and $r \geq |.14|$ are significant at $p < .01$. [a]Do you plan to marry/partner? [b]At what age do you plan to marry/partner (for those who indicated an age)? [c]Do you plan to have children at some point in your life? [d]How many children do you plan to have (for those who plan to have children)? [e]At what age do you plan to start having children (for those who indicated an age)? [f]Do you plan to have others (besides you and your spouse/partner provide regular childcare? [g]Do you plan to work full time? [h]Do you plan for your spouse to provide childcare during your working hours? [i]Certainty of Relationship Plans. [j]Certainty of Family Plans. [k]Certainty of Medical Plans.

Table 30 examines the extent to which male and female participants planned to enter different specializations and settings as their first choice. A chi-square test indicates that there are significant male-female differences in the choice of medical specialization when the seven top specializations and other (all other choices including other specializations, unsure, and haven't thought about it) are compared ($\chi^2 = 26.10, p < .01$). Differences between males and females that reflect a greater than 5% difference in the proportions planning to enter different specializations/settings are discussed. Results show that a higher percentage of women planned to enter Family Practice, Obstetrics and Gynecology, and Pediatrics than men. A higher percentage of men intended to enter Emergency Medicine and Orthopedic Surgery than women.

A chi-square test was also conducted examining whether there were gender differences in choice of setting, comparing three settings (excluding pharmaceutical corporation because N=1) to all other choices (e.g., unsure, haven't thought about it). The results of this test indicate no significant differences in choices between males and females ($\chi^2 = 3.20, p > .05$). Therefore, gender differences in the choice of setting are not discussed further.

The last four columns of Table 30 present a rank-ordering of the specializations in order of the demands that they place on the individual (hours and on-the-job) as rated by both the participant him/herself and the experts (lower number ranking = more demanding). A higher percentage of women plan to go into Family Practice. This specialization was ranked by both the participants and experts as having very low hour and on-the-job demands. A higher percentage of women also planned to enter Obstetrics and Gynecology. This specialization was seen as having very demanding hours by both

participants and experts and as having fairly high on-the-job demands as well. A higher percentage of women were also planning to go into Pediatrics than men. This was seen as having fairly low hours and on-the-job demands as compared to the other specializations by both participants and experts.

More males planned to go into Orthopedic Surgery than women. This specialization ranked at about the middle on the hours and on-the-job demands it was perceived to have by participants. For experts, it ranked around the middle on hours demands and last on on-the-job demands. A higher percentage of men planned to enter Emergency Medicine than women. This was considered to have high on-the-job demands (by experts and participants) and very low hours demands (by experts and participants).

To summarize, a higher percentage of women planned to enter two specializations that were fairly low on demands (Family Practice and Pediatrics). However, a higher percentage of women also planned to enter Obstetrics and Gynecology, which had highly demanding hours and somewhat high on-the-job demands. One specialization that a higher percentage of men planned to enter had medium levels of demands (Orthopedic Surgery) while the other (Emergency Medicine) had very low hours demands and very high on-the-job demands.

Table 30

Male-Female Differences in Specialization/Setting Choice

Specialization	% Male	% Female	% Male – % Female	Rank Hours Demands (self-ratings)	Rank On-the-Job Demands (self-ratings)	Rank Hours Demands (expert-ratings)	Rank On-the-Job Demands (expert-ratings)
Emergency Medicine	12.29	7.00	5.29	7	1	7	1
Family Practice	11.73	19.84	-8.11	6	7	6	6
Internal Medicine	10.61	10.51	0.11	4	5	4	5
Obstetrics and Gynecology	3.35	8.56	-5.21	1	3	1	2
Orthopedic Surgery	9.50	2.33	7.16	3	4	3	7
Pediatrics	7.26	12.45	-5.19	5	6	5	4
Surgery – General	6.15	4.28	1.87	2	2	2	3
Unsure	5.59	4.28	1.31	n/a	n/a	n/a	n/a
Setting							
Hospital	31.28	24.90	6.38	n/a	n/a	1	1
Private Practice	42.46	42.02	0.43	n/a	n/a	3	3
University Research Setting	1.68	1.95	-0.27	n/a	n/a	2	2
Unsure	16.20	21.79	-5.59	n/a	n/a	n/a	n/a

DISCUSSION

The focus of this study was on understanding the constructs of anticipated work-family conflict and positive spillover. In particular, an examination of the extent to which demographics, personality, and attitudes predicted these constructs was central to the research presented here. Results indicate that while demographics were not a strong predictor of anticipated conflict or positive spillover, personality and attitudes did explain a significant amount of variance in all six forms of anticipated work-family conflict and positive spillover. In particular, core self-evaluations, knowledge about how to plan for future roles, and the importance that individuals place on their careers were shown to be influential in the prediction of these constructs. This study also investigated the relationship between anticipated conflict and positive spillover and the personal and professional choices that individuals plan to make. Relationship/family plans showed little variance across participants and were not associated with any of the six forms of anticipated conflict or positive spillover (when controlling for demographics, personality, and attitudes). On the other hand, the self-perceived demands of the specializations and settings that individuals plan to enter into were associated with greater anticipated work-family conflict (although not with anticipated positive spillover).

The discussion that follows reviews the findings from this study in more detail and presents a number of directions for future research. I begin by discussing the measurement and dimensionality of the anticipated work-family conflict and work-family positive spillover scales, and the relationship between these two constructs. Next, I review the findings regarding each of the predictor variables in more detail and suggest future research on the prediction of anticipated work-family conflict and positive

spillover. Then, the findings regarding personal and professional plans and anticipated work-family conflict and positive spillover are reviewed and discussed. Finally, I discuss the study more broadly, focusing on the limitations of this research and directions for future research. In particular, suggestions regarding the development of a theoretical model of anticipated conflict and positive spillover are discussed.

Anticipated Work-Family Conflict and Positive Spillover

A key aspect of this study was the development of the constructs of anticipated work-family conflict and anticipated work-family positive spillover. In addition to examining their predictors and other correlates, it was important to consider the measurement of these constructs and their dimensionality. The anticipated work-family conflict measure was adapted from a popular measure of actual work-family conflict developed by Carlson et al. (2000). The findings from this study indicate that the six-factor structure that emerges in the measurement of actual work-family conflict also emerges in the measurement of anticipated work-family conflict. Thus, similar to actual work-family conflict, anticipated work-family conflict can be said to be comprised of three types of conflict (behavior, time, and strain) flowing in two directions (work-interference-with-family and family-interference-with-work). It is important to note, however, that this measure was adapted from research on actual work-family conflict rather than developed for the purpose of measuring the construct of interest, anticipated work-family conflict. Perhaps interviews with medical students and pilot testing of items would have revealed untapped dimensions of anticipated work-family conflict. Developing a revised or new measure of anticipated work-family conflict using such methods may be a valuable direction for future research.

The anticipated work-family positive spillover scale was adapted from Sumer and Knight (2001). These authors conceptualized this scale as having two dimensions (positive spillover from work-to-family and positive spillover from family-to-work). However, in the current study, the two directions of positive spillover were not distinguishable and a unidimensional scale was formed. In the Sumer and Knight (2001) study, the correlation between the two directions of positive spillover (when corrected for unreliability) was $r = .66$. The authors do not provide results from an exploratory factor analysis and their confirmatory factor analysis does not provide a comparison of how well a model of the data that considered these two directions of positive spillover to be separate dimensions fit the data as compared to a model that considered them to be a single dimension (Sumer and Knight, 2001). Therefore, it is difficult to determine whether the scale would have been better conceived of as a unidimensional measure in the Sumer and Knight (2001) study.

As mentioned previously, a recent article (after the data was collected for this study) by Carlson et al. (in press) describes the development and validation of a measure of work-family enrichment (another term for positive spillover). These authors found positive spillover from work-to-family to be distinct from positive spillover from family-to-work. These authors also found that there were distinct types of positive spillover from family-to-work and work-to-family. Both types of spillover consisted of development spillover (when knowledge and skills gained in one domain assist functioning in the other) and affect spillover (when positive moods and attitudes from one domain affect the other). However, family-to-work positive spillover also consisted of efficiency spillover (when involvement in family motivates the individual to perform

more efficiently at work) whereas work-to-family positive spillover also consisted of capital spillover (when work provides psychological resources such as security and self-esteem; Carlson et al., in press). Because the Sumer and Knight (2001) measure did not result in distinguishable dimensions in the current study, future research should consider the development of an anticipated work-family positive spillover scale based on the six-dimensional Carlson et al. (in press) measure. A more detailed analysis of the predictors and correlates of different types of positive spillover might then be possible. It is also conceivable that individuals are not able to distinguish between different types of anticipated positive spillover (thus causing the lack of distinguishable dimensions found in the current study). Because these potential benefits are in the future and somewhat abstract, it is possible that participants cannot distinguish between directions of positive spillover in this type of future-oriented measure, while they are able to do so for actual work-family positive spillover.

The relationship between anticipated work-family conflict and anticipated work-family positive spillover is also important for understanding these new constructs. The research presented here shows that anticipated work-family positive spillover was significantly negatively correlated with four out of the six forms of anticipated work-family conflict (even when controlling for core self-evaluations). It was not significantly correlated with time-based work-interference-with-family or time-based family-interference-with-work. These findings differ from much prior research that suggests that the correlations between actual work-family conflict and actual work-family positive spillover are generally weak or non-significant (e.g., Grzywacz & Marks, 2000; Kirchmeyer, 1993). Interestingly, the newly developed Carlson et al. (in press) measure

of positive spillover found that all three types of positive spillover from work-to-family and from family-to-work were negatively correlated with behavior-based conflict and that two out of the three types of positive spillover (other than developmental) were negatively correlated with strain-based conflict. These authors also found that none of their positive spillover subscales were correlated with time-based conflict. Thus, these results quite closely mirror the relationships found in the current examination of the correlations between types of anticipated work-family conflict and positive spillover.

In sum, the measure of anticipated work-family conflict was found to match the dimensionality of the measure of actual work-family conflict it was based upon. The current study found anticipated work-family positive spillover to be have no distinguishable dimensions. Future research should consider using a different measure of anticipated work-family positive spillover (perhaps the Carlson et al. (in press) measure) to determine whether this lack of clear dimensionality is a result of the particular items used to measure it or a reflection of participants' true perceptions of future positive spillover. Although the correlations between anticipated work-family positive spillover and work-family conflict diverge from much of the prior research on the relationship between these two constructs, they are similar to the findings from the Carlson et al. (in press) study that found positive spillover to be correlated negatively with behavior-based and strain-based conflict but not correlated with time-based conflict.

Predictors of Anticipated Work-Family Conflict and Positive Spillover

In this study, demographics, personality, and attitudes were considered possible predictors of anticipated work-family conflict and positive spillover. Below, I summarize the findings regarding each of these types of predictors and present possible

interpretations for these findings. Future directions for research on the predictors of anticipated work-family conflict and positive spillover are also considered.

Demographics

In general, demographics were not highly correlated with any form of anticipated work-family conflict. There were no significant correlations between anticipated work-family positive spillover and demographics. For anticipated work-family conflict, only 5 out of the 36 potential correlations were significant, with the strongest correlation being $r = .17$ ($p < .01$). Demographics as a set explained less than 5% of the variance in each of the six dimensions of conflict.

One interesting finding is that women anticipated less time- and behavior-based work-interference-with-family. In a review of the IO/OB literature on work-family conflict, Eby et al. (2005) report mixed findings regarding gender differences in actual work-family conflict. Only one study reported men experiencing higher levels of work-family conflict than women (Parasurman & Simmers, 2001). This gender difference in anticipated work-family conflict begs the question of whether the women in this sample will experience less actual work-interference-with-family when they become doctors. It is possible that women and men have different expectations of conflict but that their actual work-family conflict will be aligned with prior findings (e.g., women experiencing equal or more conflict than men; Eby et al., 2005). Alternatively, perhaps women in this sample will actually experience less work-interference-with-family than males. The longitudinal follow-up study planned with this group of medical students will be useful in answering this research question.

In sum, the demographics examined here were not highly correlated with work-family conflict and not significantly correlated with positive spillover at all. Critics of the work-family field have claimed that the research conducted in this field tends to place too strong of an emphasis on demographics as a predictor of work-family conflict (Eby et al., 2005; Zedeck, 1992). Based on the limited relationship between demographics and the constructs of interest in this study (as well as similarly limited findings in the literature on actual work-family conflict), further research on anticipated work-family conflict and positive spillover should not focus on the demographics examined here as primary predictors. Demographic characteristics should nonetheless by assessed and reported in such research so that sample characteristics are available for examination and comparison across studies. Further, other demographic characteristics may be stronger predictors of the constructs examined here. For example, financial status may be related to anticipated conflict and positive spillover and career- and family-related choices because of the different financial burdens that individuals will have when beginning their careers and families. This is particularly relevant when studying medical students because many of them will graduate with a significant amount of debt.

Personality

In the work-family field, there has been a call for a greater research focus on personality and other individual differences as predictors of work-family conflict and positive spillover (Eby et al., 2005; Lockwood et al., 2002; Sumer & Knight, 2001). The findings from this study support the inclusion of personality measures in the examination of anticipated work-family conflict and positive spillover. Core self-evaluations were negatively correlated with all six forms of anticipated work-family conflict and positively

correlated with anticipated work-family positive spillover. Core self-evaluations also explained incremental variance in the prediction of these constructs above and beyond demographics. Core self-evaluations had particularly strong correlations with strain-based work-interference-with-family and strain-based family-interference-with-work (explaining an incremental 8% and 10% of the variance in these variables above and beyond demographics, respectively). This suggests that personality may most strongly influence whether people anticipate being able to manage the strain associated with balancing multiple roles, more so than the time or behavior demands of such roles.

Due to its nature as a global personality trait (comprised of four more specific traits), core self-evaluations may be an especially useful predictor of anticipated (and actual) work-family conflict and positive spillover. To the extent that individuals broadly view themselves as capable and in control of their lives, they will see themselves as more able to handle the challenges of balancing work and family in the future. Further, as reported by Friede and Ryan (unpublished manuscript), core self-evaluations also explain a significant portion of variance in the actual school-family conflict and positive spillover of student-parents. It is important to note that research not directly focused on personality as a predictor of anticipated work-family conflict or positive spillover may still benefit from measuring and controlling for it when examining other predictors of anticipated conflict and positive spillover. Controlling for personality is critical when examining the relationship between other constructs (e.g., attitudes) and anticipated work-family conflict/positive spillover.

Attitudes

Attitudes towards the roles that individuals will be engaging in (role-sharing, role-planning, and role-importance) explained incremental variance in all six dimensions of anticipated work-family conflict and in positive spillover when controlling for the effects of demographics and core self-evaluations. In particular, attitudes explained an additional 16% of the variance in strain-based work-interference-with-family and an additional 20% of the variance in time-based work-interference-with-family.

Role-Planning. Currently being involved in planning for future roles (role-planning involvement) was not significantly correlated with any of the six forms of anticipated work-family conflict. While role-planning involvement did have a positive correlation with anticipated work-family positive spillover, it did not have a significant beta-weight when entered as a set with the other attitudinal constructs in the prediction of positive spillover (when controlling for demographics and personality).

On the other hand, the extent to which individuals felt that they had knowledge about how to plan for balancing work and family in the future (role-planning knowledge) was an influential attitudinal predictor. Individuals who perceived that they had more knowledge and certainty about how to plan for balancing work and family anticipated experiencing less conflict and greater positive spillover between these roles. This construct had a significant beta-weight in the prediction of all six forms of anticipated work-family conflict and in anticipated work-family positive spillover when entered as a set with the other attitude variables (and controlling for demographics and personality).

The relevance of this construct in the prediction of anticipated conflict and positive spillover points to some important directions for future research. First, future research could examine whether the belief that one knows how to balance future work

and family (perceived role-planning knowledge) is related to actual knowledge about how to balance these roles effectively. The literature on stress and coping suggests that identifying the appropriate strategy for dealing with an environment stressor is a key aspect of stress management (Lazarus, 1991). To the extent that individuals with greater perceived role-planning knowledge are able to identify more effective coping strategies when they have to balance actual work and family responsibilities, they may experience less conflict between these roles. Future research could examine whether individuals with greater perceived role-planning knowledge are better able to identify and implement coping strategies that are likely to be effective. For example, previous research has identified problem-focused coping as a more effective strategy for dealing with work-family conflict than emotion-focused coping (Kirchmeyer, 1993). To the extent that individuals with greater perceived role-planning knowledge indicate that they would be more likely (or, when actually balancing work and family, are more likely) to engage in problem-focused coping (as compared to emotion-focused coping), they could be said to actually know how to cope with work and family demands better than other individuals.

Second, future longitudinal research will consider whether perceived role-planning knowledge predicts actual work-family conflict and positive spillover. If individuals who feel that they know how to plan for managing multiple roles anticipate experiencing less conflict and actually do experience less conflict, the question emerges of whether helping individuals develop more knowledge about how to plan for balancing multiple roles may reduce their actual work-family conflict and increase their actual positive spillover. If so, interventions could be developed that increase role-planning knowledge.

The research on anticipatory socialization and realistic job previews tends to show that individuals who know more about the roles that they are going to occupy before they enter them are more satisfied in these roles and perform better in them (see, for example, Premack & Wanous, 1985). This research tends to focus on the expectations and demands of a particular role (e.g., a job). Perhaps individuals who have more realistic expectations about the demands of each of the roles that they are going to enter (e.g., being a doctor, being a parent) have greater knowledge about what to expect within each role and therefore anticipate and/or experience less conflict and more positive spillover between roles. Future research on this topic could measure within-role role-planning knowledge (e.g., what it's like to be a doctor, what it's like to be a parent) and consider the extent to which knowledge about future roles is related to anticipated and actual conflict and spillover. Since interventions are likely to already exist that provide individuals with information about demands of a particular role (e.g., shadowing a doctor), future research could examine the extent to which such interventions affect work-family conflict and positive spillover (both anticipated and actual).

It is also possible that knowledge within a particular domain is not as critical for avoiding anticipated and actual work-family conflict and gaining anticipated and actual positive spillover as knowledge about how to balance demands *across* domains. In this case, interventions aimed at providing participants with knowledge about how to manage multiple roles would have to be developed and examined empirically. For example, doctors could discuss the challenges of balancing work and family and how they deal with them with medical students. This might help students feel that they have more knowledge about how to balance multiple roles and actually anticipate and experience

less conflict. Investigating the extent to which such interventions increase role-planning knowledge, decrease conflict (anticipated and actual) and increase positive spillover (anticipated and actual) is a valuable next step in research on the work-family interface. In particular, it is exciting to consider the possibility that such interventions might be able to prevent individuals from experiencing as much work-family conflict as they otherwise would.

It is also important to also consider the possibility that individuals who think they know how to plan for their future roles and do not expect to experience much conflict between these roles are actually unrealistic. It may be that the individuals who report the greatest role-planning knowledge experience the most actual work-family conflict and the least actual positive spillover because they are more confident in their ability to handle the challenges ahead and therefore do not take the appropriate steps to avoid such problems before they arise. Of course, individuals will probably not be able to prepare themselves completely for the work-family challenges that they will face regardless of how much planning they do. However, individuals who are overly confident may not try to control or avoid those aspects of work-family demands that are predictable. To the extent that perceptions of role-planning knowledge result in negative outcomes for individuals, interventions focused on explaining the challenges that lie ahead may help individuals think more realistically about their future and actually prepare themselves for the demands of balancing work and family. Regardless of the relationship between perceived role-planning knowledge and actual work-family conflict/positive spillover, the research presented here points to the importance of considering perceived role-planning

knowledge in future research and its potential usefulness in the development of interventions aimed at alleviating conflict and facilitating positive spillover.

Role-Importance. The importance that individuals place on three domains of their lives (relationship, parenting, and occupation) was also considered as a predictor of anticipated work-family conflict and positive spillover. While all three types of role-importance were correlated with forms of anticipated work-family conflict, only occupational role-importance had a significant beta-weight when entered as a set with the other attitudinal variables. It was a significant predictor of three out of the six forms of anticipated work-family conflict. For positive spillover, individuals who placed a greater importance on their relationship experienced more positive spillover between work and family.

Individuals who placed a greater importance on achieving occupational satisfaction anticipated greater behavior-based work-interference-with-family and strain-based work-interference-with-family. These individuals also anticipated less time-based family-interference-with-work. In other words, individuals who place a greater value on their career expected behaviors and strain at work to interfere with family more, and for time with family to interfere with work less than other individuals. Work was seen as particularly likely to permeate home-life for these individuals while home-life was seen as less likely to permeate the work domain. This seems logical given the greater value that these individuals place on work compared to others. Post-hoc analyses were conducted that examined whether a difference score between the importance placed on work and the importance placed on parenting was a significant predictor of anticipated work-family conflict (when controlling for the importance placed on work alone).

Results indicate that it was the absolute importance that individuals placed on work, rather than its relative importance (compared to parenting), that explained the variance in these outcomes.

Research has examined the relationship between the emphasis that individuals place on their work, such as work involvement and commitment, and the amount of actual work-family conflict that they experience. This research has yielded mixed results. With regards to job involvement, Carlson and Perrewe (1999) found that individuals higher in job involvement experienced greater work-family conflict. Aryee (1992) found that individuals who were more involved in their jobs experienced greater conflict between work and parenting roles but less conflict between work and marital roles. Tenbrunsel, Brett, Maoz and Stroh (1995) found non-significant correlations between work involvement and work-family conflict for both males and females. For job commitment, a recent Day and Chamberlain (in press) article found that individuals who are more committed to their jobs experienced less conflict between the work and parental roles. Again, future longitudinal research will hopefully allow an investigation of whether role-importance prior to entering a role is associated with actual work-family conflict and positive spillover once individuals enter that role.

The question will still remain regarding whether this conflict is something that individuals with high occupational role-importance are motivated to try to reduce, eliminate, or avoid. Individuals who place a high value on career satisfaction may be willing to tolerate work-interference-with-family or feel that it is unavoidable. If individuals are not motivated to alleviate work-interference-with-family, it may not be appropriate to pursue interventions aimed at helping them to do so. However, one must

also consider the potential detrimental effects that work interfering with family may have on others besides the individual him/herself. If the spouse and/or children of an individual who places a high value on career suffer because of it, perhaps findings ways to alleviate the distress of these family members is valuable. Future research should continue to investigate the relationship between occupational role-importance and actual work-family conflict and positive spillover. While interventions may not be appropriate and/or feasible, understanding occupational role-importance is nonetheless valuable for a theoretical understanding of how and why the work and family domains often conflict with one another and sometimes enrich one another.

The role-importance placed on one's relationship (i.e., marriage or long-term partnership) was a significant predictor of anticipated work-family positive spillover when entered as a set with the other attitudinal variables (controlling for personality). It may be that having a relationship that one values highly helps individuals to appreciate and enjoy the benefits that come from having multiple roles. As mentioned above, future research should consider the adoption of a more complex measure of anticipated work-family positive spillover (e.g., the Carlson et al. (in press) measure). The use of this measure would facilitate a better understanding of what direction (i.e., family-to-work or work-to-family) and type (i.e., development, affect, capital, or efficiency) of positive spillover individuals who highly value their relationships anticipate experiencing. It seems likely that valuing one's marriage/partnership might be associated with more affective positive spillover from family-to-work, where the positive moods that result from engagement in a valued relationship spillover into the work domain. However, it is

also possible that other types of anticipated (and actual) positive spillover result from valuing one's marriage/partnership.

Also, note that parental role-importance was not a significant predictor of anticipated conflict and/or positive spillover in this study. This may be because this construct had a particularly high mean and low standard deviation (the mean was 4.24 out of 5 (*SD* = .69)) as compared to the other forms of role-importance. To the extent that parenting is seen as universally important, it is less likely to explain variance in the constructs of interest. Therefore, another potential avenue for future research would be to identify whether there are individuals who admit to placing a low importance on parenting and to examine the relationships among these constructs with that sample. Also, perhaps responses to questions regarding the importance that individuals place on their parental role are highly influenced by social-desirability. Individuals may not want to admit that they do not value their role as a parent. This poses an additional challenge for researchers interested in the true relationship between parental role-importance and work-family outcomes.

Role-Sharing. The extent to which individuals plan to share responsibility for childcare, chores, and finances with their spouse/partner was examined in relation to anticipated work-family conflict and positive spillover. Note that the means on this variable are all close to 2, which indicates that individuals tend to expect to share these responsibilities about equally with their partners.

Plans to share responsibility for finances were not significantly correlated with any of the six forms of anticipated work-family conflict or positive spillover. In fact, role-sharing only had a significant beta-weight in the prediction of anticipated time-based

and strain-based work-interference-with-family (when entered with the other attitudes as a set while controlling for demographics and personality). Individuals who thought that their partners would do more of the chores anticipated greater time- and strain-based work-interference-with-family. Individuals who thought that their partners would do more of the childcare expected greater time-based work-interference-with-family, as well.

These findings are interesting. Perhaps individuals who expect to have more help fulfilling these obligations from their partners feel like they will be in a position to allow work to interfere with family since they are not the sole care-takers of their family. These findings are also somewhat counter-intuitive because one might have expected that having a partner who takes on greater responsibility at home would allow individuals to keep their work-life from interfering with their home-life (because home-life may be less demanding). Again, one benefit from the opportunity to collect longitudinal data will be the possibility of examining whether individuals are realistic about role-sharing with their spouse and partners. Do they end up dividing family responsibilities in the way that they anticipate? Further, an investigation of whether perceptions of future role-sharing predict actual work-family conflict and positive spillover will be informative and interesting.

It is also worthwhile to consider whether role-sharing perceptions act more like a stable attitudinal construct (as conceptualized in this study) or as choices that influence *and are influenced by* anticipated work-family conflict and positive spillover. Similar to other personal and professional plans, it is possible that there is a reciprocal relationship between the anticipation of conflict/positive spillover and the choices that people feel they will make regarding the division of responsibilities in their families. For example, if

individuals anticipate a great deal of conflict between work and family, they may seek out a partner who is more willing to take-on childcare and chore responsibilities at home.

Choosing to alter the amount of effort that one puts into to family responsibilities in reaction to the anticipation of inter-role conflict can be conceived of as a coping strategy. Lazarus (1991) defined coping as "the cognitive and behavioral efforts a person makes to manage demands that tax or exceed his or her personal resources" (p. 5). If individuals perceive that the demands of work and family will exceed their "personal resources," they may choose to cope by changing the amount of responsibility that they intend to take for such things as chores, childcare, and finances. Coping by altering role-sharing plans may, in turn, reduce the amount of conflict that individuals anticipate experiencing between roles. The potential for a reciprocal relationship between role-sharing and anticipated conflict and spillover should be considered in future research. Assessing role-sharing perceptions, anticipated conflict, and positive spillover at multiple time points would facilitate an understanding of this potentially complex relationship.

Job/Career Plans

The investigation of occupational plans was focused largely on the demands that different specializations and settings place on the doctor. Results indicate that participants' perceptions of the demands of their medical specialization explain incremental variance in anticipated behavior-based family-interference-with-work, strain-based work-interference-with-family and time-based conflict (both directions). For anticipated behavior-based work-interference-with-family and strain-based family-interference-with-work, the on-the-job demands of the specialization had a significant beta-weight in the prediction of the two forms of conflict. On the other hand, the

perceived hours demands of specializations were associated with anticipated time-based conflict (in both directions). These findings are logical, in that the time-demands that individuals expect their work to place on them are associated with the perception that it will be difficult to balance time at work and at home. It is also logical that the perceived psychological and physical demands of one's specialization are more closely aligned with the behavior-based and strain-based conflict.

Expert-raters (medical doctors) also rated the demands of the different medical specializations and settings. Expert-ratings of the demands of different medical settings did explain incremental variance in anticipated behavior-based and time-based family-interference-with-work. The extent to which experts perceived certain specializations as more demanding (both on-the-job and hours) did not explain incremental variance in any of the six forms of anticipated work-family conflict or in positive spillover (when controlling for demographics, personality, and attitudes). In this study, specializations and settings were rated separately by the expert-raters. However, the demands of the setting may depend on which specialization one enters (e.g., dermatology in a hospital may be *less* demanding than dermatology in a private practice whereas cardiology in a hospital is *more* demanding than cardiology in a private practice). Future research should consider having experts rate the demands of specializations within each setting to better assess the specific demands of the careers that medical students plan to enter.

It is interesting to note that the perceptions of these demands, but not the objective ratings of demands, explain incremental variance in anticipated work-family conflict and positive spillover, given that expert-ratings were fairly highly correlated with self-ratings ($r = .57$ for hours demands and $r = .49$ for on-the-job demands, $p < .01$ for both). This

may have occurred for a number of reasons. First, it may be due, at least in part, to common method variance. In other words, the fact that the same individuals completed the specialization ratings and the ratings of anticipated work-family conflict may have inflated the relationship between them. However, controlling for a global personality trait, such are core self-evaluations, is likely to reduce some of this common method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Second, this may be due to the lack of variance in the expert-ratings (since each person going into the same specialization received the same score). This means that the expert-ratings could not account for any variance across individuals within the same specialization. Third, it could be that the shared variance between expert-ratings and self-ratings of specializations is different from the variance that self-ratings share with anticipated work-family conflict. Further research should be conducted that attempts to determine why self-ratings explained incremental variance in some forms of anticipated work-family conflict but expert-ratings did not despite their high correlations with one another. Nonetheless, the fact that participants were somewhat accurate in their ratings of the demands of their first choice of specializations is important because realistic expectations have been shown to have beneficial effects on job-related outcomes and may potentially have beneficial effects on the levels of work-family conflict that individuals experience (Wanous, Poland, Premack, & Davis, 1992).

Future research should consider the extent to which perceived demands (as compared to expert-ratings of demands) predict actual work-family conflict and positive spillover. A post-hoc analysis was conducted to determine whether the difference between the participants' perceptions of specialization demands and the expert-raters'

perceptions of specialization demands was associated with any of the six forms of anticipated work-family conflict or positive spillover. Results indicate that this difference score was not correlated with anticipated work-family conflict or positive spillover (when controlling for individual perceptions of demands). Although not true for *anticipated* conflict, it may be that individuals who have expectations that more closely match expert-raters experience less *actual* work-family conflict in the long-run because their expectations are more closely aligned with reality and they prepare for it appropriately. An alternative possibility is that more realistic individuals experience the same amount of work-family conflict yet experience fewer of its negative consequences (e.g., increased depression, burnout, alcohol use) because they are not surprised or overwhelmed by the conflicting demands that they face (cf., Burke, 1988; Hammer et al., 2001; Frone et al., 1993).

Research on "met expectations" in the IO/OB and broader psychology literature suggest that a number of negative outcomes occur for individuals when their expectations of a job do not match the reality they encounter upon beginning that job. For example, a meta-analysis conducted by Wanous et al. (1992) found an estimated corrected population correlation of .39 between met expectations and job satisfaction and .11 between met expectations and job performance. An examination of whether the discrepancy between self-ratings and expert-ratings of job demands is associated with negative outcomes for graduating medical students is a valuable research question in its own right. Further, future research should focus on understanding the extent to which unmet expectations regarding work (and family) are related to actual work-family conflict and positive spillover. As mentioned previously, realistic previews regarding the

demands of different roles (e.g., worker, parent) and the demands of balancing work and family could be investigated as potential interventions aimed at avoiding the negative outcomes that have been associated with unmet expectations.

Relationship/Family Plans

Results from an examination of the relationship and family plans of participants indicate that they are largely uncorrelated with anticipated work-family conflict and positive spillover. Excluding the measures of certainty about relationship/family plans, only 7 out of a possible 63 correlations between relationship/family plans and anticipated conflict/spillover were significant. Indeed, when controlling for demographics, personality, and attitudes, relationship/family plans did not explain incremental variance in any of the six forms of anticipated work-family conflict or in anticipated work-family positive spillover.

This lack of predictive power may be due, at least in part, to the lack of variance in relationship and family plans reported by these participants. Over 95% of participants indicated that they plan to marry/partner, with 67.6% reporting that they planned to do so between the ages of 25 and 30. 87.5% of the sample planned to have children at some point, and the vast majority of those individuals planned to have either two or three children. For individuals who planned to have children, over 70% planned to do so between the ages of 27 and 32. The majority of participants (84.3%) also said that they planned to work full-time. While there was some variance on the type of childcare that individuals planned to use, one can see that the participants in this study planned to have a traditional family with a partner and children, for the most part.

According to the U.S. Census, the 2003 American Community Survey indicates that 50.4% of all Americans live in households live as part of a married-couple family (e.g., as compared to single-parent homes or people living with non-family members). Of those, 44.8% of households had children under the age of 18 years old (United States Census, 2003). Thus, one can see that the lifestyle that the medical students expected to experience (i.e., married with children) is reflective of the actual family status of a large portion of the United States population. Future research could focus on the anticipated work-family conflict/positive spillover of individuals who plan to enter non-traditional relationships and families.

In sum, results indicate that relationship/family plans do not explain a significant amount of incremental variance in anticipated conflict and positive spillover. This finding may be a result of limited variance in such plans. While it is interesting to consider the extent to which relationship/family plans and anticipated conflict/positive spillover interact and influence one another over time, the findings presented here suggest that relationship/family plans may not change much over time or may only change for a small subset of people. Therefore, large-scale survey studies may be unlikely to yield strong relationships between anticipated or actual conflict/positive spillover and relationship/family plans. Future survey research should not place a strong emphasis on assessing the relationship between relationship/family plans and anticipated work-family conflict/positive spillover. Perhaps a qualitative examination of why some individuals change their relationship/family plans (e.g., decide not to marry or have children) might provide a compelling investigation of the impact of anticipated and actual work-family conflict on people's lives.

Additional Analyses: Gender Differences in Other Study Variables

The additional analyses conducted investigated gender differences in the predictors and correlates of anticipated work-family conflict and positive spillover. These findings add to the literature on gender differences in personality, attitudes, and personal and professional choices. Results indicate that there were differences in the medical specializations that males and females intended to enter. Differences in the perceived and actual demands of different medical specializations and settings may explain, at least in part, gender differences in entry into particular medical careers. Further research could use the social cognitive career development theory to model the process by which medical students decide on a specialization and setting. Such research should consider how the anticipation of job demands, work-family conflict, and positive spillover play a role in this process.

Limitations and Future Research Directions

In additions to those limitations and future research directions described above, there are two more broad limitations of this research that provide insight into the direction that future research should take. One limitation of this study was the possibility that common method biases were responsible for the relationships found in this study. Common method bias is considered "variance that is attributable to the measurement of method rather than to the constructs the measures represent" (Podsakoff et al., 2003, p.879). Podsakoff et al. (2003) discuss four general sources of common method biases. Each of these four sources will be discussed as a potential cause of common method bias in this study.

First, Podsakoff et al. (2003) discuss common rater effects as a source of common method bias. The relationships found between the constructs assessed in this study may be inflated because a single individual completed almost all of the measures. Common rater effects may be the result of a number of factors, including a desire to maintain consistency in how individuals respond to questions, a tendency to respond to survey items in a particular way (e.g., yea-saying), and pervasive dispositional characteristics of individuals (e.g., negative affectivity; Podsakoff et al., 2003).

These factors can all inflate the relationships among measures. As discussed earlier, the fact that self-ratings of job demands were more highly correlated with anticipated work-family conflict than expert-ratings may reflect a common method bias. However, it is important to note that by controlling for core self-evaluations, a broad dispositional characteristic, at least some of the common rater effects may be reduced,

because variance attributable to this personality trait is statistically controlled for when examining the relationships between other study variables. The fact that attitudes and perceptions of specialization demands explained incremental variance when controlling for core self-evaluations suggest that participant disposition is not solely responsible for the relationships that were found in this study. Further, common rater effects are expected to be consistent across measures. Differences in the predictive power of measures (e.g., role-planning knowledge explained significantly more variance in the outcomes of interest than role-planning involvement) cannot be attributed to common rater bias.

Overall, while common rater effects may have inflated some of the relationships between constructs measured, the fact that core self-evaluations were statistically controlled for and differential relationships were found across predictors suggest that it is not responsible for all of the findings presented here. The use of expert-raters was beneficial because it provided an alternative source of information regarding job demands. For future research, the use of expert-raters and other relevant additional sources of information about the participant (e.g., his/her coworkers, spouse, children) will also mitigate the possibility that the relationships found in the study are due to common rater effects.

The second source of common method bias discussed by Podsakoff et al. (2003) is item characteristic effects. When items tend to have similar formats, response options, and wording, this can inflate the relationships among measures. In this study, almost all of the items were rated on a five-point Likert-type scale. Further, a number of these scales used response options ranging from "strongly disagree" to "strongly agree." It is

possible that these item characteristics inflated the relationships among study constructs. However, differences in the extent to which different subscales of the same construct (e.g., role-sharing childcare vs. role-sharing finances) were associated with anticipated work-family conflict and positive spillover are evidence that item characteristic effects may not be particularly problematic because item formats and response options were common across all subscales. Future research could consider alternative formats for items. However, the benefits associated with using well-validated measures may outweigh the costs associated with using traditional item formats across measures.

A third source of common method bias discussed by Podsakoff et al. (2003) is item context effects. The context in which items are asked in relation to other items may influence participant responses. For example, viewing certain items earlier in a measure may "prime" individuals to respond in a particular way to later items. For example, in this study, participants were asked about their personal and professional plans prior to completing measures of anticipated work-family conflict and positive spillover. Thinking about future family and job demands may have influenced how individuals thought about the conflict and spillover between these roles (as compared to if they hadn't been asked about these plans prior to completing these measures). Therefore, it is possible that some of the findings in study are due, at least in part, to the context in which items are presented.

The fourth source of common method bias that Podsakoff et al., (2003) describe is measurement context effects. When measures are administered at a single point in time, in a single location, and/or using a single medium, relationships among constructs may be inflated. Except for the possibility that some participants may have logged out of the

web-survey and completed it in a different location later in time, participants completed the measures at a single location (either in a lecture hall or at a computer), using a single medium (either paper-and-pencil or web-based survey), at a single point in time. These measurement context effects may have inflated the relationships among self-reported responses. Future longitudinal research will provide an additional time, location, and (for some) medium of survey completion.

Overall, while Podsakoff et al. (2003) identify sources of common method bias that may have inflated the relationships found in this study, the use of expert-ratings and a statistical control of personality decrease the potential impact of common method bias on the findings reported here. Further, the fact that predictors were differentially related to the outcomes of interest suggests that common method bias is not solely responsible for results obtained in this study. Future research should attempt to reduce common method bias. However, attention should also be paid to the costs incurred by altering the source of ratings, the item characteristics, the item context characteristics, and the measurement contexts.

A second key limitation of this study is that it was exploratory in nature with no directional hypothesis proposed. Work-family research has been criticized broadly for a lack of an over-arching theoretical framework (Eby et al., 2005). This study is subject to that criticism, as well. The research presented here should be considered a first-step in the process of building a theory of anticipated work-family conflict and positive spillover. Future research should try to explain how and why certain predictors are related to certain forms of work-family conflict and positive spillover rather than simply

re-examining the relationships presented here or correlating new predictors with the anticipated conflict and spillover constructs.

There are a number of theoretical frameworks that might be useful in understanding how and why the key constructs in this study are related. Two potential theoretical frameworks, social cognitive career theory and a stress/coping model, are discussed here in more detail.

Social cognitive career theory. As discussed previously, social cognitive career theory can be useful in thinking about how personal and professional choices interact with anticipated work-family conflict and positive spillover over time (Lent et al., 1994). While this theory has mainly been applied within the academic and job choice literature, it could also be applied more broadly to develop a dynamic model of decision-making regarding work and family choices, conflict, and positive spillover over time.

More specifically, social cognitive career theory discusses how self-efficacy and outcome expectations influence what individuals are interested in and which activities they pursue. As young adults develop self-efficacy and outcome expectations within the academic domain (e.g., "I get praised for getting As in math") and other life domains, such as the interpersonal domain (e.g., "I'm good at taking care of others"), they will choose to engage in behaviors and activities in each domain for which they have high self-efficacy and outcome expectations (e.g., taking more math classes, acting more caring towards others). Individuals may also develop self-efficacy and outcome expectations regarding the interactions between life domains (e.g., "I'm good at balancing schoolwork and extracurricular activities"). Over time, self-efficacy and outcome expectations within and across domains may push people towards certain

academic/professional and personal choices. As individuals experience different amounts of success and satisfaction within domains and in managing demands across domains, their self-efficacy and outcome expectations are further adjusted.

Importantly, the other constructs included in this study can also be incorporated into this theoretical framework. Demographics, personality, and attitudes are likely to influence self-efficacy and outcome expectations within and across domains. As an example of demographics influencing outcome expectations, females may not be encouraged to excel in math thus reducing the belief that pursuing a math-related career will be rewarding (Eccles, 1994). Anticipated and actual work-family conflict and positive spillover are also likely to be intricately tied to this process. As individuals consider and make choices in each domain, they will have to re-evaluate the expected conflict and positive spillover across domains. The perception that certain choices are more likely to result in conflict and positive spillover will influence the outcome expectations that individuals have for these choices. This reciprocal process repeats itself over a lifetime, influencing the choices that individuals make and the conflict and positive spillover that they anticipate and experience.

While a model that repeats continuously over the course of a lifetime is likely to be difficult to test, it nonetheless provides a useful way of thinking about how and why the constructs described in this study may be related. Testable hypotheses may be able to be derived from this model, particularly if longitudinal research is possible. For example, this model predicts that a lack of self-efficacy for a particular type of activity results in a lack of interest in and pursuit of engagement in that activity. A resulting work-family hypothesis would be that lower self-efficacy for balancing work and family

in the future will be associated with a greater likelihood that individuals plan to avoid multiple roles (e.g., by being a stay-at-home parent or a working non-parent). Future research could examine whether the social cognitive theory of career is able to clarify the relationships between anticipated and actual work-family conflict, positive spillover, and personal/professional decision-making.

Stress/coping model. A second potentially useful theoretical framework for thinking about anticipated work-family conflict and positive spillover is adopted from the stress and coping literature. The relevance of stress and coping in understanding the constructs presented in this study has already been discussed briefly in this paper. One stress and coping framework that may be particularly useful in thinking about how and why the constructs described in this study are related to one another was first proposed by Bolger and Zuckerman (1995). The authors describe a framework for examining the role of personality in the experience of stress. Friede and Ryan (2004) have considered how this framework can be applied to understanding how personality relates to the experience of *actual* work-family conflict and positive spillover. This framework could also be expanded to consider how and why individuals anticipate *future* work-family conflict and positive spillover.

The Bolger and Zuckerman (1995) model focuses on three pathways by which personality may be related to stress. First, they describe "differential exposure" to stressors in which individuals, based on their personality, experience different types or amounts of actual stressors in their environments. Next, they describe "differential reactivity" to stressors, in which personality affects the felt intensity of or reaction to stressors. Third, they describe how personality affects coping strategies; both the coping

strategies individuals choose to deal with the stressors that they encounter ("differential coping choice") and how effective individuals are at implementing these coping strategies ("differential coping effectiveness"; Bolger & Zuckerman, 1995).

This model is potentially useful for building a theory of how and why certain constructs predict anticipated work-family conflict and positive spillover. First, individuals with different core self-evaluations and attitudes may plan to enter different types of personal and professional situations ("differential exposure"). For example, individuals who place a high role-importance on their occupation may be more likely to plan to enter a demanding career. In the current study, individuals who placed a greater importance on their occupational role were more likely to plan to enter a specialization with more demanding hours, as rated by both the participant ($r = .12, p < .05$) and experts ($r = .10, p = .05$). These increased demands may influence the conflict and positive spillover that individuals expect to experience between work and family roles. For this "differential exposure" pathway, personality and attitudes are seen as influencing personal and professional plans. These plans are then seen as influencing anticipated and work-family conflict/positive spillover. Further research should consider whether individuals with different personality characteristics and attitudes make personal and professional choices that are likely to result in different amounts of anticipated work-family conflict and positive spillover.

Personality and attitudes may also influence how individuals expect to react to the work-family challenges that they face. Because individuals are familiar with the way that they tend to respond to stressors in their environment, they may be able to develop expectations regarding how they will feel when they experience work-family stressors.

For example, individuals who have positive core self-evaluations or place a lower importance on family-life might expect to react to a work-related stressor (e.g., a last minute late night meeting) with a slight feeling of work-interfering-with-family. On the other hand, individuals with more negative core self-evaluations or those who place a higher importance on family might expect that the same stressor will cause a great amount of work-interference-with-family. Therefore, in this "differential reactivity" pathway, personality and attitudes are seen as affecting anticipated work-family conflict and positive spillover, even when holding the actual characteristics of the future environment constant. Future research to examine the "differential reactivity" pathway could ask individuals to report how much work-family conflict and positive spillover they would expect to experience in hypothetical situations. Results that indicate that individuals with different personality characteristics and attitudes expect to experience different amounts of conflict and positive spillover when reading about the same objective situation would support the "differential reactivity" pathway.

Personality and attitudes may also influence the coping styles that individuals expect to use to deal with future work-family demands ("differential coping choice") and how effective they think these coping strategies will be ("differential coping effectiveness"). If individuals belief that they know what types of coping strategies to use to cope with work-family demands and that they will effectively be able to use them, they may anticipate less work-family conflict and more positive spillover. Note that in this study, individual who perceived that they knew how to cope with the demands of work and family (role-planning knowledge) anticipated less work-family conflict (all six forms) and more positive spillover, even when controlling for demographics and

personality. It is important to point out that this pathway is focused on *perceived* coping skills (rather than *actual* coping skills). In other words, a greater perceived ability to cope with work-family demands is predicted to be associated with less anticipated conflict and more anticipated positive spillover regardless of the accuracy of this perception. Future research could be aimed at examining the relationship between perceptions of coping skills and anticipated work-family conflict and positive spillover to follow-up on the suggestions presented here.

Overall, the findings from the current study suggest that adapting a model of the relationship between personality and stress/coping to the prediction of anticipated work-family conflict and positive spillover may be useful. Additionally, the social cognitive theory of career development provides an alternative framework for thinking about anticipated work-family conflict and positive spillover. The stress/coping framework is more focused on predicting anticipated conflict/positive spillover whereas the social cognitive theory is more focused on the relationship between anticipated conflict/positive spillover and personal/professional decision-making over time. The discussion above provides some initial ideas for future research examining the two potential frameworks just described. There may be a number of additional theoretical frameworks that could also be useful in thinking about the constructs of anticipated work-family conflict and positive spillover and their correlates.

One vital characteristic of a theoretical model is the relationship between *anticipated* work-family conflict and positive spillover and *actual* work-family conflict and positive spillover. An understanding of whether individuals are accurate or inaccurate in their anticipation of conflict and spillover (e.g., do those who anticipate less

conflict experience more or less conflict?) is going to be an important step in the theoretical understanding of the relationships between the constructs presented in this study. Both theoretical frameworks presented above can incorporate both anticipated and actual forms of work-family conflict and positive spillover. Importantly, the accuracy of anticipation is also important for the development of interventions. If individuals are inaccurate in their anticipation then interventions focused on improving the accuracy of perceptions of individuals who anticipate *little* conflict should be targeted so that they become more accurate and make well-informed decisions. On the other hand, if individuals are accurate in their anticipate (e.g., those who anticipate less conflict experience less conflict), then interventions should be targeted at those who experience the most conflict, helping them to make choices that will help alleviate actual work-family conflict and reduce their anticipation of conflict. A longitudinal investigation focused on the relationship between anticipated and actual work-family conflict and positive spillover is planned with the medical students who participated in this study.

Conclusion

The study described here presents one of the first comprehensive examinations of anticipated work-family conflict and positive spillover. Results indicate that these are measurable constructs that can be predicted by personality and attitudes. Broadly, results suggest that core self-evaluations, role-planning knowledge, and occupational role-importance are particularly influential predictors of these constructs. Further, this study investigates the relationship between personal/professional plans and anticipated work-family conflict and positive spillover. While relationship/family plans did not explain incremental variance in these variables, this may be due to the lack of variance in such

plans across participants. Participant perceptions of the demands of medical specializations and expert-ratings of the demands of medical settings also added predictive value in the understanding of some forms of anticipated work-family conflict and positive spillover. Overall, this study has provided a foundation for beginning to answer more complex questions about the nature of anticipated work-family conflict and positive spillover. Social cognitive career theory and a model linking personality to stress and coping are two potentially useful theoretical frameworks for modeling these relationships. The relationship between anticipated and actual work-family conflict and positive spillover is an important key in the development of such theoretical models. Future research investigating these relationships is essential to theory-building and interventions aimed at alleviating work-family conflict and promoting positive spillover.

Appendix A

Recruitment Emails

Dear CHM Medical Student,

We are writing to invite you to participate in a research study that looks at how MSU College of Human Medicine medical students make choices about how to balance their future medical career and family life. We're interested in how you think and feel about your future work and family roles. As part of this study, we're asking you to participate in a web-based survey. The survey takes about 10 - 15 minutes to complete and contains 128 questions.

There will be a random drawing for a $50 gift certificate to a medical bookstore for study participants. The survey is voluntary, confidential, and easy to complete. Your answers will help us better understand the needs of medical students and the reasons that you make the choices that you do!

To take the survey, please go to http://psychology.msu.edu/Balance and enter the Access ID: medicine

If you have any questions about the survey, please contact Professor Ann Marie Ryan at ryanan@msu.edu or (517) 353-8855 . If you have any difficulty accessing the web-survey, please see the "web survey help" instructions below.

We greatly appreciate you taking time out of your busy schedule to participate in this study.

Thank you,

Dr. Wanda Lipscomb, Assistant Dean for Student Affairs and Services
Dr. Ann Marie Ryan, Professor of Psychology
Alyssa Friede, Graduate Student

If you have any other questions, please email friedeal@msu.edu

Dear COM medical student,

Thank you very much to all of you who have completed the survey about balancing work and family. For those of you who haven't taken it yet, we'd like to remind you that there is still time to complete the web-based survey. Your response will help us understand the thoughts, feelings, and needs of COM medical students. Again, it takes about 10 - 15 minutes to complete and contains 128 questions.

There will be a random drawing for a $50 gift certificate to a medical bookstore for study participants. The survey is voluntary, confidential, and easy to complete.

To take the survey, please go to https://psychology.msu.edu/Balance and enter the Access ID: medicine

If you have any questions about the survey, please contact Ann Marie Ryan at ryanan@msu.edu or (517) 353-8855
If you have any difficulty accessing the web-survey, please see the "web survey help" instructions below.

We greatly appreciate you taking time out of your busy schedule to participate in this study.
Thank you,

Dr. Celia Guro
Dr. Bill Falls
Dr. Ann Marie Ryan
Alyssa Friede

Appendix B

Consent Form

Anticipated Work-Family Balance

Please read the information below:

We will be asking you to respond to a series of questions about how you think about and plan for your future career and family life. We are also asking you to respond to some commonly used personality and demographic questions that will help us interpret the meaning of your responses to the questionnaire.

We expect that it will take you about 20 minutes for you to fill out the survey. You will also have a chance to win a $50 gift certificate to a medical bookstore through your participation based on a random drawing. There are no foreseeable risks associated with participating in this study. Your name and information will remain confidential. Your privacy will be protected to the maximum extent allowable by law. The data will be saved for at least five years after it is collected and will only be accessible by the primary investigator and one graduate student. By signing below you indicate that you are free to refuse to participate in this project or any part of this project. You may refuse to answer some of the questions and may discontinue your participation at any time without penalty.

If you have any questions or concerns about your participation in this project, you can reach Daniel Ilgen by phone: (517)355-7503, fax: (517)353-4873, email: ilgen@msu.edu, or regular mail: 340A Psychology Building, East Lansing, MI 48824.. If you have questions or concerns regarding your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact – anonymously if you wish – Peter Vasilenko, Ph.D. Chair of the University Committee on Research Involving Human Subjects (UCRIHS) by phone: (517) 355-2180, fax: (517)432-4503, email: ucrihs@msu.edu, or regular mail: 202 Olds Hall, East Lansing, MI 48824.

Please sign you name and write the date below if you agree to participate in this study.

Name _____

Date _____

Appendix C

Introduction

Anticipated Work-Family Balance

Introduction: Thank you for participating in this survey of medical students. We are interested in how you think about and plan for your future, both your professional and family lives. **For many people, family may mean spouse or partner and/or children; for others, it may include a more extended group of individuals. Please use your own definition of your future family when you answer the questions that follow.** We realize that you may not be certain about all of your plans, but please answer the questions that follow to the best of your ability. Circle your response to each question in the survey packet. Feel free to raise your hand at any time if you have a question.

Appendix D

Permission to Re-Contact

Permission to Re-Contact: We would like permission to contact you again in the future. We are interested in how your thoughts and feelings about your work and family lives change over time and about the choices that you make. By providing your name and email address here, you indicate your consent to have us send you an email inviting you to participate in a follow-up study in the future.

Name (please print): _____

Email: _____

Appendix E

Personal Characteristics

Part I - Personal Characteristics: ***Please circle the option below that best describes you.***

1. How old are you?
   a. 22 or younger
   b. 23-24
   c. 25-26
   d. 27-28
   e. 29 or older

2. What year in medical school are you?
   a. 1st year
   b. 2nd year
   c. 3rd year
   d. 4th year

3. What is your gender?
   a. Male
   b. Female

4. What is your current marital status?
   a. Never married
   b. Currently married
   c. Divorced
   d. Widowed
   e. Long-term live-in relationship (for example, common law marriage, same sex partnership)

5. What is your current parental status?
   a. I have never had any children
   b. I have children that live with me
   c. I have children that do not live with me (for example, other parent has full custody, gave up child for adoption, children are grown)

6. How old is your youngest child?
   a. I do not have children
   b. 0-5 years old
   c. 6-10 years old
   d. 11-15 years old
   e. 16 or older

7. What ethnicity do you consider yourself to be?
   a. American Indian or Alaskan native
   b. Asian
   c. Black/African American
   d. Hispanic
   e. Native Hawaiian or other Pacific Islander
   f. White/Caucasian/Not of Hispanic origin
   g. Multi-racial
   h. Other

Appendix F

Relationship and Family Choices

Part II - Relationship and Family Choices*: Please circle the option below that best describes your future relationship and family plans.*

1. Do you plan to be married or have a life-long committed partnership at some point in your life?
    a. Yes
    b. No
    c. Maybe
    d. I haven't thought about it

2. At what age do you plan to marry or enter a life-long committed partnership?
    a. I do not plan to be married/partnered
    b. I am already married/partnered
    c. 22-25 years old
    d. 25-30 years old
    e. 30-35 years old
    f. 35 years old or older
    g. Unsure
    h. I haven't thought about it

3. How certain are you that the relationship plans you just described will actually happen?
    a. Very unsure
    b. Somewhat unsure
    c. Neither sure nor unsure
    d. Somewhat sure
    e. Very sure

4. Do you plan to have children at some point in your life?
    a. Yes
    b. No
    c. Maybe
    d. I haven't thought about it

If you are fairly certain that you <u>do not</u> plan to have children, please skip to Question 18. If you're unsure or haven't thought about it, please answer the questions assuming that you choose to have children.

5. How many children do you plan to have (include in this number any children that you already have)?
    a. 0
    b. 1
    c. 2
    d. 3
    e. 4
    f. 5 or more
    g. I haven't thought about it
    h. Unsure

6. At what age do you plan to start having children?
    a. I already have children
    b. 21-23
    c. 24-26
    d. 27-29
    e. 30-32
    f. 33-35
    g. 35+
    h. I haven't thought about it
    i. Unsure

7. Do you plan to have other people (besides you and your spouse/partner) provide regular childcare?
    a. Yes
    b. No
    c. I haven't thought about it
    d. Unsure

8. If you plan to be married/partnered, how much do you expect yourself and your partner to work once you have children?
    a. We will both work full-time.
    b. I will work full-time but my spouse/partner will work part-time.
    c. I will work part-time but my spouse/partner will work full-time.
    d. I will work full-time but my spouse/partner will not work.
    e. I will not work but my spouse/partner will work full-time.
    f. We will both work part-time.
    g. At least one of us will work full-time, but I'm not sure who.
    h. Neither of us will work.
    i. I do not plan to be married/partnered.
    j. I haven't thought about it.
    k. Unsure

9. What type of childcare do you plan to use during your working hours (circle all that apply)?
    a. I plan for my spouse to provide the care during those hours.
    b. I plan to use a professional group day care for care during those hours.
    c. I plan to have a relative provide care during those hours.
    d. I plan to have a nanny/babysitter provide care in my home during those hours.
    e. I haven't thought about it.
    f. Unsure

10. How certain are you that the family plans you just described will actually happen?
    a. Very unsure
    b. Somewhat unsure
    c. Neither sure nor unsure
    d. Somewhat sure
    e. Very sure

Appendix G

Job/Career Choices

Part III: Job/Career Choices

1. For the next question, mark an X in the column labeled "First Choice" next to the medical specialization that you think that you are MOST likely to go into. Mark an X in the column labeled "Second Choice" next to your SECOND choice of medical specialization. Make only 1 X per column.

Specialization	First Choice	Second Choice
Anesthesiology		
Dermatology		
Emergency medicine		
Family practice		
Internal medicine		
Medical genetics		
Neurological surgery		
Neurology		
Nuclear medicine		
Obstetrics and gynecology		
Ophthalmology		
Orthopedic surgery		
Otolaryngology		
Pathology – anatomic and clinical		
Pediatrics		
Physical medicine and rehabilitation		
Plastic surgery		
Preventive medicine		
Psychiatry		
Radiation oncology		
Radiology – diagnostic		
Surgery – general		
Urology		
Unsure		
Other (please write in)		

2. What setting do you plan to work in?
   a. Hospital
   b. Private practice
   c. Pharmaceutical corporation
   d. University research setting
   e. Not sure
   f. Other (please write in) _____

3. How certain are you that your medical career plans that you just selected will actually happen?
   a. Very unsure
   b. Unsure
   c. Neither sure nor unsure
   d. Sure
   e. Very sure

Specialization Ratings

4. To what extent do you think that the specialization you chose as your first choice above will allow you to experience an ideal balance between your work and family life?
   a. It will hinder my ability to have balance a lot.
   b. It will hinder my ability to have balance a little.
   c. It will not affect my ability to have balance.
   d. It will help my ability to have balance a little.
   e. It will help my ability to have balance a lot.

Part IV: Specialization Ratings

Thinking about the specialization that you rated as your **first choice** as it compares to the other specializations listed on the previous page, answer the following questions about that specialization by filling in the blanks in the statements below using the following scale:

①	**Less**	**L**
②	**Somewhat less**	**SL**
③	**About the same / equally**	**A**
④	**Somewhat more**	**SM**
⑤	**More**	**M**

Specialization Ratings
Hours Demands
1. Doctors in my preferred specialization work _____ hours per week compared to doctors in other specializations.
2. The hours of work in my preferred specialization are _____ predictable compared to the hours for doctors in other specializations.
3. Doctors in my preferred specialization have _____ control over the hours which they work compared to doctors in other specializations.
4. Doctors in my preferred specialization are on call _____ hours per week compared to doctors in other specializations.
On-the-Job Demands
1. The emotional challenges (i.e., dealing with stressful or highly emotional situations, such as upset patients or family members) in my preferred specialization are _____ challenging compared to the emotional challenges for doctors in other specializations.
2. The difficult decisions (such as the choice to advise a more aggressive treatment plan) in my preferred specialization are _____ difficult compared to the decisions for doctors in other specializations.
3. The behavioral control requirements (i.e., having to act in ways that are different from one's natural behavior, such as acting dispassionate in a clinical setting) in my preferred specialization require _____ control compared to the behavioral control requirements of doctors in other specializations.
4. Doctors in my preferred specialization have to follow protocols (i.e., strict requirements for behavior at work rather than making one's own choice about behavior) _____ often compared to doctors in other specializations.

Use the following scale to answer the next question.

①	**Slower than**	**S**
②	**Somewhat slower than**	**SS**
③	**About the same as**	**A**
④	**Somewhat faster than**	**SF**
⑤	**Faster than**	**F**

On-the-Job Demands, Continued.
5. The pace of work in my preferred specialization is _____ the pace for doctors in other specializations.

Appendix I

Specialization Ratings Scale Development

Table 31

Intercorrelations for Self-Rated Specialization Ratings Items

	1	2	3	4	5	6	7	8
1. Hours Item 1								
2. Hours Item 2*	**.47**							
3. Hours Item 3*	**.51**	**.58**						
4. Hours Item 4	**.61**	**.53**	**.51**					
5. On-the-job Item 1	**.21**	.09	**.21**	**.16**				
6. On-the-job Item 2	**.24**	**.13**	**.21**	**.19**	**.53**			
7. On-the-job Item 3	**.14**	**.13**	**.15**	**.11**	**.45**	**.45**		
8. On-the-job Item 4	**.20**	**.14**	**.23**	**.16**	**.20**	**.27**	**.37**	
9. On-the-job Item 5	**.28**	**.18**	**.21**	**.17**	**.37**	**.38**	**.28**	**.37**

Note. Ns range from 419 to 425. Correlations that are significant at $p < .05$ are presented in bold. Correlations with $r \geq |.095|$ are significant at $p < .05$. Correlations with $r \geq |.125|$ are significant at $p < .01$. See Appendix H for item content.

*Items reverse-coded prior to analysis.

Table 32

Factor loadings for Self-Rated Specialization Ratings

Item	Factor 1	Factor 2
Hours Item 1	0.70	
Hours Item 2*	0.73	
Hours Item 3*	0.71	
Hours Item 4	0.74	
On-the-job Item 1		0.67
On-the-job Item 2		0.71
On-the-job Item 3		0.64
On-the-job Item 4		0.41
On-the-job Item 5		0.50

Note. Two factors were extracted using principal axis factoring with a varimax rotation. Factor loadings less than |.30| are not shown. See Appendix H for item content.

*Items reverse coded prior to analysis.

Appendix J

Anticipated Work-Family Conflict

Part V: Anticipated Work-Family Conflict

Thinking about your future job in medicine and the family that you plan to have in the future, please indicate whether you agree or disagree with the following statements. Your ratings should range from **1** (showing that you ***strongly disagree*** with the statement) to **5** (showing that you ***strongly agree*** with the statement).

①	**Strongly Disagree**	**SD**
②	**Disagree**	**D**
③	**Neither Agree nor Disagree**	**N**
④	**Agree**	**A**
⑤	**Strongly Agree**	**SA**

Anticipated Work-Family Conflict
Time-Based Work-Interference-with-Family
1. My work will keep me from my family activities more than I would like.
2. The time I will devote to my job will keep me from participating equally in household responsibilities and activities.
3. I will have to miss family activities due to the amount of time I will have to spend on work responsibilities.
Time-Based Family-Interference-with-Work
1. The time I will spend on family responsibilities will often interfere with my work responsibilities.
2. The time I will spend with my family will often cause me not to spend time in activities at work that could be helpful to my career.
3. I will have to miss work activities due to the amount of time I will have to spend on family responsibilities.
Strain-Based Work-Interference-with-Family
1. I think that when I get home from work I will often be too frazzled to participate in family activities/responsibilities.
2. I will often be so emotionally drained when I get home from work that it will prevent me from contributing to my family.
3. Due to all the pressures I will have at work, sometimes when I get home I will be too stressed to do the things I enjoy.
Strain-Based Family-Interference-with-Work
1. Due to stress at home, I will often be too preoccupied with family matters at work.
2. Because I will often be stressed from my family responsibilities, I will have a hard time concentrating on my work.
3. Tension and anxiety from my family life will often weaken my ability to do my job.
Behavior-Based Work-Interference-with-Family
1. The problem-solving behaviors I will use in my job will not be effective in resolving problems at home.
2. Behavior that is effective and necessary for me at work will be counterproductive at home.
3. The behaviors that I will perform that will make me effective at work will not help me to be a better parent and spouse/partner.

Behavior-Based Family-Interference-with-Work, Continued.
1. The behaviors that will work for me at home will not be effective at work.
2. Behavior that is effective and necessary for me at home will be counterproductive at work.
3. The problem-solving behavior that will work for me at home will not be as useful at work.

Appendix K

Anticipated Work-Family Benefits

Part VI: Anticipated Work-Family Benefits

Thinking about your future job in medicine and the family that you plan to have in the future, please indicate whether you agree or disagree with the following statements. Your ratings should range from **1** (showing that you ***strongly disagree*** with the statement) to **5** (showing that you ***strongly agree*** with the statement).

①	**Strongly Disagree**	**SD**
②	**Disagree**	**D**
③	**Neither Agree nor Disagree**	**N**
④	**Agree**	**A**
⑤	**Strongly Agree**	**SA**

Anticipated Work-Family Benefits
1. My job will show me ways of seeing things that will be helpful outside of work.
2. My job will develop skills in me that will be useful at home.
3. My home life will develop skills in me that will be useful at work.
4. My family/partner will give me support so that I can face the difficulties of work.
5. The quality of my job performance will improve if I am satisfied with my home life.
6. My home life will energize me so that I can tackle the challenges of my job.
7. The quality of my home life will improve if I am satisfied with my job.
8. My job will give me access to certain facts/information which can be used to improve my home life.
9. My family/partner will give me ideas that can be applied to the job.
10. My co-workers will support me and help me face challenges in my home life.
11. My work life will energize me so that I can tackle the challenges of my home life.
12. My home life will provide me with ideas or information that can help me at work.

Appendix L

Anticipated Work-Family Benefits Scale Development

Table 33

Intercorrelations for Anticipated Work-Family Positive Spillover Items

	1	2	3	4	5	6	7	8	9	10	11	12
1. Item 1												
2. Item 2	**.59**											
3. Item 3	**.52**	**.66**										
4. Item 4	**.34**	**.36**	**.41**									
5. Item 5	**.24**	**.33**	**.33**	**.38**								
6. Item 6	**.30**	**.32**	**.35**	**.48**	**.54**							
7. Item 7	**.25**	**.22**	**.21**	**.32**	**.51**	**.37**						
8. Item 8	**.31**	**.44**	**.34**	**.26**	**.30**	**.28**	**.26**					
9. Item 9	**.32**	**.47**	**.43**	**.33**	**.25**	**.28**	**.21**	**.46**				
10. Item 10	**.23**	**.30**	**.25**	**.25**	**.19**	**.16**	**.16**	**.30**	**.31**			
11. Item 11	**.24**	**.37**	**.30**	**.18**	**.15**	**.24**	**.21**	**.36**	**.35**	**.42**		
12. Item 12	**.38**	**.51**	**.53**	**.32**	**.25**	**.26**	**.16**	**.52**	**.61**	**.39**	**.45**	

Note. Ns range from 424 to 428. Correlations that are significant at $p < .05$ are presented in bold. Correlations with $r \geq |.095|$ are significant at $p < .05$. Correlations with $r \geq |.125|$ are significant at $p < .01$. See Appendix K for item content.

Table 34

Factor Loadings for Anticipated Work-Family Positive Spillover

	Factor 1	Factor 2	Factor 3
Item 1		0.60	
Item 2	0.37	0.72	
Item 3		0.70	
Item 4		0.31	0.48
Item 5			0.74
Item 6			0.65
Item 7			0.60
Item 8	0.55		
Item 9	0.58	0.32	
Item 10	0.50		
Item 11	0.58		
Item 12	0.73	0.38	

Note. Three factors were extracted using principal axis factoring with a varimax rotation. Factor loadings less than |.30| are not shown. See Appendix K for item content.

Appendix M

Role-Importance

Part VII: Role Importance

Please indicate whether you agree or disagree with the following statements. Your ratings should range from **1** (showing that you ***strongly disagree*** with the statement) to **5** (showing that you ***strongly agree*** with the statement).

①	**Strongly Disagree**	**SD**
②	**Disagree**	**D**
③	**Neither Agree nor Disagree**	**N**
④	**Agree**	**A**
⑤	**Strongly Agree**	**SA**

Role Importance
Role-Importance – Occupational (Items 3, 4, and 5 not included)
1. Having work/a career that is interesting and exciting to me is my most important life goal.
2. I expect my job/career to give me more real satisfaction than anything else I do.
3. Building a name and reputation for myself through work/a career is not one of my life goals.
4. It is important to me that I have a job/career in which I can achieve something of importance.
5. It is important to me to feel successful in my work/career.
Role-Importance – Relationship
1. My life would seem empty if I never married or had a long-term partner.
2. Having a successful marriage/partnership is the most important thing in life to me.
3. I expect marriage/partnership to give me more real personal satisfaction than anything else in which I am involved.
4. Being married/partnered to a person I love is more important than anything else.
5. I expect the major satisfactions in my life to come from my marriage/partnership relationship.
Role-Importance – Parental
1. Although parenthood requires many sacrifices, the love and enjoyment of children of one's own are worth it all.
2. If I chose not to have children, I would regret it.
3. It is important to me that I will be an effective parent.
4. The whole idea of having children and raising them is not attractive to me.
5. My life would be empty if I never had children.

Appendix N

Role-Importance Scale Development

Table 35

Intercorrelations for Role-Importance Items

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Occupational Item 1															
2. Occupational Item 2	**.59**														
3. Occupational Item 3	-.01	-.04													
4. Occupational Item 4 *	**.18**	**.21**	**.18**												
5. Occupational Item 5	.06	**.16**	**.17**	**.48**											
6. Relationship Item 1	**-.10**	-.09	.01	**.10**	**.14**										
7. Relationship Item 2	-.08	-.08	-.01	-.01	-.01	**.48**									
8. Relationship Item 3	**-.14**	**-.12**	.01	.00	-.05	**.38**	**.71**								
9. Relationship Item 4	-.07	**-.11**	.00	.04	.02	**.44**	**.79**	**.75**							
10. Relationship Item 5	**-.11**	**-.18**	-.01	.00	.01	**.36**	**.62**	**.70**	**.71**						
11. Parental Item 1	**-.13**	**-.25**	.03	.06	.03	**.26**	**.30**	**.33**	**.31**	**.38**					
12. Parental Item 2	**-.16**	**-.16**	.06	**.10**	.04	**.43**	**.25**	**.28**	**.23**	**.22**	**.48**				
13. Parental Item 3	**-.12**	**-.18**	.00	.07	**.17**	**.20**	**.24**	**.20**	**.22**	**.26**	**.50**	**.43**			
14. Parental Item 4*	**-.16**	**-.21**	.03	.07	.06	**.22**	**.16**	**.18**	**.18**	**.21**	**.55**	**.52**	**.47**		
15. Parental Item 5	**-.12**	**-.11**	.03	.07	.08	**.57**	**.37**	**.29**	**.30**	**.28**	**.43**	**.64**	**.29**	**.41**	

Note. Ns range from 421 to 426. Correlations that are significant at $p < .05$ are presented in bold. Correlations with $r \geq |.095|$ are significant at $p < .05$. Correlations with $r \geq |.125|$ are significant at $p < .01$. See Appendix M for item content.

*Items reverse-coded prior to analysis.

Table 36

Factor Loadings for Role-Importance

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Occupational Item 1				0.76	
Occupational Item 2				0.75	
Occupational Item 3					
Occupational Item 4					0.61
Occupational Item 5					0.77
Relationship Item 1	0.38		0.58		
Relationship Item 2	0.82				
Relationship Item 3	0.82				
Relationship Item 4	0.89				
Relationship Item 5	0.76				
Parental Item 1		0.70			
Parental Item 2		0.56	0.53		
Parental Item 3		0.62			
Parental Item 4		0.69			
Parental Item 5		0.35	0.77		

Note. Five factors were extracted using principal axis factoring with a varimax rotation. Factor loadings less than $|.30|$ are not shown. See Appendix M for item content.

Table 37

Factor Loadings for Role-Importance Forcing Four Factors

	Factor 1	Factor 2	Factor 3	Factor 4
Occupational Item 1			0.62	
Occupational Item 2			0.86	
Occupational Item 3				
Occupational Item 4				0.6
Occupational Item 5				0.7
Relationship Item 1	0.42	0.4		
Relationship Item 2	0.84			
Relationship Item 3	0.82			
Relationship Item 4	0.89			
Relationship Item 5	0.74			
Parental Item 1		0.6		
Parental Item 2		0.8		
Parental Item 3		0.5		
Parental Item 4		0.7		
Parental Item 5		0.7		

Note. Four factors were forced using principal axis factoring with a varimax rotation. Factor loadings less than | .30 | are not shown. See Appendix M for item content.

Appendix O

Role-Sharing

Part VIII: Role Sharing

If you are fairly certain you <u>do not</u> plan to have a spouse/partner, please skip to question 90. If you're unsure or haven't thought about it, answer the questions assuming that you choose to have a spouse/partner.

Below are a number of responsibilities that you may face in the future. We are interested in the extent to which you think that you will share those responsibilities with your spouse/partner or take care of them yourself. Please use the following scale to describe how you think you and your future partner may share each responsibility.

① **I will be entirely responsible for this**
② **I will be mostly responsible for this, but not entirely**
③ **We will share this responsibility equally**
④ **My spouse/partner will be mostly responsible for this, but not entirely**
⑤ **My spouse/partner will be entirely responsible for this**
⑥ **Contract out to professional**

Role Sharing
Role-Sharing Finances (Item 1 not included)
1. Bringing in income
2. Managing the household budget
3. Saving money for the future
Role-Sharing Chores (Item 5 not included)
1. Cleaning the house
2. Cooking
3. Grocery shopping
4. Doing laundry
5. Maintaining our home/apartment (e.g., painting, yard work)
6. Taking care of regular errands (e.g., going to the bank, post office, dry cleaning)
7. Daily care of the children, such as feeding and dressing them
If you are fairly certain you <u>do not</u> plan to have children, please skip to question 90. If you're unsure or haven't thought about it, answer the questions assuming that you choose to have children.
Role-Sharing Childcare
1. Supporting our children emotionally, such as talking and spending time with our children
2. Overseeing our children's education, such as meeting with their teachers
3. Supporting our children's extra-curricular activities, such as driving them to sports practices Supporting our children's extra-curricular activities, such as driving them to sports practices
4. Disciplining our children

Appendix P

Role-Sharing Scale Development

Table 38

Intercorrelations for Role-Sharing Items

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Finances Item 1														
2. Finances Item 2	.02													
3. Finances Item 3	**.31**	**.41**												
4. Chores Item 1	**-.53**	.01	**-.19**											
5. Chores Item 2	**-.39**	-.02	**-.18**	**.49**										
6. Chores Item 3	**-.48**	.07	**-.17**	**.56**	**.62**									
7. Chores Item 4	**-.40**	.04	**-.23**	**.65**	**.36**	**.51**								
8. Chores Item 5	**.20**	.03	**.18**	**-.17**	**-.16**	**-.26**	**-.17**							
9. Chores Item 6	**-.35**	**.10**	-.07	**.40**	**.25**	**.40**	**.38**	.00						
10. Chores Item 7	**-.52**	.08	**-.16**	**.51**	**.42**	**.50**	**.48**	**-.23**	**.47**					
11. Childcare Item 1	**-.15**	**.13**	-.02	**.16**	**.23**	**.26**	**.21**	-.03	**.17**	**.27**				
12. Childcare Item 2	**-.10**	**.11**	.05	**.18**	**.21**	**.19**	**.19**	.05	**.19**	**.20**	**.35**			
13. Childcare Item 3	**-.40**	.08	-.06	**.32**	**.29**	**.31**	**.32**	-.04	**.32**	**.43**	**.27**	**.37**		
14. Childcare Item 4	.03	**.14**	.09	.06	-.04	-.03	.03	**.15**	.06	.02	**.22**	**.25**	**.18**	

Note. Ns range from 383 to 423. Correlations that are significant at $p < .05$ are presented in bold. Correlations with $r \geq |.100|$ are significant at $p < .05$. Correlations with $r \geq |.131|$ are significant at $p < .01$. See Appendix O for item content.

*Items reverse-coded prior to analysis.

Table 39

Factor Loadings for Role-Sharing

	Factor 1	Factor 2	Factor 3
Finances Item 1	-0.68		
Finances Item 2			0.55
Finances Item 3			0.70
Chores Item 1	0.75		
Chores Item 2	0.59		
Chores Item 3	0.76		
Chores Item 4	0.66		
Chores Item 5	-0.31		
Chores Item 6	0.50		
Chores Item 7	0.70		
Childcare Item 1		0.51	
Childcare Item 2		0.65	
Childcare Item 3	0.40	0.47	
Childcare Item 4		0.46	

Note. Three factors were extracted using principal axis factoring with a varimax rotation. Factor loadings less than | .30 | are not shown. See Appendix O for item content.

Appendix Q

Role-Planning

Part IX: Role Planning

Please indicate whether you agree or disagree with the following statements. Your ratings should range from **1** (showing that you ***strongly disagree*** with the statement) to **5** (showing that you ***strongly agree*** with the statement).

①	**Strongly Disagree**	**SD**
②	**Disagree**	**D**
③	**Neither Agree nor Disagree**	**N**
④	**Agree**	**A**
⑤	**Strongly Agree**	**SA**

Role Planning
Role-Planning Knowledge
1. I don't know how to plan for combining my medical career and my family.
2. Figuring out how to balance my medical career and my family confuses me because I don't feel I know enough about myself or about the stresses involved in balancing these roles.
3. I can't understand how some people can be so certain about how to successfully manage career and family responsibilities.
4. When it comes to combining my medical career with my family, I can't seem to make up my mind how to do it successfully.
5. It's easy to be certain how to manage my future medical career and family obligations in ways that are realistic for me.
6. I have little or no idea of what being both a doctor and a parent will be like.
7. I don't know whether my plans for combining my medical career and my family will allow me to be the kind of person I want to be.
8. I'm very clear on how to plan for combining my medical career and family responsibilities.
9. I don't know whether my plans for combining my medical career with my family are realistic.
10. I know a lot of strategies for combining a family with a career in a way that minimizes the stress involved.
Role-Planning Involvement
1. I can't seem to become very concerned about how to combine my medical career with my family plans.
2. I seldom think about the ways that I might actually combine my medical career and my family obligations.
3. I'm not going to worry about how to combine my medical career with my family until I'm actually involved in both of these roles.
4. I don't worry about managing my medical career and family responsibilities because I'm sure it will sort itself out sooner or later.
5. There is no point in trying to decide how to deal with the demands of a medical career and a family when the future is so uncertain.
6. Finding out who I am as a person is so important right now that it makes planning for combining a medical career and family seem unrealistic.
7. You shouldn't worry about trying to combine your career with your family because so much depends on things that are out of your control.

Role-Planning Involvement, Continued.
8. I feel it's important to "take it as it comes" when it comes to planning for combining my medical career and my family plans.
9. I seem to spend a lot of time these days thinking about how I will combine my family and my work responsibilities.
10. It's very important to me to try and figure out ahead of time how I will balance my medical career and family responsibilities.

Table 40
Intercorrelations for Role-Planning Items

	1	2	3	4	5	6	7	8	9
1. Knowledge Item 1									
2. Knowledge Item 2	**.68**								
3. Knowledge Item 3	**.62**	**.66**							
4. Knowledge Item 4	**.66**	**.69**	**.69**						
5. Knowledge Item 5*	.43	.49	.45	**.53**					
6. Knowledge Item 6	**.45**	**.43**	**.43**	**.39**	**.31**				
7. Knowledge Item 7	**.50**	**.45**	**.47**	**.42**	**.40**	**.50**			
8. Knowledge Item 8	**.53**	**.47**	**.44**	**.46**	**.53**	**.44**	**.47**		
9. Knowledge Item 9	**.45**	**.37**	**.40**	**.45**	**.41**	**.38**	**.49**	**.42**	
10. Knowledge Item 10*	**.49**	**.41**	**.42**	**.40**	**.38**	**.38**	**.34**	**.52**	**.31**
11. Involvement Item 1	-.08	-.04	-.03	-.07	-.07	.07	-.08	-.07	-.02
12. Involvement Item 2	.02	.06	**.10**	.03	-.04	**.10**	-.06	.04	.00
13. Involvement Item 3	.06	.09	.09	.05	-.07	**.18**	.03	.09	.01
14. Involvement Item 4	-.01	.02	.01	-.01	-.08	.07	-.03	.04	-.03
15. Involvement Item 5	**.16**	**.19**	**.17**	**.17**	**.11**	**.20**	**.11**	**.10**	.07
16. Involvement Item 6	**.23**	**.27**	**.28**	**.22**	**.12**	**.23**	**.16**	**.15**	.09
17. Involvement Item 7	**.13**	**.19**	**.23**	**.21**	.07	**.14**	**.14**	.07	.06
18. Involvement Item 8	**.11**	**.15**	**.16**	**.15**	.04	.09	**.15**	.08	**.13**
19. Involvement Item 9*	**-.16**	-.08	-.04	-.10	-.08	-.01	**-.17**	.01	**-.15**
20. Involvement Item 10*	-.05	-.01	.02	-.06	.01	.07	-.04	.08	-.06

Note. Ns range from 420 to 424. Correlations that are significant at $p < .05$ are presented in bold. Correlations with $r \geq |.095|$ are significant at $p < .05$. Correlations with $r \geq |.125|$ are significant at $p < .01$. See Appendix Q for item content.
*Items reverse-coded prior to analysis.

Table 40 (cont'd)

	10	11	12	13	14	15	16	17	18	19	20
1. Knowledge Item 1											
2. Knowledge Item 2											
3. Knowledge Item 3											
4. Knowledge Item 4											
5. Knowledge Item 5*											
6. Knowledge Item 6											
7. Knowledge Item 7											
8. Knowledge Item 8											
9. Knowledge Item 9											
10. Knowledge Item 10*											
11. Involvement Item 1	-.01										
12. Involvement Item 2	**.14**	**.46**									
13. Involvement Item 3	**.16**	**.42**	**.54**								
14. Involvement Item 4	.08	**.44**	**.47**	**.67**							
15. Involvement Item 5	**.24**	**.32**	**.38**	**.58**	**.59**						
16. Involvement Item 6	**.16**	**.20**	**.31**	**.38**	**.36**	**.44**					
17. Involvement Item 7	**.17**	**.23**	**.38**	**.46**	**.48**	**.47**	**.39**				
18. Involvement Item 8	.09	**.21**	**.30**	**.44**	**.47**	**.42**	**.28**	**.48**			
19. Involvement Item 9*	**.10**	**.30**	**.41**	**.39**	**.35**	**.26**	**.18**	**.22**	**.23**		
20. Involvement Item 10*	**.18**	**.29**	**.37**	**.47**	**.46**	**.48**	**.27**	**.31**	**.35**	**.55**	

Table 41

Factor Loadings for Role-Planning

	Factor 1	Factor 2	Factor 3
Knowledge Item 1	0.79		
Knowledge Item 2	0.75		
Knowledge Item 3	0.74		
Knowledge Item 4	0.77		
Knowledge Item 5	0.64		
Knowledge Item 6	0.59		
Knowledge Item 7	0.65		
Knowledge Item 8	0.72		
Knowledge Item 9	0.58		
Knowledge Item 10	0.60		
Involvement Item 1		0.50	
Involvement Item 2		0.63	
Involvement Item 3		0.79	
Involvement Item 4		0.79	
Involvement Item 5		0.71	
Involvement Item 6		0.50	
Involvement Item 7		0.64	
Involvement Item 8		0.58	
Involvement Item 9		0.49	0.44
Involvement Item 10		0.60	0.42

Note. Three factors were extracted using principal axis factoring with a varimax rotation. Factor loadings less than | .30 | are not shown. See Appendix Q for item content.

Appendix S

Core Self-Evaluations

Part X: Core Self-Evaluations

Below are several statements about you with which you may agree or disagree. Your ratings should range from **1** (showing that you ***strongly disagree*** with the statement) to **5** (showing that you ***strongly agree*** with the statement).

①	**Strongly Disagree**	**SD**
②	**Disagree**	**D**
③	**Neither Agree nor Disagree**	**N**
④	**Agree**	**A**
⑤	**Strongly Agree**	**SA**

Core Self-Evaluations	
1.	I am confident I get the success I deserve in life.
2.	Sometimes I feel depressed.
3.	When I try, I generally succeed.
4.	Sometimes when I fail I feel worthless.
5.	I complete tasks successfully.
6.	Sometimes, I do not feel in control of my school work.
7.	Overall, I am satisfied with myself.
8.	I am filled with doubts about my competence.
9.	I determine what will happen in my life.
10.	I do not feel in control of my success in medical school.
11.	I am capable of coping with most of my problems.
12.	There are times when things look pretty bleak and hopeless to me.

Appendix T

Core Self-Evaluations Scale Development

Table 42

Intercorrelations for Core Self-Evaluations Items

	1	2	3	4	5	6	7	8	9	10	11	12
Item 1												
Item 2*	**.18**											
Item 3	**.41**	**.14**										
Item 4*	**.25**	**.33**	**.24**									
Item 5	**.29**	**.14**	**.47**	**.17**								
Item 6*	**.14**	**.25**	**.12**	**.29**	**.19**							
Item 7	**.35**	**.35**	**.41**	**.31**	**.34**	**.18**						
Item 8*	**.27**	**.35**	**.28**	**.43**	**.28**	**.34**	**.43**					
Item 9	**.32**	**.21**	**.25**	**.13**	**.17**	**.14**	**.28**	**.21**				
Item 10*	**.24**	**.15**	**.23**	**.25**	**.18**	**.34**	**.23**	**.36**	**.23**			
Item 11	**.28**	**.20**	**.34**	**.21**	**.38**	**.12**	**.50**	**.32**	**.29**	**.27**		
Item 12*	**.15**	**.44**	**.19**	**.38**	**.25**	**.30**	**.35**	**.41**	**.22**	**.32**	**.35**	

Note. Ns range from 417 to 421. Correlations that are significant at $p < .05$ are presented in bold. Correlations with $r \geq |.096|$ are significant at $p < .05$. Correlations with $r \geq |.126|$ are significant at $p < .01$. See Appendix S for item content.
*Items reverse-coded prior to analysis.

Table 43

Factor Loadings for Core Self-Evaluations

	Factor 1	Factor 2
Item 1	0.53	
Item 2		0.55
Item 3	0.69	
Item 4		0.53
Item 5	0.56	
Item 6		0.48
Item 7	0.56	0.38
Item 8	0.32	0.60
Item 9	0.37	
Item 10		0.40
Item 11	0.55	
Item 12		0.64

Note. Two factors were extracted using principal axis factoring with a varimax rotation. Factor loadings less than |.30| are not shown. See Appendix S for item content.

Appendix U

Definition of Family

Definition of Family: In the space below, please write down the types of individuals included in the definition of family that you used to answer the survey (e.g., wife, child, parent, etc.).

Appendix V

Sample Expert-Ratings of Specialization and Setting Demands

Introduction: This survey is part of a larger study that examines the medical specializations that medical students are choosing to go into and the setting in which they plan to work. In particular, we are interested in how the demands of the different specializations are related to whether individuals choose to go into them. Further, we are assessing the role that perceptions of future work-family balance plan in this decision-making process. By providing ratings of the demands of the different specializations, you will help us in this research process.

You will be asked to describe a number of medical specializations by answering 9 questions about each specialization. While it may seem like there are a lot of questions, we expect that you will be able to move through the survey quickly. Please answer the questions referring to the specialization described at the top of each page. Following the questions about medical specializations, there are a few questions about the different types of settings in which doctors may work. Please answer the questions to the best of your ability, even if you are not 100% certain.

Please answer the following questions about the medical specialization of ANESTHESIOLOGY.

1. Doctors in this specialization work _____ hours per week compared to doctors in other specializations.
Less Somewhat less About the same/equally Somewhat more More

2. The hours of work in this specialization are _____ predictable compared to the hours for doctors in other specializations.
Less Somewhat less About the same/equally Somewhat more More

3. Doctors in this specialization have _____ control over the hours which they work compared to doctors in other specializations.
Less Somewhat less About the same/equally Somewhat more More

4. Doctors in this specialization are on call _____ hours per week compared to doctors in other specializations.
Less Somewhat less About the same/equally Somewhat more More

5. The emotional challenges (i.e., dealing with stressful or highly emotional situations, such as upset patients or family members) in this specialization are _____ challenging compared to the emotional challenges for doctors in other specializations.
Less Somewhat less About the same/equally Somewhat more More

6. The difficult decisions (such as the choice to advise a more aggressive treatment plan) in this specialization are _____ difficult compared to the decisions for doctors in other specializations.
Less Somewhat less About the same/equally Somewhat more More

7. The behavioral control requirements (i.e., having to act in ways that are different from one's natural behavior, such as acting dispassionate in a clinical setting) in this specialization require _____ control compared to the behavioral control requirements of doctors in other specializations.
Less Somewhat less About the same/equally Somewhat more More

8. Doctors in this specialization have to follow protocols (i.e., strict requirements for behavior at work rather than making one's own choice about behavior) _____ often compared to doctors in other specializations.
Less Somewhat less About the same/equally Somewhat more More

9. The pace of work in this specialization is _____ the pace for doctors in other specializations.
Slower than Somewhat slower than About the same as Somewhat faster than Faster than

Please answer the following questions about working in a PRIVATE PRACTICE.

1. Doctors who work in this setting work _____ hours per week compared to doctors in other settings.
Less Somewhat less About the same/equally Somewhat more More

2. The hours of work in this setting are _____ predictable compared to the hours for doctors in other settings.
Less Somewhat less About the same/equally Somewhat more More

3. Doctors in this setting have _____ control over the hours which they work compared to doctors in other settings.
Less Somewhat less About the same/equally Somewhat more More

4. Doctors in this setting are on call _____ hours per week compared to doctors in other settings.
Less Somewhat less About the same/equally Somewhat more More

5. The emotional challenges (i.e., dealing with stressful or highly emotional situations, such as upset patients or family members) in this setting are _____ challenging compared to the emotional challenges for doctors in other settings.
Less Somewhat less About the same/equally Somewhat more More

6. The difficult decisions (such as the choice to advise a more aggressive treatment plan) in this setting are _____ difficult compared to the decisions for doctors in other settings.
Less Somewhat less About the same/equally Somewhat more More

7. The behavioral control requirements (i.e., having to act in ways that are different from one's natural behavior, such as acting dispassionate in a clinical setting) in this setting require _____ control compared to the behavioral control requirements of doctors in other settings.
Less Somewhat less About the same/equally Somewhat more More

8. Doctors in this setting have to follow protocols (i.e., strict requirements for behavior at work rather than making one's own choice about behavior) _____ often compared to doctors in other setting.
Less Somewhat less About the same/equally Somewhat more More

9. The pace of work in this setting is _____ the pace for doctors in other settings.
Slower than Somewhat slower than About the same as Somewhat faster than Faster than

Appendix W

Expert-Ratings of Specialization/Setting Demands

Table 44

Mean and Standard Deviation of Expert-Ratings for Hours and On-the-Job Demands for Each Specialization and Setting

Specialization/Setting	Hours *Mean*	Hours *SD*	On-the-Job *Mean*	On-the-Job *SD*
Anesthesiology	2.56	1.00	2.62	0.82
Dermatology	1.54	0.50	1.93	0.48
Emergency Medicine	2.44	1.23	4.18	0.49
Family Practice	3.35	0.98	3.33	0.59
Internal Medicine	3.45	0.79	3.35	0.58
Medical Genetics	1.75	0.61	2.37	0.99
Neurological Surgery	4.34	0.73	3.82	0.67
Neurology	3.02	0.36	3.13	0.46
Nuclear Medicine	1.81	0.61	1.93	0.59
Obstetrics and Gynecology	4.65	0.29	4.13	0.65
Ophthalmology	1.81	0.71	2.24	0.67
Orthopedic Surgery	3.85	0.43	3.10	0.51
Otolaryngology	2.77	0.56	2.76	0.40
Pathology – Anatomical and Clinical	1.57	0.59	1.65	0.60
Pediatrics	3.38	0.52	3.61	0.51
Physical Medicine and Rehabilitation	1.78	0.81	2.55	0.67
Plastic Surgery	2.97	0.61	2.92	0.54
Preventive Medicine	1.97	0.68	2.29	0.46
Psychiatry	2.28	0.75	3.56	0.71
Radiation Oncology	2.48	0.56	3.35	0.70
Radiation - Diagnostic	1.87	0.52	1.67	0.53
Surgery - General	4.45	0.51	3.89	0.48
Urology	2.83	0.78	3.08	0.26
Hospital	3.40	0.76	3.77	0.52
Private Practice	3.02	1.05	2.95	0.21
Pharmaceutical Corporation	1.49	0.59	1.67	0.49
University Research Setting	3.05	0.84	2.93	1.06

Note. All ratings were made on a 5-point scale. Higher scores reflect greater demands.

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