

Effects of Gender Role Ideologies on Stressors and Cortisol Reactivity in Dual-Earner Couples
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Dual-earner partnerships currently rank among the most common household arrangements in United States (U.S. Census 2010). In 2007, dual-earner families comprised 65% of U.S. family types with children under the age of 18 (Perrone et al. 2009, Barnett et al. 1994). The prevalence of dual-earner families has increased due to the upturn in the number of females employed in the past fifty years; by 1985, 70% of working mothers were employed full-time (Bartley et al. 2005). Collectively, the heads of these families spend an average of 91 hours per week engaged in paid work (Saxbe et al. 2011, from Bond, Thompson, Galinsky, & Prottas, 2003). Dual-earner couples earn considerable benefits: greater economic stability and protection against financial disaster, husbands are relieved from the sole responsibility of the family's financial stability, and wives are able to derive satisfaction from work outside the home (Bartley et al. 2005). The increased number of women in the workforce is indicative of a cultural shift away from traditional gender roles and away from societal acceptance of sex-based division of responsibilities as the norm. However, the rise in married female workers has been accompanied by reports of heightened levels of stress in dual-earner couples ("Coping with Stress at Work"). The number of stressors an individual encounters inhibits their physiological responses; chronically or intense encounters with stressors interferes with allostasis by altering hormonal responses of the hypothalamic-pituitary-adrenal (HPA) axis in the brain, interfering with cortisol production. Gender role ideologies play an indirect, but powerful, role in mediating the body's physiological responses to stressors, for the number of stressors dual-earner couples encounter in the home, in their relationship, and due to parenting responsibilities, is influenced by their enactment of gender roles. Conformity to and performance of traditional gender roles is

correlated with decreased chances of marital happiness in dual-earner couples, leading to high cortisol reactivity and disruption of the diurnal cortisol curve, whereas dual-earner couples who espouse an egalitarian gender ideology more frequently report higher rates of marital success, equitable distribution of domestic labor, and higher rates of marital disclosure, all of which are associated with more positive stress outcomes.

Cortisol is a regulatory hormone of the neuro-endocrine system. It is a regulatory hormone, involved in learning, memory, and emotion, and plays a role in stress reactivity and in social and affiliative behavior (Slatcher 2014, Gordon et al. 2010). It is produced in the HPA axis of the brain, and shows a strong diurnal rhythm, peaking approximately 30 minutes after waking and then, under normal circumstances, gradually declining over the course of the day (Slatcher 2014). Receptors to cortisol exist in nearly every cell of the human body, attesting to its important role in allostasis (Slatcher 2014). Many studies have found the steepness of daily cortisol decline to be positively associated with health and well-being, whereas elevated end-of-the-day cortisol levels, and a therefore flattened diurnal cortisol slope, has been linked to burnout, depression, and earlier mortality (Saxbe 2011).

Cortisol reactivity is affected by disruptions to bodily homeostasis. The production and output of cortisol is influenced by encounters with stressors; while cortisol levels habituate to regular encounters with stressors, they are sensitive to novel or intense environmental challenges. Chronic stress affects endocrine system responses and upsets allostasis which is maintained by the combined functioning of the adrenal glands, hypothalamus, ovaries, pancreas, parathyroid, pituitary gland, testes, thyroid, while make up the endocrine system, and produce and regulate the effects of a number of regulatory, reproductive, maintenance hormones (“Endocrine Glands and Types of Hormones”). Disruptions to cortisol secretion can dysregulate biological systems

throughout the body, and chronically high cortisol levels are associated with negative health outcomes later in life (Lundberg 2005, Slatcher 2014). High cortisol reactivity is indicative of a dysregulation of the HPA axis, and chronically high cortisol levels and flattened diurnal cortisol curves can lead to hippocampal atrophy (Slatcher 2014). Individuals who cope with emotional challenges, heavy workloads, and chronic stress, experience dysregulated cortisol responsivity, as the body attempts to maintain homeostasis in challenging environments (Lundberg 2005). Repeated activation of cortisol responses without time for recovery increases the risk of various health problems, inhibits immune system function, and can lead to cognitive impairment (Lundberg 2005, Slatcher 2014). Dual-earner couples encounter a vast number of stressors each day, whether at work, in the home, or with their children, and seldom have adequate amounts of time for physiological recovery, inhibiting the normal drop in cortisol from afternoon to evening, leading to chronic dysregulation of stress system functionality, flattened diurnal cortisol slopes, and impaired HPA axis functioning (Saxbe et al. 2011).

The quantity and quality of stressors that dual-earner couples experience are unique to their provisioning situation. Both members of a dual-couple negotiate the combined obligations of fulfilling of their individual career, home, and parenting responsibilities. Common workplace stressors include dissatisfaction with one's salary, excessive workloads, limited opportunities for advancement or growth, unstimulating and unchallenging tasks, lack of social support, exclusion from job-related decisions, and conflicting demands, among others ("Coping with Stress at Work"). These worries and pressures do not dissipate at the end of the day; workers often return to their homes tired and stressed, emotionally and physically worn. As women's workforce participation rise, men and women report a convergence in the amount of time allocated to household tasks, yet women still devote considerably more time to domestic responsibilities than

men. A 2011 study by Saxbe et al. found that women tend to devote more time to domestic chores after coming home from work, while men devote more time to leisure (Saxbe et al. 2011). These women's cortisol levels stayed higher for longer, and their diurnal cortisol curve was flattened (Saxbe et al. 2011). The men in this study who engaged in housework also maintained higher cortisol levels for longer after coming home (Saxbe et al 2011). Dual-earner parents face the challenges, responsibilities, and demands of parenting prior to leaving for and upon coming home from work. While working parents today spend more time with their children than parents did in 1989, they report higher levels of stress (Perrone et al. 2009). A 2010 online survey by the American Psychological Association found that 73 percent of parents report family responsibilities as a significant source of stress ("Managing Stress for a Healthy Family"). Factors such as the parents' income, number, age and sex of children, and the length of the marriage contribute to psychological distress as well (Bartlett et al. 2003). Relationship satisfaction is partially influenced by the couple's management of work and parenting stressors. High marital disclosure acts as a buffer to physiological stress reactivity in working women, and low levels of marital disclosure are correlated with reports of higher stress and impaired physiological recovery from work (Slatcher et al. 2010, Perrone et al. 2009). The perceived fairness of the division of labor between partners contributes to marital happiness. When both partners feel that the household and childcare duties are equitably divided, both feel that their stress load is lighter; when one or both of the partners feels that duties are not fairly distributed, they report diminished marital quality (Perrone et al 2009). A 2006 study of 52 dual-earner German couples found that the amount of time allocated to daily housework did not influence relationship satisfaction, but the absolute difference between each person's contributions did (Saxbe et al. 2011). The combination of work, domestic, and relationship obligations give rise to

high levels of stress, but the gender ideologies by which a couple abides can exacerbate or mitigate the harmful outcomes of high-stress environments.

A traditional patriarchal gender role ideology holds the man to the standard of “breadwinner,” and the women to the role of housekeeper and primary childcare survivor. According to the logic of a traditional gender role ideology, there exists a natural order in which each member of a partnership has a “realms of expertise”: “men hold power in the outside world, and women hold power in the home, and are primarily responsible for the home and its work, the children, and relationship maintenance” (Bartley et al. 2005) Women who hold traditional views believe that ‘it is their duty to stay at home and care for their children while their husbands work’ (Kauffman 2000). Working women with traditional gender views do more housework and childcare than men after coming home from work, and, as a result, their cortisol levels stay higher for longer, and their diurnal cortisol curve is flattened (Saxbe et al. 2015). Traditional men believe that their role of provider justifies their relative lack of participation in child-rearing activities (Kauffman 2000). Men who take on fewer household chores and childcare after work and instead engage in leisure activities experience a steeper decline in cortisol levels over the course of the evening, suggesting that non-contribution to domestic and childcare tasks leads to steeper diurnal cortisol slopes (Saxbe et al. 2015). Traditional gender role beliefs differentially affect relationship quality. While women with traditional views are less likely to divorce or separate, prior studies report finding decreased marriage stability when the husband holds traditional views, and marital dissatisfaction in wives is associated with weaker end-of-the-day physiological recovery from work (Kauffman 2000, Saxbe et al 2011). Men who maintain traditional views are less supportive of their working wives, and report feeling competition with their wives’ career successes (Kauffman 2000). Attitudes of aggression are associated with

holding and enacting traditional gender role ideologies, and both men who initiate aggression and women who experience partner aggression have flatter diurnal cortisol curves (Saxbe et al. 2015). These findings suggest that men and women who hold traditional views do believe that each individual should fulfill the responsibilities of their sex-specific “realm of expertise” for the benefit of the other; however, the low levels of marital disclosure and the unequal distribution of essential household and childcare in traditional marriages are related to heightened levels of stress for both partners.

Recent cultural, socio-political, and economic forces have led to decreased acceptance of traditional gender role ideologies in several societies across the globe. Men and women are increasingly likely to report praise and support for wives and mothers, and more accepting of the idea that men should help with housework (Kaufmann, 2000). Egalitarian attitudes about gender roles are becoming more common among men and women, partially due to socioeconomic and political factors that either enable or drive women to work more than they have been able to do historically. Couples who espouse egalitarian models of gender roles are more likely to “share the load.” Egalitarian husbands assist more with housework, practice more equitable decision-making, are more involved with their children, and are more supportive of their wives (Kauffman 2000). Egalitarian women married to egalitarian men report higher levels of marital disclosure, more active support, and decreased domestic responsibilities (Kauffman 2000). A more balanced distribution of household labor and more time to relax and withdraw after a high-workload day are related to higher marital satisfaction in married working women (Saxbe et al. 2011). Egalitarian women more commonly think that tasks should be shared equally, but realize that reality does not mirror hope as closely as they would like; studies demonstrate that working women spend more hours than engaged in housework and childcare (Saxbe et al. 2011, from

Bianchi et al., 2000). Husbands with egalitarian views about family roles are more inclined to report very low chances of divorce and very high levels of marital happiness compared to traditional husbands, and wives with egalitarian attitudes report more openly expressing disagreement with their husbands than traditional wives (Kauffman 2000). The lower divorce rates of egalitarian men suggest that they experience fewer conflicts with their wives, perhaps due to more equal distribution of responsibilities with their wives (Kauffman 2000). This assistance alleviates pressure on, and reduces the number of stressors, that wives and husbands encounter in their relationship and in the home. Additionally, higher marital disclosure and support for a partner's career increase chances of marital happiness and success for egalitarian couples.

Gender attitudes are an important aspect of any partnership, for the acceptance of gender roles leads to the internalization of role responsibility (Kauffman 2000). This internalization goes beyond merely acting out a role, for, as observed in the example of dual-earner couples' gender role ideologies and stress levels, attitudes and their enactment affect the amount of stressors each individual encounters. Factors such as the extent of each person's contribution to childcare and domestic tasks, marital happiness, support of each other's work success contributes to each individual's stress loads, and the literature suggests that egalitarian couples encounter fewer stressors due to the buffering effects of partner support, more equal distribution of household labor, and greater levels of marital disclosure.

Regardless of which gender role ideology a dual-earner couple accepts, employed women do more housework and childcare than employed men after coming home from work, but domestic labor is most often the woman's obligatory responsibility among traditional couples, whereas housework is more divided between both partners in egalitarian couples in ways that are

deemed equitable by both individuals. The buffering effects of marital satisfaction, such as marital disclosure and equitable distribution of household chores and childcare, are more commonly found in couples who hold egalitarian views. Working husbands and wives who divide housework and childcare as equally as possible distribute the quantity and quality of environmental stressors. Working couples who favor and live out traditional gender roles demonstrate lower levels of marital disclosure, report lower levels of marital happiness, and wives are primarily responsible for fulfilling the roles of housekeeper and childcare provider, increasing their responsibilities and therefore their stress levels. While men who take on more household chores and childcare after work have higher cortisol levels for longer into the evening than men who only marginally contribute, it is likely that the higher reported levels of marital happiness among egalitarian men are due to their willingness to equitably participate in domestic tasks. The stress of housework is much less wearing than the stress of marital discord, which many traditional men report. Adherence and enactment of gender role ideologies, stressors encountered, and cortisol reactivity are subject to biocultural variation, including type of job, upbringing, socioeconomic status, health status, and number of children. However, the existing literature on the intersections of these social and biological systems indicates that egalitarian attitudes about gender roles and equitable distribution of household tasks and childcare contributes to relatively positive stress physiology outcomes for both partners in dual-earner couples.

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