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Ever-Married Women's Enabling Resources and Generalized Anxiety in Minya, Egypt

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Ever-Married Women's Enabling Resources and Generalized Anxiety in Minya, Egypt

By

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B.A.
Macalester College
2010

Thesis Committee Chair: Kathryn M. Yount, Ph.D.

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Abstract

Ever-Married Women's Enabling Resources and Generalized Anxiety in Minya, Egypt

By Sally Dijkerman

Gender disparities in mental health are evident across the globe, with women experiencing higher rates of depression, anxiety disorders, and suicide attempts in comparison to men. Women's low social status is thought to underlie some of these disparities in mental health, yet empirical evidence in Arab and Middle Eastern settings is limited. In this study, we explore the relationship between ever-married women's acquired patriarchal and human and economic enabling resources and their generalized anxiety in Minya, Egypt. We hypothesize that both types of enabling resources are associated with lower generalized anxiety. We conceptualize two pathways through which women may achieve better mental health: empowerment and strategic conformity to local systems of patriarchy. We hypothesize that women's agency and exposure to intimate partner violence (IPV) mediate the relationship between enabling resources and generalized anxiety. Using secondary data from the 2005 Egyptian Demographic Health Survey (EDHS) and a 2012 follow-up survey, we performed bivariate and linear regressions to assess the associations between women's enabling resources, agency, and exposure to IPV at their time of marriage and their generalized anxiety at the 2012 follow-up.

Women's work before marriage, schooling, and proximity to natal family are significantly associated with lower generalized anxiety. Women's agency and IPV status do not mediate the relationship between women's enabling resources and generalized anxiety. Women's agency has mixed associations with generalized anxiety, and exposure to IPV is associated with higher generalized anxiety. Women's empowerment is the primary pathway through which women achieve lower generalized anxiety. There is not sufficient evidence to support the strategic conformity to patriarchy pathway. Women's access to social support, education, and work before marriage are imperative to their mental health and generalized anxiety specifically. Our results can prompt gender-equity development projects to focus on increasing women's access to these enabling resources. Empowerment projects should continue to focus on women's schooling and entering women into the workplace. More emphasis should be made on building women's social support networks, particularly between the woman and her natal family.

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Introduction

Rationale

Social position plays a key role in the well-being of women worldwide. Gender disparities in mental health are evident across the globe, with women experiencing higher rates of depression, anxiety disorders, and suicide attempts in comparison to men (Douki, Nacef, Halbreich, 2007; Yount & Smith, 2012). Women's low social status is thought to underlie some of these disparities, as gains in gender equality are generally met with improvements in women's well-being (WHO, 1998). The process of empowerment is hypothesized to improve women's physical and mental health by increasing their capacity to influence decisions regarding their own health and welfare; however, the relationship between women's empowerment and their mental health is understudied. In addition, the patriarchal systems in which some women live have the potential to greatly impact their empowerment and mental health. Women acquire resources through both empowerment and strategic conformity to patriarchal cultural systems. In this study, we explore the relationship between these enabling resources and ever-married women's mental health in Minya, Egypt, as measured by their generalized anxiety.

Problem Statement

The World Health Organization (WHO) defines mental health as "a state of well-being in which the individual realizes his or her own potential, can cope with normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community" (WHO, 2007, p.1). Mental health disorders make up 11-14% of global disease burden (Patel, 2007; Prince et al., 2007), and in 2000 were estimated to account for 12% of disability-adjusted life-years (DALYs) lost globally (Afifi, 2007). In a national household survey of mental

disorders in five governorates in Egypt, Ghanem and colleagues (2009) found that almost 17% of Egyptian adults had a mental disorder; the most common mental health problems were mood and anxiety disorders. Anxiety disorders include generalized anxiety disorder, panic disorder, post-traumatic-stress disorder (PTSD), and obsessive-compulsive disorder (OCD), and social phobia (Afifi, 2007).

Scholars have consistently documented important differences in the mental health of women and men worldwide. Globally, anxiety and depression are most common among women (Afifi, 2007; Seedat et al., 2009), while men are more likely to experience externalizing mental health disorders (Seedat et al., 2009). In a WHO global report on women's mental health published in 2000, unipolar depression was found to be twice as frequent among women as compared to men (Astbury & Cabral, 2000). These global mental health disparities persist in the Arab/Middle Eastern setting (Afifi, 2007; Ghanem, 2004). Among Muslim women, the most prevalent psychiatric conditions are depression, anxiety disorders, and suicide attempts, with a significantly high female to male gender ratio (Douki et al., 2007). In Alexandria, Egypt, the rate of depressive symptoms was found to be nearly double among female adolescents compared to their male peers (Afifi, 2006). In Egypt, mental disorders have been found to be significantly associated with gender, marital status, education, housing, and physical illness (Ghanem, 2004; Ghanem, Gadallah, Meky, Mourad, & El-Kholy, 2009).

With such disparities being consistently found at the global and local levels, scholars have begun to explore the causes of gendered mental health outcomes in the Middle East. The gender roles hypothesis asserts that gender differences in mental health are "due to differences in the typical stressors, coping resources, and opportunity structures for expressing psychologic[al] distress made available differentially to women and men in different countries at different points

throughout history" (Seedat et al., 2009, p.785). This theory predicts that as the social roles of women and men become more equal in a given society, so too will differences in the prevalence of mental disorders. Afifi (2007) also theorizes that gender-based differences may stem from cultural, social, economic, and political processes in addition to biomedical, psychosocial, and epidemiological factors. In a comprehensive review of studies relating to post-partum depression (PPD) in Arab and Middle Eastern populations, Yount and Smith (2012) observed that women's risk for PPD may be associated with gender norms in some settings, particularly patriarchal kin relations: "Women's embeddedness and dependence on patriarchal kin relations may elevate their risk of experiencing PPD" (Yount & Smith, 2012, p. 5). Based on these findings, it has become increasingly apparent that women's roles in society play an important role in their mental well-being.

Higher rates of mental disorders among women have drastic implications for the societies in which they live. As women's presence in the Egyptian workforce continues to increase, so too will the impact of their mental health on national productivity (Afifi. 2007). Egyptian women are often the primary caregivers of children and elderly relatives, meaning that their mental health also has the potential to affect the well-being of those who depend on their care. Despite the findings that women's mental health is linked to their sociodemographic attributes, research on the relationship between women's acquired resources and their mental health, and specifically generalized anxiety, is thus far extremely limited, especially in Middle Eastern settings.

Purpose Statement

In this paper, we aim to answer the following research questions: How do the enabling resources that ever-married women in Minya, Egypt have at the time of marriage impact their generalized anxiety? What are the pathways through which women's enabling resources,

acquired through either empowerment or strategic conformity to patriarchy, impact their mental health? Do women's agency and experience with intimate partner violence (IPV) mediate the relationship between enabling resources and generalized anxiety?

Research Hypotheses

We hypothesize that acquiring both patriarchal resources as well as human and economic enabling resources will be linked with better mental health. Specifically, these enabling resources will be associated with women's lower generalized anxiety. Second, a woman's exposure to IPV and her ability to exclusively make common family and household decisions will mediate the relationship between these set of resources and women's generalized anxiety.

Significance Statement

Women's physical and mental well-being is greatly influenced by their position in society, and so it is plausible that gender disparities in social position are contributing to the gender disparities consistently observed in mental health outcomes worldwide. Without further research into the impact of women's social position on their mental health, this hypothesis cannot be empirically confirmed. This research is necessary to gain greater understanding of the social processes that influence women's mental health. Specifically, exploring the resources that women acquire through both empowerment and strategic conformity to local systems of patriarchy will give insight into: (1) which enabling resources are significantly associated with women's mental health (here operationalized as generalized anxiety); (2) whether these resources are improving or harming women's mental health; and (3) whether these resources are acquired within local forms of patriarchy or instead through traditional modes of women's empowerment.

It is commonly assumed that women must be empowered to improve their mental and physical well-being, and traditional ideas of empowerment often transgress patriarchal norms for

women's gender roles. This study will provide much needed insight into the role of patriarchy in women's mental health, and whether or not women are able to acquire resources within local systems of patriarchy that they can use to improve their mental health. The findings of this study have the potential to inform policy regarding women's empowerment and mental health. The knowledge gained can be used to create public health programs tailored to increase women's access to and control over certain enabling resources identified as negatively associated with generalized anxiety, and improve their overall mental health.

Comprehensive Review of the Literature

Women's empowerment pathway

Kabeer (1999) defines *empowerment* as the process by which women acquire enabling resources, which in turn may influence their agency, or ability to make strategic life choices in a historically gender inequitable context. The acquisition of resources and the exercise of agency facilitate a range of human achievements, which some scholars measure in terms of advances in human development (Mahmud, Shah, & Becker, 2012), and in the case of this study, mental health. According to Kabeer (1999), enabling resources can be existing material (e.g., owned property or income), human (e.g., educational attainment or fertility), or social (e.g., extra-familial social networks or respect from community members based on certain social norms), or even anticipated future claims.

Resources often are acquired through a multitude of social relationships operating in the various institutions that make up a person's social context, including their family, community, and markets. Not all social relationships, however, provide enabling resources for women. A woman's family, for example, may not exclusively provide social support (Kabeer, 2011); for instance, in patriarchal cultures such as in Egypt, the family may be a source of many constraints on women's mobility, decision-making, and entry into the workforce. In this context, extra-familial relationships can provide women more social support and solidarity (Kabeer, 2011; Kabeer & Huq, 2010). As such, a woman's access to specific resources depends on societal norms (Kabeer, 1999).

In the *empowerment pathway* (Figure 1), economic, human, and extra-familial social resources are hypothesized to be enablers of women's agency and improved mental health. Due

to a lack of data on extra-familial social resources in this study, our primary focus is on human and economic resources. *Human and economic enabling resources* are expected to offer social and financial support and security, and thereby may enhance women's agency; yet, women's acquisition of such resources in many classic patriarchal settings may transgress patriarchal norms and gendered hierarchies and relations, which inequitably distribute resources to older male kin (Kandiyoti, 1988). Therefore, the benefits of human and economic resources to women's mental health are unclear in patriarchal settings like Egypt.

Human and economic enabling resources

Schooling. Formal schooling is an enabling resource that many regard as the means through which women's empowerment and gender equity are achieved, as evidenced by the Millennium Development Challenge's third goal to empower women by increasing the percentage of women in primary and secondary schools (UNDP, 2012). This Millennium Development Goal (MDG) rests on the assumption that if women understand their conditions and rights, and develop useful skills, their knowledge will translate to empowerment (Kabeer, 2005). Yet, the empirical evidence is equivocal (Boserup, 1990; Shukrallah, 1994; Yount, 2005a). Educated women in Bangladesh, especially those with secondary or higher levels of schooling, are more likely to have egalitarian preferences for sons and daughters, are more likely to be consulted for advice by other community members, and more likely to vote according to their own beliefs and preferences compared to their uneducated peers (Kabeer, Mahmud, & Tasneem, 2011), implicating that schooling can increase women's empowerment. However, in a study examining women's family power in Minya, Egypt, Yount (2005a) found nuanced effects of women's education on their gender preference for children. While it was hypothesized that formal education would lead to more egalitarian preferences for sons and daughters by exposing

women to more modern-family ideals such as gender equality, this was not found to be the case. This led to the supposition that the type of education which a woman receives is of crucial importance; education in Egypt might be gendered in that women are inculcated to patriarchal cultural values and prepared for their traditional gender roles similarly to the ideals they are exposed to in the home, as opposed to exposing them to more egalitarian and empowering ideals (Boserup, 1990; Yount, 2005a).

There is little research evaluating the relationship between women's education and their mental health in the Middle Eastern setting. Kabeer (2005) argues that education increases the likelihood that women will more closely look after their own well-being and their family's well-being, which could translate to better mental health. Educated Bangladeshi women were found to feel more control over their own lives and less likely to feel stressed than uneducated women (Kabeer et al., 2011), which may also lead to lower levels of generalized anxiety. A spousal gap in schooling attainment may also impact women's mental health. A larger spousal gap in schooling favoring the husband could reflect a disproportionate dependence of the wife on marriage and her lower decision-making authority in marriage, which may translate to higher levels of generalized anxiety.

Market work. Empowerment rhetoric also claims that women's entry into the workforce is a critical step in the empowerment of women (Kabeer, 1999; Kabeer et al., 2011). Women's market work, especially outside the home, is an important enabling resource for women (Kabeer, 1999). Egyptian women often engage in both formal and informal types of work, in both public and private spheres (Meleis & Lindgren, 2002), and this distinction of type of work is significant in the relationship between women's work and their empowerment (Kabeer et al., 2011). Women in Bangladesh working in all of the above types of work were found to be more likely to have

agency over their mobility, specifically in being able to visit their natal families unaccompanied by another person. In the same study, women engaging in paid work were more likely to have authority over decisions regarding their own health, to be able to choose their own clothes, and to invest in a major asset independently of their spouses. Only women who engage in work outside the home felt comfortable visiting the marketplace alone (Kabeer et al., 2011). In low income families in Cairo, men who depended on their wife's labor for a significant contribution to their family's livelihood were less likely to dominate and restrict their wife's physical mobility and work activities (Hoodfar, 1998-1999). Thus, a woman's work and her family's (low) socio-economic status may in fact enhance her agency.

However, not all scholars agree that women's labor force participation can be used as a measure of her rising position in society (Papps, 1992). Bruce (1989) argues that women's participation in the labor force or even the amount of income they make does not predict their social position; instead, a woman's position is determined by how much of that income she can retain for her personal use or control. Papps (1992) explains, "If women do not control the fruits of their own labor, then no improvements in their positions in the labor market will be of benefit to them" (p. 611). For example, in Egypt a husband can forbid his wife to work if it interferes with her household chores and taking care of the children (Yount, 2005b; Yount & Agree, 2004), suggesting that women's market work does not necessarily equate to their agency. Working outside the home also comes at a price for women, as entering the public domain can leave them vulnerable to harassment and abuse, which can negatively impact women's mental health and generalized anxiety. This was found to be particularly prominent among Bangladeshi women engaging in informal work outside the home. These women report greater feelings of constant pressure and lower levels of optimism about their futures compared to women not engaging in

informal work outside the home (Kabeer et al., 2011).

The health enhancement model proposes that health benefits can be derived from gainful employment (Messias et al., 1997), which may operate by enhancing social support, self-esteem, and social identity. Yet, empirically the associations between women's work and their mental health are mixed (Douki et al., 2007; Rosenfield, 1989). According to the *double burden* and *role overload* models, women who work inside and out of the home can suffer from greater levels of demand on their time and energy than their husbands (Douki et al., 2007), often manifesting in higher rates of anxiety and depression (Rosenfield, 1989). Women entering the work force in the Middle East have been found to only slightly decrease the time they spend on household related work, with the greatest life change being a decrease in their leisure time (Papps, 1992), putatively not beneficial to their mental health. Working women in the United Arab Emirates commonly cite difficulty at work as one of their greatest life stressors during pregnancy, and employed pregnant women experience higher rates of postpartum depression compared to unemployed women (Hamdan & Tamin, 2011). Thus, it is very likely that market work has mixed impacts on women's mental health, varying greatly depending on type and location of work, as well as whether she can control the use of her earnings.

Strategic conformity pathway

Anthropologist Suad Joseph (1993) defines Arab patriarchy as "the privileging of males and seniors and the mobilization of kin structures, kin morality, and kin idioms to legitimate and institutionalize gendered and aged domination" (p.468). As the family is the basic unit of Arab society, understanding kinship customs is essential to understand the role of women in Egyptian marriage. Patriarchal kinship is the primary source of women's economic security; males and elders are customarily expected to be financially responsible for women and younger relatives

(Joseph, 1996). Muslim marriage traditions in Egypt dictate that women have the right to economic security, whereas men have the right to obedience from their wife and legal guardianship of their children (Hoodfar, 1998-1999; Yount & Khadr, 2008).

In the *strategic conformity pathway* (Figure 1), women conform to the patriarchal ideal of femininity by providing their obedience in exchange for patriarchal protection and resources (Yount, 2011). Classic patriarchy motivates women to pursue certain models of femininity, such as early marriage and demonstrated fertility, because it promises the returns of accrued authority over other family members, such as future daughters in law; Kadiyoti (1988) termed this as the patriarchal bargain. Other elements of classic patriarchy, such as kin endogamy (marriage to a blood relative), may enable women to leverage more agency in the marital family, such as the power to have greater or exclusive influence over certain household and family decisions. This accrued authority may possibly enhance a woman's mental health. However, the agency that women may acquire through strategic conformity is relegated, in that their authority can be taken away from them at any time by a dominant male relative. In a qualitative study of the empowerment of Bedouin women in Southeastern Egypt, Sharp and colleagues (2003) found that "the empowerment they receive from the 'patriarchal bargain', and the sense of identity and security that this provides, clearly offers more than any potential improvements more radical changes might offer at present" (p.293).

Patriarchal resources are those to which women have access within local systems of patriarchy and that may confer some measure of patriarchal "protection" (or support) and relegated authority or agency (Yount, 2005b). In this respect, patriarchal resources may not enable women's agency, per se, but still may provide some psychological benefits because the exchange may offer women financial support and maintenance.

Patriarchal resources

Bridewealth. Customarily in the Arab world, a woman's parents arrange her marriage, which is formalized with the payment and negotiation of bridewealth (*mahr*). Bridewealth consists of two components: the first (*muqaddam*) is paid by the groom before marriage and often covers expenses associated with setting up the couple's household; the second (*muakhar*) is a sum of money that the wife is entitled to in the event of divorce (Hoodfar, 1998-1999; Salem, 2011). The payment of bridewealth from the groom's family "secures rights over the woman to the man and his family with respect to her household labor, sexual and reproductive rights… [having] implications for women's autonomy which is crucial to various aspects of their lives including…matters related to their health" (Fuseini & Dodoo, 2012, p.3). Yet, scholars have argued that bridewealth often serves to limit and undermine women's autonomy (Anderson, 2007). In Ghana, for example, as the ratio of paid to unpaid bridewealth increases, gender norms dictate more constraints on women (Fuseini & Dodoo, 2012). The spending of a woman's family on her marriage may be seen as their acceptance of the arrangement, with higher values reflecting higher valuing of the union, and perhaps a higher level of social support.

Endogamy, or marriage to a blood relative, is a common kinship practice in Muslim and Christian families in Arab countries, and comprises one third of marriages in Egypt (El-Zanaty, Hussein, Shawky, & Kishor, 1996; Yount, 2004). Endogamy has implications for a woman's generalized anxiety and may be considered a patriarchal resource for married women. Endogamy often secures the loyalty of a woman's parents, as it enhances trust between her natal and affinal families, is associated with lower marriage costs, and ensures that the wealth that the wife eventually will inherit will stay within the family (Weinreb, 2008). In Egypt, endogamy has been seen to enhance women's authority in decisions about children (Yount, 2004), hypothetically

increasing her agency. On the other hand, endogamous marriages may disadvantage a woman's mental health by limiting her opportunity to diversify her family support networks, which is commonly cited as a strength of non-consanguineous marriages (Weinreb, 2008). Therefore, being blood related to her husband might have nuanced effects on a woman's generalized anxiety.

Patrilocality. Endogamy is often associated with *patrilocality*, or living in close geographic proximity to one's natal family (Yount, 2004). This customary living arrangement is prevalent in Egypt and provides women with more access to social support (Yount, 2004), which they may leverage to enhance their decision-making authority within the household. Living near one's natal family may provide increased access to social support networks which could prove beneficial to a woman's mental health. However, patrilocality has been shown to have detrimental effects on women's agency; Yount (2005a) found in Egypt that residence with marital kin and parents actually decreases a woman's influence in daily household and life course decisions. Studies conducted in India have also shown mixed effects of living with one's extended family on women's agency (IIPS & Macro, 2000; Lee-Rife, 2010; Visaria, 1999). Lee-Rife (2010) found that women living in India in a nuclear household had half as many restrictions on their mobility as women living in extended households. In general, women in nuclear households had fewer restrictions, but these restrictions were higher for women living in rural areas. On the other hand, women in nuclear households also had 50% higher odds of experiencing violence (Lee-Rife, 2010). These mixed associations may extend to women's mental health.

Fertility. In Arab and many African cultures, a woman's social value is strongly tied to her fertility (Inhorn, 1996). Because of the patriarchal nature of Egyptian society, sons are more

valued as a result of their ability to carry on the family name and to provide financial support for parents and especially mothers in old age (Yount, 2009). A study in Egypt by Cunnigham and colleagues (2012) observed that having more children that survive into adulthood is strongly associated with parents' receipt of later-life returns. Sons generally provide economic transfers while daughters provide instrumental help (Cunningham, Yount, Engelman, & Agree, 2012). Historically, if a woman had no children or only daughters, her husband may take a second wife (Lane & Meleis, 1991). Infertility has been linked to higher rates of depression and anxiety among Arab populations in Tunisia (Douki et al., 2007). As a result, demonstrating fertility by having any live births has the potential to be an enabling resource for women; this patriarchal resource could potentially be even more beneficial for women if they birth sons.

Age at first marriage. The age of a woman at the time of her first marriage is also a patriarchal resource. The relationship between a woman's age at marriage and her mental health has not been formally studied to date in Egypt, but mixed effects are conceivable. It is customary for Egyptian women to marry at a young age. Although this age has been gradually increasing in recent decades (Salem, 2011), early marriage, defined as marriage before the legal age of 18, is still desired because of cultural values surrounding a girl's virginity, fertility, and their relation to family honor (Rashad, Osman, & Roudi-Fahimi, 2005). Marrying at a young age is considered ideal for women in the patriarchal system. Given the social pressures for early marriage, women who do not marry until a later age may experience social scorn or stigma, potentially affecting their mental health. On the other hand, early marriage has been shown to adversely affect women's other enabling resources and agency in several spheres among women in India, Turkey, Benin, and Columbia, including early cessation of schooling, early onset of childbearing, and lower status within the household (Jensen & Thornton, 2003). In addition, women who marry

early in these countries are more likely to marry men much older than them, and a large spousal age gap has been linked to decreased social status and agency within the household. Early marriage was also found to increase women's chances of being physically beaten in the past year and having restrictions on their mobility and personal savings in India and Columbia (Jensen & Thornton, 2003). In these ways, a woman's age at marriage may have significant impacts on her generalized anxiety, but whether the effects are beneficial or harmful is unknown.

Women's agency

Women's agency is defined as the ability to make strategic life choices in a historically gender inequitable context (Kabeer, 1999). Similar to empowerment, agency is context specific. Women may exercise agency in several domains, including family and household decision-making, freedom of mobility, and the adoption and expression of gender equitable viewpoints (VanderEnde, Cheong, Salem, Zureick-Brown, Yount, 2013). Research on women's agency, enabling resources, and their effects has found inconsistent associations. Studies in India and Bangladesh have exhibited both positive and negative associations between women's schooling and household wealth with their decision-making and mobility (Amin, Becker, & Bayes, 1998; Anderson & Eswaran, 2009; Balk, 1997; Chakrabarti & Biswas, 2012).

Exclusive family and household decision-making is defined as a woman's ability to make family and household decisions without the permission or input of her husband (henceforth called exclusive decision-making), and is widely considered a domain of women's agency (Kabeer, 1999; Kishor, 1995; VanderEnde et al., 2013). A woman's exclusive decision-making ability may reflect her ability to exercise agency differently across various social contexts. For example, a woman's ability to visit her family without permission from her husband may be a meaningful measure of her agency in the Egyptian context, whereas in countries with few

cultural restrictions on women's mobility outside the home this might not be a good approximation of agency (VanderEnde et al., 2013). There is limited research on determinants of women's agency in Middle Eastern settings. However, studies exploring the effects of exclusive decision-making on women's agency in this context have found positive associations between decision-making and other determinants of women's agency, including mobility and adoption of gender equitable viewpoints (Govindasamy & Malhotra, 1996; VanderEnde et al., 2013). Little to no research exists in the Middle Eastern context exploring the impact of women's exclusive decision-making on their generalized anxiety. Nevertheless, it is plausible that increased exclusive decision-making could increase a woman's sense of control over her own life, which could in turn lower her generalized anxiety.

Intimate partner violence

Intimate partner violence (IPV) refers to "assaultive and coercive behaviors that adults use against their intimate partners" (Holden, 2003, p. 155). IPV is a potential mediator and a critical component in understanding the relationship between women's enabling resources and their generalized anxiety. Studies have linked IPV with several of the patriarchal resources discussed above. The 2005 Egyptian Demographic and Health Survey showed women who married at later ages were at lower odds of experiencing physical IPV (Yount & Li, 2010). In the same study, women in endogamous marriages also had lower odds of experiencing IPV: "Thus, while such marriages reflect and uphold patriarchal kinship, they appear to confer protection to some women, perhaps because the husband's background is better known and the woman's kin are more vested to intervene in disputes" (Yount & Li, 2010, p.343).

Linkages have also been identified between IPV and several of the human and economic resources discussed. In Minya, Egypt, Yount (2005c) found that the likelihood of physical abuse

is generally higher for women who are economically dependent on their husband and lack access to social support. The implication of this is that women with fewer enabling resources and lower levels of agency might be more prone to experiences of IPV. However, it was also found that women in Egypt who have unusually less or unusually more schooling than their spouse were at higher odds of experiencing IPV (Yount & Li, 2010), complicating the relationship between women's human and economic enabling resources and IPV.

Physical and sexual violence is strongly associated with higher levels of depression, anxiety, phobias, PTSD, suicide, and drug abuse among women in Arab and Islamic countries (Douki, Nacef, Belhadj, Bouasker, & Ghachem, 2003); yet there are few studies of this association in developing countries. Population-based surveys conducted in ten countries by the WHO found that women who had experienced IPV were more likely to contemplate and attempt suicide (Ellsberg, Jansen, Heise, Watts, & Garcia-Moreno, 2008). Because the risk of IPV is higher in women with extremely low and extremely high human and economic resources, and IPV victimization has clear associations with women's poor mental health, it is an important potential mediator in this analysis.

Confounders

There are many factors that may confound the relationship between women's enabling resources and their generalized anxiety, including socioeconomic status (SES), age, religion, and parental education. SES is important for both women's enabling resources and mental health. Studies have shown significant correlations between higher levels of poverty and higher prevalence of mental health issues (Belle, 1990). Kabeer (1999) explains that poverty denotes an insufficiency in resources and therefore the means for meeting basic needs, limiting a person's ability to make meaningful choices. However, the association between socioeconomic status and

mental health is not always consistent. In certain situations, financial constraints within a household can provide women more opportunities to exercise agency out of necessity (Kabeer et al., 2011). In Bangladesh, household wealth is associated with many aspects of women's empowerment, including increased agency in terms of voice and mobility, as well as more respect within the community (Kabeer et al., 2011).

The educational status of a woman's father is also a potential confounder, as it may signify her family's social status within a community and denote a higher SES. A woman's age may also confound the relationship between enabling resources and generalized anxiety. Women often acquire authority within the family as they age; in a study in Minya, Egypt, women's decision-making ability was found to be positively correlated with their age (VanderEnde et al., 2013). It is possible that this increase in agency could translate to lower anxiety for women, but the relationship is poorly studied. Older age is also correlated with widowhood and other factors such as declining health, which may equate to higher levels of anxiety. Religion is another potential confounder. Women who comply with religious and cultural norms in Bangladesh have lower levels of mobility and are more likely to express preference for sons over daughters. Conversely, these women are more likely to be consulted by other community members for advice, possibly indicating a respected social position. In regards to mental health, women with stronger adherence to religious norms have increased resilience, or the ability to deal with difficult life situations. Muslim Bangladeshi women were also found to feel less pressure and feel more in control of their own lives than non-Muslim women (Kabeer et al., 2011). These factors indicate that religion may positively impact women's generalized anxiety.

Ever-Married Women's Enabling Resources and Generalized Anxiety in Minya, Egypt*

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Contribution of student

I was not involved in data collection for this study. I performed data cleaning, coding, and variable creation. I conducted secondary data analysis with guidance from my co-authors, who also assisted in figure and table development. I wrote the manuscript and was provided with comments and edits by my co-authors.

Abstract

Gender disparities in mental health are evident across the globe, with women experiencing higher rates of depression, anxiety disorders, and suicide attempts in comparison to men. Women's low social status is thought to underlie some of these disparities in mental health, yet empirical evidence in Arab and Middle Eastern settings is limited. In this study, we explore the relationship between ever-married women's acquired patriarchal and human and economic enabling resources and their generalized anxiety in Minya, Egypt. We hypothesize that both types of enabling resources are associated with lower generalized anxiety. We conceptualize two pathways through which women may achieve better mental health: empowerment and strategic conformity to local systems of patriarchy. We hypothesize that women's agency and exposure to intimate partner violence (IPV) mediate the relationship between enabling resources and generalized anxiety. Using secondary data from the 2005 Egyptian Demographic Health Survey (EDHS) and a 2012 follow-up survey, we performed bivariate and linear regressions to assess the associations between women's enabling resources, agency, and exposure to IPV at their time of marriage and their generalized anxiety at the 2012 follow-up.

Women's work before marriage, schooling, and proximity to natal family are significantly associated with lower generalized anxiety. Women's agency and IPV status do not mediate the relationship between women's enabling resources and generalized anxiety. Women's agency has mixed associations with generalized anxiety, and exposure to IPV is associated with higher generalized anxiety. Women's empowerment is the primary pathway through which women achieve lower generalized anxiety. There is not sufficient evidence to support the strategic conformity to patriarchy pathway. Women's access to social support, education, and work before marriage are imperative to their mental health and generalized anxiety specifically. Our results can prompt gender-equity development projects to focus on increasing women's access to these enabling resources. Empowerment projects should continue to focus on women's schooling and entering women into the workplace. More emphasis should be made on building women's social support networks, particularly between the woman and her natal family.

Introduction

Social position plays a key role in the well-being of women worldwide. Gender disparities in mental health are evident across the globe, with women experiencing higher rates of depression, anxiety disorders, and suicide attempts in comparison to men (Douki et al., 2007; Yount & Smith, 2012). Women's low social status is thought to underlie some of these disparities, as gains in gender equality are generally met with improvements in women's well-being (WHO, 1998). The process of empowerment is hypothesized to improve women's physical and mental health by increasing their capacity to influence decisions regarding their own health and welfare; however, the relationship between women's empowerment and their mental health is understudied. In addition, the patriarchal systems in which some women live have the potential to greatly impact their empowerment and mental health. Women acquire resources through both empowerment and strategic conformity to patriarchal cultural systems. In this study, we explore the relationship between these enabling resources and women's mental health, as measured by their generalized anxiety. In particular, we examine whether the patriarchal and human and economic enabling resources that married women have at the time of marriage in Minya, Egypt are significantly associated with their generalized anxiety. The results of this analysis provide evidence for the association between patriarchy, empowerment, and women's mental health, identify specific resources that Egyptian women have in marriage that are significantly associated with their generalized anxiety, and highlight the potential pathways through which this relationship operates.

Background

Women's mental health

The World Health Organization defines mental health as "a state of well-being in which the individual realizes his or her own potential, can cope with normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community" (WHO, 2007, p.1). In a household survey in five governorates in Egypt, Ghanem and colleagues (2009) found that almost 17% of Egyptian adults had a mental disorder; the most common mental health problems were mood and anxiety disorders. Women in Arab settings are more likely to suffer from depression and anxiety disorders and are more likely to attempt suicide than their male peers (Afifi, 2007; Douki et al., 2007; Ghanem, 2004). In Egypt, mental disorders among women are significantly associated with their marital status, education, housing, and physical illness (Ghanem, 2004; Ghanem et al., 2009). Similarly, in Arab and Middle Eastern populations, Yount and Smith (2012) observed that post-partum depression may be associated with gender norms in some settings, particularly a woman's embeddedness in patriarchal kin relations.

The above findings support the gender roles hypothesis, which asserts that gender-based differences in mental health are "due to differences in the typical stressors, coping resources, and opportunity structures for expressing psychologic[al] distress made available differentially to women and men in different countries at different points throughout history" (Seedat et al., 2009, p.785). This theory predicts that as the social roles of women and men become more equal in a given society, so too will differences in the prevalence of mental disorders. Given the potential importance of women's social roles in explaining their higher burden of mental disorders in comparison to men in the Egyptian setting, in this study we examine how women's empowerment and their conformity to patriarchal norms and relations are associated with their

mental health. We draw a distinction between human and enabling resources on the one hand and patriarchal resources on the other and consider two competing pathways through which women may achieve mental health: (1) the *empowerment pathway* and (2) the *strategic conformity pathway* (Figure 1).

Women's empowerment pathway

Kabeer (1999) defines *empowerment* as the process by which women acquire enabling resources, which in turn may influence their *agency*, or ability to make strategic life choices in a historically gender inequitable context. The acquisition of resources and the exercise of agency facilitate a range of human achievements, in the case of this study mental health. Enabling resources can be existing material or economic (e.g., owned property or income), human (e.g., educational attainment or fertility), or social (e.g., extra-familial social networks or respect from community members), or even anticipated future claims (Kabeer, 1999). In the *empowerment pathway*, economic and human resources are hypothesized to be enablers of women's agency and improved mental health. *Human and economic enabling resources* are expected to offer social and financial support and security, and thereby may enhance women's agency; yet, women's acquisition of such resources in many classic patriarchal settings may transgress patriarchal norms and gendered hierarchies and relations, which inequitably distribute resources to older male kin (Kandiyoti, 1988). Therefore, the benefits of these resources to women's mental health are unclear in patriarchal settings like Egypt.

Human and economic enabling resources

Schooling. Formal schooling is an enabling resource that many regard as the means through which women's empowerment and gender equity are achieved. This argument rests on the assumption that if women understand their conditions and rights and develop useful skills,

their knowledge will translate to empowerment (Kabeer, 2005). Yet, the empirical evidence is equivocal (Boserup, 1990; Shukrallah, 1994; Yount, 2005a). In Bangladesh, women's education has been positively associated with measures of their empowerment, including social standing within the community and expression of egalitarian viewpoints (Kabeer et al., 2011). However, in Minya, Egypt, Yount (2005b) found nuanced effects of women's education on their gender preference for children, leading to the conclusion that the type of education that a woman receives is of crucial importance. Kabeer (2005) argues that education increases the likelihood that women will look more closely after their own well-being and their family's well-being, which could translate to better mental health. Evidence from Bangladesh is consistent, where educated women have expressed feelings of greater control over their own lives and lower stress than uneducated women (Kabeer et al., 2011), which could lead to lower generalized anxiety.

Market work. Women's entry into the workforce is also thought to be a critical step in their empowerment, especially if they are able to engage in market work outside the home (Kabeer, 2011). In Bangladesh, women's market work has been positively correlated with their mobility, decision-making authority, and investments independently of their spouses (Kabeer et al., 2011). However, not all scholars agree that women's labor force participation can be used as a measure of her rising position in society (Papps, 1992). Bruce (1989) argues that women's participation in the labor force or even the amount of income they make does not predict their social position; instead, a woman's position is determined by how much of that income she can retain for her personal use or control.

According to health enhancement model, health benefits can be derived from gainful employment (Messias et al., 1997), which may operate by enhancing social support, self-esteem, and social identity. Yet, empirically, the relationship between women's work and their mental

health is mixed (Douki et al., 2007; Rosenfield, 1989). According to the *double burden* and *role overload* models, women who work inside and out of the home can suffer from greater levels of demand on their time and energy than their husbands (Douki et al., 2007), often manifesting in higher rates of generalized anxiety and depression (Rosenfield, 1989). Women entering the work force in the Middle East have only slightly decreased the time they spend on household related work, with the greatest life change being a decrease in their leisure time (Papps, 1992), harming rather than benefitting their mental health. Women in Bangladesh engaging in work outside the home were more likely to report feelings of constant pressure and lower levels of optimism about their futures (Kabeer et al., 2011). Thus, it is likely that market work has mixed impacts on women's mental health.

Strategic conformity pathway

Anthropologist Suad Joseph (1993, p.468) defines Arab patriarchy as "the privileging of males and seniors and the mobilization of kin structures, kin morality, and kin idioms to legitimate and institutionalize gendered and aged domination." Muslim marriage traditions in Egypt dictate that women have the right to economic security, whereas men have the right to obedience from their wife and legal guardianship of their children (Hoodfar, 1998-1999; Yount, 2011; Yount & Khadr, 2008). In the *strategic conformity pathway* (Figure 1), women conform to the patriarchal ideals of femininity, including early marriage, demonstrated fertility, and obedience to their husbands, in exchange for patriarchal protection and eventual accrued authority over other family members, such as future daughters in law (Yount, 2011). This accrued authority may enhance a woman's mental health. *Patriarchal resources* are those to which women have access within local systems of patriarchy and that may confer some measure of patriarchal "protection" (support) and relegated authority or agency (Yount, 2005b). These

resources may not enable women's *agency*, per se, but still may provide some psychological benefits because the exchange may offer women financial support and protection.

Patriarchal resources

Age at first marriage. Early marriage, defined as marriage before the legal age of 18, is common in Egypt because of gender norms surrounding a girl's virginity, fertility, and their relation to family honor (Rashad et al., 2005). Given the social pressures for early marriage, women who do not marry until a later age may experience social scorn or stigma, potentially affecting their mental health. On the other hand, early marriage has been adversely associated with women's other enabling resources and agency among women in India, Turkey, Benin, and Columbia, including early cessation of schooling, early onset of childbearing, and lower status within the household. Early marriage also has been associated with greater restrictions on women's mobility and personal savings (Jensen & Thornton, 2003). In these ways, a woman's age at first marriage may be significantly associated with her generalized anxiety, in which poorer mental health is associated with early and late marriage.

Bridewealth. Customarily in the Arab world, a woman's parents arrange her marriage, which is formalized with the payment and negotiation of bridewealth (*mahr*). Bridewealth consists of two components: the first (*muqaddam*) is paid by the groom before marriage and often covers expenses associated with setting up the couple's household; the second (*muakhar*) is a sum of money that the wife is entitled to in case of divorce (Salem, 2011; Hoodfar, 1998-1999). The spending of a woman's family on her marriage may be seen as their acceptance of the arrangement, with higher values reflecting a higher valuing of the union, and perhaps greater social support; however, scholars also have argued that bridewealth often serves to limit and undermine women's autonomy (Anderson, 2007; Fuseini & Dodoo, 2012), implicating possible

nuanced affects for women's generalized anxiety.

Endogamy, or marriage to a blood relative, is a common kinship practice in Muslim and Christian families in Arab countries, and comprises one third of marriages in Egypt (Yount, 2004; El-Zanaty et al., 1996). Endogamy often secures the loyalty of a woman's parents, as it enhances trust between the natal and affinal families (Weinreb, 2008). In Egypt, endogamy has enhanced women's ability to negotiate within the family and to influence life course decisions, increasing her authority and agency (Yount, 2004). On the other hand, endogamous marriages may limit a woman's opportunity to diversify her social support networks (Weinreb, 2008), implicating possibly nuanced effects on generalized anxiety.

Patrilocality indicates living in close geographic proximity to one's natal family, and often is associated with kin endogamy. This customary living arrangement, prevalent in Egypt, provides women with more access to social support, which they may leverage to enhance their decision-making authority within the household (Yount, 2004). In contrast, residence with parents- or brothers-in-law has been negatively associated with a woman's influence in daily household and life course decisions (Yount, 2005a). Studies conducted in India have shown mixed effects of living with one's extended family on women's agency (IIPS & Macro, 2000; Visaria, 1999; Lee-Rife, 2010). These mixed associations between patrilocality and women's agency may extend to women's mental health.

Fertility. In Arab and many African cultures, a woman's social value is strongly tied to her fertility (Inhorn, 1996). Because of the patriarchal nature of Egyptian society, sons are more valued as a result of their ability to carry on the family name and to provide financial support for parents and especially mothers in old age (Yount, 2009; Cunningham et al., 2012). Historically, if a woman had no children or only daughters, her husband may take a second wife (Lane &

Meleis, 1991). Infertility has been linked to higher rates of depression and anxiety among Arab populations in Tunisia (Douki et al., 2007). As a result, demonstrating fertility by having any live births has the potential to be patriarchal resource for women.

Women's agency

Women's agency is defined as the ability to make strategic life choices in a historically gender inequitable context (Kabeer, 1999). Women may exercise agency in several domains, including family and household decision-making, freedom of mobility, and the adoption and expression of gender equitable viewpoints (VanderEnde et al., 2013). *Exclusive family and household decision-making* is defined as a woman's ability to make family and household decisions without the permission or input of her husband (henceforth called exclusive decision-making), and is widely considered a domain of women's agency (Kabeer, 1999; Kishor, 1995; VanderEnde et al., 2013). Studies exploring the effects of exclusive decision-making on women's agency in the Middle East have found positive associations between exclusive decision-making and other determinants of women's agency, including mobility and adoption of gender equitable viewpoints (Govindasamy & Malhotra, 1996; VanderEnde et al., 2013). However, little to no research exists in the Middle Eastern context exploring the association of women's exclusive decision-making with their generalized anxiety. Nevertheless, it is plausible that greater exclusive decision-making authority could increase a woman's sense of control over her own life, which could in turn lower her generalized anxiety.

Intimate partner violence

Intimate partner violence (IPV) refers to "assaultive and coercive behaviors that adults use against their intimate partners" (Holden, 2003, p. 155). IPV is a potential mediator and a critical component in understanding the relationship between women's enabling resources and

their generalized anxiety. Studies in the Egyptian context have linked IPV with several of the enabling resources discussed above, including endogamy, age at marriage, and education (Yount, 2005c; Yount & Li, 2010). Patriarchal resources, particularly endogamy, were found to provide more protection against IPV than human and economic enabling resources, such as schooling (Yount, 2010; Yount & Li, 2010).

Physical and sexual violence is strongly associated with higher levels of depression, anxiety, phobias, PTSD, suicide, and drug abuse among Egyptian women (Douki et al., 2003). Population-based surveys conducted in ten countries by the WHO found that women who had experienced IPV were more likely to contemplate and attempt suicide (Ellsberg et al., 2008). In light of this, IPV victimization has clear associations with women's poor mental health, and it is an important potential mediator in this analysis.

Confounders

Many factors may confound the relationship between women's enabling resources and their generalized anxiety. Studies have shown significant correlations between higher levels of poverty and higher prevalence of mental health issues (Belle, 1990), as well as higher levels of agency among women (Kabeer, 2011). The educational status of a woman's father also is a potential confounder, as it may signify her family's social status within a community and denote a higher socioeconomic status. A woman's age also may confound the relationship between enabling resources and generalized anxiety, as age has been shown to be positively correlated with women's agency in Minya, Egypt (VanderEnde et al., 2013). Last, religion may have varying associations with women's agency and mental health, as shown in the Bangladeshi setting comparing Muslim and Christian women (Kabeer et al., 2011).

Research Hypotheses

This discussion informs two main hypotheses. First, both patriarchal resources as well as human and economic enabling resources will be negatively associated with women's generalized anxiety through the respective pathways depicted in Figure 1. Second, a woman's exposure to IPV and her ability to exclusively make common household decisions will partially mediate the relationship between these sets of resources and women's generalized anxiety.

Methods

Setting

The specific site for this study was Minya, Egypt, an agrarian Upper Egyptian governorate located about 200km south of Cairo inhabited by about 4.2 million residents (Yount, 2005c). Minya ranks third from last among governorates on indicators of human development (Yount, Zureick-Brown, & Salem, 2012; UNDP & INP, 2008). Results from a survey conducted of married women ages 15-54 years in Minya, Egypt in 1995 (n=2,522) found that 27% of the women reported any lifetime exposure to physical IPV and about 27% had reported being ever beaten in adulthood. 15% of the women had ever worked for cash or in kind and about 65% had no schooling. Little more than half (51.1%) of the women were in endogamous marriages, and three-quarters lived in close proximity to their natal family (their natal family was resident in their neighborhood or village). About 80% of women were Muslim, with the remaining 20% being Coptic Christian (Yount, 2005c). In another survey of married women ages 15-54 years with school-aged children in Minya (n=2,226), only 8.5% of women reported having the final say on decisions related to their ability to visit family or friends, and only about 9% has the final say on household budget-related decisions (Yount, 2005a). While there are no statistics on prevalence of mental health disorders among women in Minya specifically, Ghanem and colleagues (2009) reported that about 21% of Egyptian women have a mental disorder, compared to only about 11% of men.

Sample

The sample consists of ever-married, rural women 22-65 years old from Minya, Egypt interviewed in the 2005 Egypt Demographic and Health Survey (EDHS). The 2005 EDHS sample was drawn from the 1996 census frame using a three-stage cluster sampling design. The

primary sampling units (PSUs) consisted of urban neighborhoods and rural villages and were subdivided into segments of about 200 households. Households were listed, systematically sampled, and contacted for interview. Within interviewed households (21,972 of 22,211 total), ever-married women 15–49 years were selected to complete a Woman Questionnaire. In one-third of the sample of interviewed households, one ever-married woman 15–49 years was selected randomly to complete an IPV module (Yount et al., 2012).

The sample for this study was drawn from the 1,122 women in rural Minya governorate who completed the Woman Questionnaire in the 2005 EDHS. From the EDHS sample, a sub-sample of 842 rural women was selected for follow-up using a two-step process. First, all 328 rural women who completed the IPV module in 2005 were included, as the parent study was focused on women's experiences of IPV. Second, 514 of the remaining interviewed households were randomly selected, and in these households, we randomly selected one previously interviewed woman for a follow-up interview. Six interviewers completed 608 interviews, for a follow-up response rate of 72% (Yount et al., 2012).

Data Collected

The Institutional Review Board at Emory University (IRB Protocol IRB#00046958; Approve Date June 1, 2011) and the Central Agency for the Public Mobilization of Statistics (CAPMAS) in Cairo, Egypt approved the protocol for this study. Verbal informed consent was obtained from the respondents with a witness present. The secondary analysis for this thesis does not qualify as human subjects research as the data had been de-identified. No amendments were necessary for the secondary data analysis reported in this study.

The 2005 EDHS Household Questionnaire collected data on the demographics and economic position of the selected households. Ever married women selected to participate in the

Woman's Questionnaire were asked about their background, including the following topics: education, market work, role in household decision-making, fertility history and preferences, marital history, and health. For comparability, the questionnaires administered in the 2012 follow-up survey were similar to the Household and Woman Questionnaires used in 2005. In addition, the 2012 Woman Questionnaire included new or extended modules on women's economic and non-economic activities, mental health, empowerment, and IPV.

The 2012 Woman questionnaire included the following modules, in order of administration: respondent's background, reproduction, husband's background and woman's work, women's status, mental health, and IPV. The respondent's background module included questions on women's marital status, age at marriage, children, and education. The husband's background and women's work module included questions regarding the woman's history of market and subsistence work, and questions concerning her husband's age, education, and other demographic variables. The women's status module included questions about the assets that both families brought to the respondent's current marriage, the woman's role and influence in family decision-making, proximity of her natal and husband's kin, her parents' educational attainment, and her attitudes towards IPV. The mental health module consisted of the Kuwait University Anxiety Scale (KUAS) (Abdel-Khalek, 2000). This 20-item scale was developed in Arabic to capture generalized, behavioral/subjective, cognitive/affective, and somatic anxiety. The KUAS has been validated in Middle Eastern settings and has shown good internal consistency (alpha coefficients ranging from .85 to .92) as well as adequate criterion-related, factorial, and discriminant validity (Abdel-Khalek, 2000). However, the scale has only been validated in university settings among Middle Eastern students, and has not been previously used to measure anxiety among low literate, resource poor populations such as the sample of this study.

The IPV module was adapted from the 2005 EDHS, which itself is based on the Revised Conflict Tactics Scales (Strauss, Hamby, Boney-McCoy, & Sugarman, 1996), and measured the woman's exposure before and after her 2005 interview and in the prior year to psychological IPV (3 items), physical IPV (7 items), and sexual IPV (2 item) by her current or former husband. Items measuring psychological IPV included whether the woman was threatened with physical attack, insulted, or humiliated in front of others by her spouse. Items measuring physical IPV included whether the woman was pushed, slapped, punched, kicked, dragged, choked, burned, shaken, had something thrown at her by her spouse. Items measuring sexual IPV included whether the woman was physically forced to have sexual intercourse or perform sexual acts with her spouse when she did not want to.

Variables

Generalized Anxiety. The outcome of interest is a unidimensional score for generalized anxiety, produced from a factor analysis of the items in the KUAS. Lower (negative) factor scores indicate lower levels of anxiety, and higher (positive) factor scores indicate higher levels of anxiety. The 20-item scale included a Likert scale measurement (1=Rarely, 2=Sometimes, 3=Often, 4=Always) of the women's current feelings, including statements such as "My nerves are strained", "I expect bad things to happen", "I am not at ease", and "I worry over the future" (Abdel-Khalek, 2000). Generalized anxiety scores were derived from the 2012 follow-up survey.

Patriarchal Enabling Resources. Patriarchal resource variables included: whether (=1) or not (=0) the woman had ever had a live birth, whether (=1) or not (=0) she had given birth to a male child, whether (=1) or not (=0) she was living in the same household as or close enough to visit her natal family in a day, whether (=1) or not (=0) her husband was a blood relative, the natural log of the total amount in Egyptian pounds spent by all parties (the bride and her family

and the groom and his family) on her current or last marriage, and her age at first marriage (< 16 years, 16 – 18 years, and > 18 years). The majority of these variables were derived from the 2012 follow-up survey, except for the husband's relational status, which was collected during the 2005 EDHS baseline survey.[1]

Human and Economic Enabling Resources. Human and economic enabling resources included: whether (=1) or not (=0) the woman had ever attended school, the schooling gap between the woman and her husband (husband completed same or less years, 1 to 5 years more, or 6 or more years more schooling than his wife), and whether (=1) or not (=0) the woman engaged in subsistence or market work in the year before her marriage. Spousal schooling gap[2] was derived from the 2005 EDHS baseline survey, and women's schooling and work before marriage was derived from the 2012 follow-up survey.

Mediating Variables. Mediating variables included: whether (=1) or not (=0) the woman had ever experienced any type of IPV in her lifetime, and whether (=1) or not (=0) the woman had the ability to exclusively make four different types of household and family decisions. These four variables included whether (=1) or not (=0) the woman had the ability to make exclusive decisions regarding her health care, major household purchases, purchases for daily household needs, and visits to her family or relatives.[3] IPV was measured in the 2005 EDHS and 2012 follow-up survey and exclusive decision-making was measured in the 2005 EDHS baseline survey.

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[1] Other patriarchal resources explored during analysis include: spousal age gap, whether the woman's husband is a paternal cousin, and various marriage costs (including value of the *muakhar* and *ayma*, as well as the bride and her family's percentage of the total spending on marriage costs). These variables were excluded due to multicollinearity, low variance and no significance.

[2] Other human and economic enabling resources considered during analysis include: highest grade level completed by woman and the woman's literacy. These variables were excluded due to low variance and no significance.

[3] Joint decision-making between the woman and her husband was also looked at as a potential mediator, but ultimately not included as it was not found to be significant. Women who did not answer the decision-making questions were also included in the analysis, and it was found that not answering these questions is not significantly associated with generalized anxiety scores.

Covariates. Covariates[4] included: the woman's age in years, whether (=1) or not (=0) the woman is Muslim, whether (=1) or not (=0) the woman's father had ever attended school, and the woman's household wealth (split into quartiles). The score for household wealth was calculated based on a principle components analysis of household amenities and assets and came directly from the EDHS (Yount et al., 2012). Father's education, age, and religion were derived from the 2012 follow-up survey, and only household wealth was derived from the 2005 EDHS.[5]

Analysis

Using SAS 9.3, univariate descriptive analyses were performed to assess the completeness and distributions of all variables. Unadjusted bivariate associations of women's scores for anxiety with each explanatory variable, mediator, and covariate were estimated using simple linear regressions.

Multiple linear regressions were then estimated to assess adjusted associations and pathways of interest (Figure 1). Of the four models estimated, all included the covariates to control for confounding. Model 1 included only the enabling resources. Model 2 included the enabling resources and exclusive decision-making mediators. Model 3 included the enabling resources and the IPV mediator, and Model 4 was a full model containing enabling resources and both types of mediators, IPV status and exclusive decision-making variables. These models permitted us to test whether the observed mediators attenuate the relationship between enabling resources and anxiety.

Diagnostics were conducted to ensure that the assumptions of linear regression analysis

[4] Other covariates considered during analysis include: whether the woman has been divorced, whether she is a co-wife, and variables measuring experiences with childhood violence. These variables were excluded due to low variance and significance. Childhood experiences with violence were excluded because not enough controls were available to adequately measure the relationship between these variables and generalized anxiety.

[5] The woman's mother's educational attainment was also looked at as a covariate, but excluded due to extremely low prevalence and variance.

were met. All models were checked for multicollinearity and high Cook's D, leverage, and jackknife residual values. Variables were dropped from the analyses that were collinear with other theoretically important variables[6]. Out of the total sample of 608 ever-married women, 69 women were dropped from the analysis due to missing values for any of the included variables (n=539). Outliers based on high leverage and jackknife residual values were identified; however, we retained these outliers in the models because they were plausible values. All statistical analysis accounted for the complex sampling design by including the PSUs and sampling weights.

[6] Variables dropped from the analysis due to collinearity include: total value of the bride and her family's spending on her marriage; the percentage of the total marriage costs that the bride and her family contributed; value of muakhar; value of ayma; whether the woman's husband was her paternal cousin; and whether the woman had ever experienced any physical or psychological IPV.

Results

Characteristics of the Sample

The mean factor score for generalized anxiety was 0.01, with scores ranging from -2.11 to 2.61 (Table 1). The majority of women (42%) were 16-18 years old at the time of their first marriage. More than half of the women (55%) had married a blood relative, and almost all (97%) had had at least one birth and a male child (95%). About one-third (37%) of the women had ever attended school, and two-thirds (69%) had performed subsistence or market work in the year before their marriage. Approximately two-thirds of the women reported experiencing any type of IPV ever in their lifetime (67%). Few women were able to make exclusive decisions regarding their healthcare (15%), major household purchases (4%), and visits to her family or relatives (10%). However, almost half of women (48%) were able to make exclusive decisions regarding purchases for daily household needs. Over two-thirds of the women (68%) were from households in the lowest quartile of household wealth. Women in the sample were 38 years old on average, and most (85%) were Muslim.

Bivariate Results

The bivariate analysis (Table 2) suggests that several enabling resources were significantly associated with mental health scores. As expected, living with her natal family or close enough to visit them in a day, a patriarchal resource, was associated with lower generalized anxiety scores (β=-0.56, $p<0.001$). Ever having attended school, a human and economic enabling resource, was also found to be associated with lower generalized anxiety (β=-0.30, $p<0.01$). Performing market or subsistence work in the year before her marriage, another human and economic resource, was also associated with lower generalized anxiety (β=-0.30, $p<0.01$).

Among the mediating variables, a woman having exclusive decision-making power over

visits to her family and relatives was associated with lower generalized anxiety (β=-0.58, p<0.001) while having ever experienced IPV was associated with higher generalized anxiety (β=0.37, p<0.0001).

Multivariate Results

The results of the four multiple linear regression models are presented in Table 3. In Model 1, living with or in close proximity to natal family was associated with lower generalized anxiety (β=-0.52, p<0.001). Ever having attended school was also associated with lower generalized anxiety (β=-0.33, p<0.01), as was performing market or subsistence work in the year prior to marriage (β=-0.37, p<0.001).

In Model 2, controlling for women's exclusive decision-making did not mediate the relationship between enabling resources and generalized anxiety. Living with or in close proximity to her natal family was still associated with lower generalized anxiety, and the beta coefficient remained largely unchanged (β=-0.47, p<0.001). Ever having attended school also remained associated with lower generalized anxiety (β=-0.33, p<0.001). Similarly, women's market and subsistence work stayed associated with lower generalized anxiety (β=-0.40, p<0.0001). A woman's exclusive decision-making ability over visits to family or relatives was associated with lower generalized anxiety (β=-0.86, p<0.001). Surprisingly, exclusive decision-making over healthcare for herself (β=0.32, p<0.01) and making major household purchases (β=0.48, p<0.01) were associated with higher generalized anxiety.

In Model 3, controlling for women's IPV status did not mediate the relationship between enabling resources and generalized anxiety, similar to controlling for exclusive decision-making in Model 2. Living with or in close proximity to natal family was associated with a woman's lower generalized anxiety (β=-0.47, p<0.001), as was having ever attended school (β=-0.28,

$p<0.01$) and women's market and subsistence work ($\beta=-0.39$, $p<0.001$). Having ever experienced any type of IPV was associated with higher generalized anxiety ($\beta=0.30$, $p<0.01$).

In Model 4, controlling for both IPV exposure and exclusive decision-making did not mediate the relationship between enabling resources and generalized anxiety. Living with or in close proximity to her natal family was again associated with lower generalized anxiety ($\beta=-0.42$, $p<0.01$), as was having ever attended school ($\beta=-0.28$, $p<0.01$), and having performed market or subsistence work ($\beta=-0.42$, $p<0.0001$). Exclusive decision-making ability concerning visits to family or relatives was associated with lower generalized anxiety ($\beta=0.-89$, $p<0.001$), while exclusive decisions regarding a woman's healthcare ($\beta=0.30$, $p<0.01$) and major household purchases ($\beta=0.51$, $p<0.01$) remained associated with higher generalized anxiety.

Discussion

Summary

In this paper, we have shown that women's empowerment in Minya, Egypt has the potential to decrease women's generalized anxiety, and therefore improve their mental health. This is the first longitudinal study in the Middle Eastern setting to explore the temporal relationship between ever-married women's enabling resources at the time of marriage and their mental health outcomes years into marriage. This study has contributed knowledge to existing literature on women's mental health and empowerment concerning the pathways through which women acquire certain enabling resources, and the understanding of how these enabling resources impact women's generalized anxiety. A key strength of this study is that it is highly context specific in the conceptualization of enabling resources that may improve women's mental health by lowering their generalized anxiety. The cultural specificity of the hypothesized pathways and enabling resources strengthens the interpretations and thus usefulness of the findings in Middle Eastern and Arabic countries.

Among the patriarchal resources, living with or in close proximity to natal family was associated with lower generalized anxiety and was the solitary patriarchal resource with a significant association across all four models. These findings with respect to women's living arrangements are most notable. Women who lived near their natal families had lower scores for generalized anxiety, suggesting that retaining social ties to natal kin – outside of the marital family – is a valuable social resource for women in this setting. These findings support the findings that patrilocality can provide women with more access to social support (Yount, 2004). No other patriarchal resources were significantly associated with lower generalized anxiety.

Among the human and economic enabling resources, we found women's market and

subsistence work and schooling to be negatively associated with generalized anxiety across all four models, suggesting that school attendance and engagement in work before marriage are protective against generalized anxiety. The negative association between women's work before marriage and their generalized anxiety is consistent with the health enhancement model, which proposes that health benefits can be derived from gainful employment (Messias et al., 1997). In contrast to our findings, some empirical studies have found work to be associated with poorer mental health outcomes, as explained by the role overload models (Douki et al., 2007). In order to more systematically investigate these two theories, particularly the role overload model, we would need to examine women's work during their marriage. Women's work before marriage may improve women's sense of social identity in accordance with the health enhancement model, but work after marriage might conflict with her domestic chores and care work and may heighten her generalized anxiety as hypothesized by the role overload model. The negative association between women's schooling and generalized anxiety is consistent with findings from Bangladesh which suggest that women who are educated feel less stressed and more control over their own lives (Kabeer et al., 2011). Further research, which examines the type and extent of women's schooling, would help to clarify the pathways through which women's schooling may lessen their generalized anxiety.

The majority of the mediators were significantly associated with women's generalized anxiety, but not always in the expected direction. Having the ability to exclusively make decisions regarding healthcare and major household purchases was associated with higher generalized anxiety. Perhaps women who make these decisions on their own are able to do so because they are socially isolated and lacking social support. This interpretation is corroborated by the statistically significant negative association between a woman's exclusive decision-

making over visits to family and her generalized anxiety. Taken together these associations suggest that having access to social support is crucial for women's generalized anxiety and mental health. As expected, exposure to any prior IPV, which may be socially isolating and psychologically traumatic, was significantly associated with higher generalized anxiety. While both exclusive decision-making and IPV were associated with generalized anxiety, including these variables did not mediate the relationships between women's enabling resources and level of generalized anxiety.

Limitations

There were several sources of possible bias in this study. As with most surveys, this study relied on self-report and is thus subject to recall bias by the women. Many of the topics covered on the survey, such as IPV, were sensitive topics that may result in non-disclosure. Thus, the estimated associations of women's anxiety with exposures like IPV may reflect lower bounds of the true relationship. The longitudinal design of the study allowed us to explore a temporal relationship between women's enabling resources at time of marriage and her anxiety several years later. However, while the enabling resources measured referred to the resources a woman had at her time of marriage, many of them were measured at the 2012 follow-up survey instead of at baseline and were thus subject to recall bias. This included market and subsistence work before marriage, age at first marriage, total spending on marriage, fertility measures, proximity to natal family, total spending on marriage, age at first marriage, and schooling.

It is also possible that other events could have happened during the years between 2005 and 2012 that could be impacting anxiety as much as or more than the enabling resources explored. We were not able to control for all possible confounders in the relationship between enabling resources and mental health. In particular, demographics and socioeconomic conditions

of women's natal families, women's childhood experiences with violence, other measures of women's agency such as mobility and participation in society, death of children, widowhood and divorce, women's work and other resources acquired during marriage, and many more factors may confound the relationship between the enabling factors we explored and women's generalized anxiety. The longitudinal design of this study allowed us to capture women's access to enabling resources at the time of marriage, their role in family decision-making in 2005, and their generalized anxiety in 2012 thus setting the ground work for causal inference; however, because we were not able to control for all possible confounders, our findings must be interpreted as associational rather than causal.

More comprehensive measures of women's agency were included in the 2012 Follow-up Questionnaire in comparison to the 2005 EDHS, including measures of women's mobility, decision-making capacity in other domains, and attitudes about gender roles and relations; however, we did not include these measures in our study as we wanted to ensure appropriate temporal ordering of explanatory variables, mediators, and the outcomes. Neither the 2005 EDHS nor the 2012 Follow-up Questionnaire measured women's social support through extra-familial relationships and solidarity, which are hypothesized to be an important enabling resource for women in the empowerment pathway (Kabeer, 1999). Future longitudinal research should collect more comprehensive measures of women's agency, including for example her mobility, decision-making capacity in other domains, and her attitudes about gender roles and relations, as well as measures of her extra-familial social relationships and support.

Conclusion

In Minya, Egypt, ever-married women's access to social support, education, and work before marriage are imperative to their mental health and generalized anxiety specifically. Our

research further confirms the finding that IPV and women's agency, or exclusive decision-making in this context, are also important for understanding women's generalized anxiety.

The majority of the enabling resources we found to be significant were human and economic resources within the empowerment pathway. We've shown that the empowerment pathway can decrease women's generalized anxiety, implicating that empowerment may also improve women's overall mental health. As patrilocality was the sole patriarchal resource consistently associated with lower generalized anxiety, we do not have sufficient evidence to conclude that the strategic conformity pathway can significantly improve women's mental health.

As these findings are consistent with existing theories and empirical findings by other researchers, these results can prompt gender-equity development projects to focus on increasing women's access to these enabling resources. Empowerment projects can continue focusing on women's schooling and entering women into the workplace. More emphasis should be made on building women's social support networks, particularly between the woman and her natal family.

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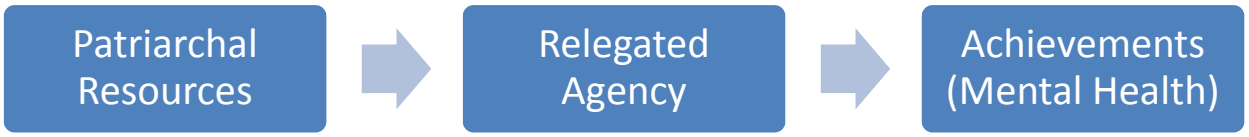
Tables and Figures

Figure 1. Resources, Agency, and Women's Mental Health

Strategic Conformity Pathway



Empowerment Pathway

Table 1. Descriptive Statistics, 539 Ever-Married Women Aged 22-65 Years in Minya, Egypt					
	Mean	Median	(SE)	Min	Max
Outcome					
Factor score for symptoms of generalized anxiety †	0.01	-0.09	0.06	-2.11	2.61
Patriarchal Enabling Resources					
Has had a live birth †	0.97	1.00	0.01	0.00	1.00
Has a male child †	0.95	1.00	0.01	0.00	1.00
Lives with natal family or close enough to visit in a day †	0.84	1.00	0.02	0.00	1.00
Husband a blood relative ‡	0.55	1.00	0.02	0.00	1.00
Total spending on marriage †*	36703.00	22017.00	3935.02	0.00	1529175.00
Age at first marriage, in years †					
<16	0.29	0.00	0.02	0.00	1.00
16-18	0.42	0.00	0.02	0.00	1.00
>18	0.29	0.00	0.02	0.00	1.00
Human and Economic Enabling Resources					
Ever attended school †	0.37	0.00	0.03	0.00	1.00
Spousal schooling gap ‡					
Husband completed a lot more schooling than respondent (6+years more)	0.29	0.00	0.02	0.00	1.00
Husband completed more schooling than respondent (1-5years more)	0.24	0.00	0.02	0.00	1.00
Husband completed same or less schooling as respondent	0.48	0.00	0.02	0.00	1.00
Performed subsistence or market work in year before marriage †	0.69	1.00	0.03	0.00	1.00
Mediators ‡					
Exclusive Decision Making					
Health care for herself	0.15	0.00	0.02	0.00	1.00
Making major household purchases	0.04	0.00	0.01	0.00	1.00
Making purchases for daily household needs	0.48	0.00	0.03	0.00	1.00
Visits to her family or relatives	0.10	0.00	0.02	0.00	1.00
Intimate Partner Violence					
Ever experienced any IPV	0.67	1.00	0.02	0.00	1.00
Control variables					
Age, in years †	37.90	35.92	0.53	22.00	65.00
Muslim †	0.85	1.00	0.03	0.00	1.00
Household wealth [a] ‡					
First quartile of household wealth	0.68	1.00	0.03	0.00	1.00
Second quartile of household wealth	0.20	0.00	0.02	0.00	1.00
Third & Fourth quartiles of household wealth	0.11	0.00	0.02	0.00	1.00
Father ever attended school †	0.10	0.00	0.01	0.00	1.00
† from the 2012 GERPA follow-up survey in Minya					
‡ from the 2005 Egypt DHS "baseline" survey in Minya					
a Score derived from a principal components analysis of household assets and amenities.					
* Adjusted for inflation					

Table 2. Bivariate associations between generalized anxiety and enabling resources, agency, and IPV, 539 Ever-Married Women Aged 22-65 Years			
	b	(SE)	*p*
Patriarchal Enabling Resources			
Has had a live birth †	0.19	0.29	0.51
Has a male child †	0.14	0.19	0.49
Lives with natal family or close enough to visit in a day †	-0.56	0.14	***
Husband a blood relative ‡	-0.02	0.10	0.83
Total spending on marriage (Natural Log) †*	0.02	0.02	0.29
Age at first marriage, in years †			
<16	ref	ref	ref
16-18	-0.05	0.09	0.56
>18	-0.20	0.12	0.12
Human and Economic Enabling Resources			
Ever attended school ‡	-0.30	0.10	**
Spousal schooling gap ‡			
Husband completed a lot more schooling than respondent (6+years more)	0.14	0.11	0.21
Husband completed more schooling than respondent (1-5years more)	-0.07	0.09	0.46
Husband completed same or less schooling as respondent	ref	ref	ref
Performed subsistence or market work in year before marriage †	-0.30	0.09	**
Mediators ‡			
Exclusive Decision Making			
Health care for herself	0.10	0.12	0.44
Making major household purchases	0.00	0.24	1.00
Making purchases for daily household needs	-0.02	0.08	0.81
Visits to her family or relatives	-0.58	0.14	***
Intimate Partner Violence			
Ever experienced any IPV	0.37	0.08	***
Covariates			
Age, in years †	0.00	0.00	0.40
Muslim †	0.02	0.15	0.91
Household wealth [a] ‡			
First quartile of household wealth	ref	ref	ref
Second quartile of household wealth	0.04	0.12	0.76
Third & Fourth quartiles of household wealth	-0.10	0.11	0.35
Father ever attended school †	-0.41	0.10	***
! p<0.10, * p<0.05, ** p<0.01, *** p<0.001			
† from the 2012 GERPA follow-up survey in Minya			
‡ from the 2005 Egypt DHS "baseline" survey in Minya			
a Score derived from a principal components analysis of household assets and amenities.			
* Adjusted for inflation			

Table 3. Linear models of the relationship between enabling resources, agency, IPV and generalized anxiety. 539 Ever-Married Women Aged 22-65 Years, Minya, Egypt

	(1)			(2)			(3)			(4)		
	β	(*se*)	*p*	β	(*se*)	*p*	β	(*se*)	*p*	β	(*se*)	*p*
Patriarchal Enabling Resources												
Has had a live birth †	0.09	0.44	0.84	0.08	0.42	0.86	-0.08	0.41	0.85	-0.11	0.40	0.79
Has a male child †	0.13	0.27	0.64	0.17	0.27	0.54	0.19	0.25	0.46	0.23	0.26	0.36
Lives with natal family or close enough to visit in a day †	-0.52	0.13	***	-0.47	0.13	***	-0.47	0.13	***	-0.42	0.13	**
Husband a blood relative ‡	0.02	0.09	0.78	0.03	0.09	0.72	0.03	0.08	0.70	0.04	0.08	0.63
Total spending on marriage (Natural Log) †*	0.02	0.02	0.20	0.03	0.02	!	0.02	0.02	0.23	0.03	0.02	!
Age at first marriage, in years †												
<16	ref	ref	ref	ref	ref	ref	ref	ref	ref	ref	ref	ref
16-18	-0.05	0.11	0.62	-0.03	0.12	0.80	-0.06	0.11	0.56	-0.04	0.12	0.73
>18	-0.16	0.11	0.16	-0.15	0.11	0.16	-0.19	0.11	0.11	-0.18	0.10	0.10
Contemporary Enabling Resources												
Ever attended school ‡	-0.33	0.09	**	-0.33	0.09	***	-0.28	0.10	**	-0.28	0.10	**
Spousal schooling gap ‡												
Husband completed a lot more schooling than respondent (6+years more)	0.04	0.10	0.71	-0.01	0.10	0.92	0.04	0.10	0.73	-0.02	0.10	0.88
Husband completed more schooling than respondent (1-5years more)	-0.07	0.09	0.45	-0.09	0.09	0.33	-0.09	0.10	0.35	-0.11	0.09	0.24
Husband completed same or less schooling as respondent	ref	ref	ref	ref	ref	ref	ref	ref	ref	ref	ref	ref
Performed subsistence or market work in year before marriage †	-0.37	0.09	***	-0.40	0.08	***	-0.39	0.09	***	-0.42	0.08	***
Mediators ‡												
Exclusive Decision Making												
Health care for herself				0.32	0.10	**				0.30	0.10	**
Making major household purchases				0.48	0.17	**				0.51	0.18	**
Making purchases for daily household needs				0.00	0.08	0.96				-0.03	0.07	0.72
Visits to her family or relatives				-0.86	0.21	***				-0.89	0.21	***
Intimate Partner Violence												
Ever experienced any IPV							0.30	0.09	**	0.32	0.09	***

Note: All models included the following covariates: Age, in years †, Muslim †, Household Wealth ‡, Father ever attended school †

! p<0.10, * p<0.05, ** p<0.01, *** p<0.001

† from the 2012 GERPA follow-up survey in Minya

‡ from the 2005 Egypt DHS "baseline" survey in Minya

a Score derived from a principal components analysis of household assets and amenities.

* Adjusted for inflation

Conclusion and Recommendations

Summary

In this paper, we have shown that women's empowerment has the potential to decrease women's generalized anxiety, and therefore improve their mental health. This is the first longitudinal study in this setting to explore the temporal relationship between ever-married women's enabling resources at the time of marriage and their mental health outcomes years into marriage. This study has contributed knowledge to existing literature on women's mental health and empowerment concerning the pathways through which women acquire certain enabling resources, and the understanding of how these enabling resources impact women's generalized anxiety. A key strength of this study is that it is highly context specific in the conceptualization of enabling resources that may improve women's mental health by lowering their generalized anxiety. The cultural specificity of the hypothesized pathways and enabling resources strengthens the interpretations and thus usefulness of the findings in Middle Eastern and Arabic countries.

Findings with respect to women's living arrangements are most notable. Women who lived near their natal families had lower scores for generalized anxiety, suggesting that retaining social ties to natal kin – outside of the marital family – is a valuable social resource for women in this setting. Our findings support previous findings that patrilocality can provide women with more access to social support (Yount, 2004). Patrilocality was the only patriarchal resource associated with lower generalized anxiety. The negative association between women's work before marriage and their generalized anxiety is consistent with the health enhancement model, which proposes that health benefits can be derived from gainful employment (Messias et al., 1997). In contrast to our findings, some empirical studies have found work to be associated with

poorer mental health outcomes, as explained by the role overload models (Douki et al., 2007). In order to more systematically investigate these two theories, particularly the role overload model, we would need to examine women's work during their marriage. Women's work before marriage may improve women's sense of social identity in accordance with the health enhancement model, but work after marriage might conflict with her domestic chores and care work and negatively impact her generalized anxiety as hypothesized by the role overload model. The negative association between women's schooling and generalized anxiety is consistent with findings from Bangladesh that education is significantly associated with women feeling less stressed and more control over their own lives (Kabeer et al., 2011). Further research into type and extent of women's schooling would help to further explain how women's schooling may lessen their generalized anxiety.

Having the ability to exclusively make decisions regarding her own healthcare and major household purchases was positively associated with a woman's generalized anxiety and these relationships were significant. Perhaps women who make these decisions on their own have to do so because they are socially isolated and lacking social support. This interpretation is corroborated by the significant negative association between a woman's exclusive decision-making over visits to family and her generalized anxiety. Taken together these associations suggest that having access to social support is crucial for women's generalized anxiety and mental health. As expected, the association between generalized anxiety and exposure to any prior IPV, which may be socially isolating and psychologically traumatic, was positive and significant. The variables exclusive decision-making and IPV exposure did not mediate the relationships between women's enabling resources and level of generalized anxiety.

In Minya, Egypt, ever-married women's access to social support, education, and work before marriage are imperative to their mental health and generalized anxiety specifically. Our

research further confirms the hypothesis that IPV and women's agency, or exclusive decision-making in this context, are also important for understanding women's generalized anxiety. Because only one patriarchal resource (patrilocality) was associated with lower generalized anxiety, we did not find sufficient evidence to support the strategic conformity pathway. Therefore, the patriarchal resources that women acquire within local systems of patriarchy in general do not improve their mental health. Instead our findings support the empowerment pathway, implicating that increasing a woman's empowerment and agency may be essential for improving her mental health.

Recommendations for future research

While this study was able to answer the intended research question asking how women's enabling resources at the time of marriage impact their generalized anxiety, our findings have illuminated areas and questions that warrant further research. To begin, we were not able to control for all possible confounders in the relationship between enabling resources and mental health. In particular, future research should examine demographics and socioeconomic conditions of women's natal families, women's childhood experiences with violence, other measures of women's agency such as mobility and participation in society, death of children, widowhood and divorce, women's work and other resources acquired during marriage, and many more factors may confound the relationship between the enabling factors we explored and women's generalized anxiety.

Future longitudinal research should also collect more comprehensive measures of women's decision-making capacity in other domains, her attitudes about gender roles and relations, as well as measures of her extra-familial social relationships and support. Lastly, future studies should more closely examine the enabling resources women acquire during marriage, and the relationship between these resources, their resources at time of marriage, and their mental

health. This could include work during marriage, amount of and control over her earnings, and participation in economic activities outside of her marriage, such as microcredit programs or savings groups.

Policy implications

As our findings are majorly consistent with existing theories and empirical findings by other researchers, these results can prompt gender-equity development projects to focus on increasing women's access to these enabling resources. As we did not find evidence to support the strategic conformity pathway, development programs and policies should continue to stress the importance of women's empowerment and gender equity. Empowerment projects should continue to focus on women's schooling and access to work. More emphasis should be made on building women's social support networks, particularly between the woman and her natal family.

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