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**Is Unsolicited Support Protective or Destructive in Collectivistic Culture?**

**Receipt of Unsolicited Job Leads and Depression in Urban China\***

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## **Is Unsolicited Support Protective or Destructive in Collectivistic Culture?**

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#### **Abstract**

Is receipt of unsolicited support—aid that is passively obtained without asking—protective or destructive in collectivistic culture? This study focuses on receipt of unsolicited job leads and examines competing hypotheses on its direct and indirect effects (through financial dissatisfaction) on depression using unique nationally representative data of working-age urban adults in China. Its direct effect should be negative from the distress-reducing perspective but positive from the distress-inducing perspective. Its indirect effect should be negative based on the stress prevention model but positive predicted by comparative reference group theory. Also the reinforced collectivistic norm explanation expects the distress-reducing perspective and the stress prevention model to have stronger explanatory power in China. Results from path analysis support the distress-inducing perspective and comparative reference group theory. Receipt of unsolicited job leads is positively associated with depression partially through financial dissatisfaction in urban China.

Key Words: unsolicited support, unsolicited job leads, depression, China

## **Protective or Destructive in Collectivistic Culture?**

### **Receipt of Unsolicited Job Leads and Depression in Urban China**

The multidimensional concept of social support—aid flowing through social ties—has triggered a burgeoning health literature for almost four decades across society (for reviews see House, Umberson, and Landis 1988; Song, Son and Lin 2011; Taylor 2007; Thoits 1995, 2011; Turner and Brown 2010; Turner and Turner 2013; Uchino 2006, 2009). Among various forms of social support, received support—actual receipt of aid—is one of the most investigated (Tardy 1985; Wethington and Kessler 1986). Its health effects, however, are puzzlingly discrepant: sometimes null, sometimes modestly protective, and often detrimental (for reviews see Barrera 1986; Thoits 2011; Turner and Turner 2013; Uchino 2004, 2009). Differentiating between two forms of received support—solicited (actively sought and obtained) and unsolicited (passively obtained without asking)—is one long-proposed direction to disentangle that puzzle but receives limited systematic attention (Barrera 1986; Eckenrode and Wethington 1990; Pearlin and McCall 1990; Thoits 1995). Several available studies focus on and find unsolicited support deleterious to recipients' health in individualistic societies (Bolger and Amarel 2007; Deelstra et al. 2003; Song and Chen forthcoming). However, one remaining challenging question is whether and how that adverse health impact is generalizable to collectivistic culture, where unsolicited support is interpreted more positively (Chentsova-Dutton 2012; Mojaverian and Kim 2012).

The purpose of this present study is to focus on receipt of unsolicited job leads and systematically investigate its direct and indirect effects (through financial dissatisfaction) on depression using unique nationally representative data of working-age adults in urban China, a society characterized by its collectivistic culture of *guanxi* (Bian 2001; Lin 2001b; Song 2013a,

2013b). Job leads refer to information about job openings and opportunities. Solicited and unsolicited job leads offered by social contacts have long been emphasized as one crucial type of received informational support in the life domain of employment and work (Granovetter [1974]1995; House 1981). Their pervasiveness in daily social intercourse and their facilitating function in job search and mobility have been well demonstrated (Granovetter [1974]1995; Lin 2000; Lin and Ao 2008; Marsden and Gorman 2001; McDonald and Elder 2006). But their health implications remain underexplored except for one recent study (Song and Chen forthcoming), which reports the detrimental effect of unsolicited job leads on recipients' mental health in the individualist United States. It is not clear whether that destructive effect is applicable to collectivistic China. Also little is known about the mechanisms for that adverse effect. In this present study available data allow the examination of one possible mediator, financial dissatisfaction, namely discontent with economic conditions, although not allowing a test of possible pathways linking unsolicited job leads to financial dissatisfaction. Note that unsolicited job leads exemplify only one particular form of informational support in the special social context of work, "the most structured and organized aspect of most adults' lives" (House 1981:8). Depression is only one indicator of mental health. Urban Chinese are a specific population within only one collectivist culture. The level of collectivism varies by society (Oyserman et al. 2002; Triandis 1995). Thus findings from this present study represent only a partial picture of health consequences of unsolicited support in collectivistic societies, which takes various forms in different social contexts.

This paper is organized as follows. First, it reviews the relevant literature on received support, unsolicited support, and unsolicited job leads, and identifies the research gaps. It then proposes competing hypotheses from five theoretical approaches (distress reducing, distress

inducing, stress prevention, comparative reference group, and reinforced collectivistic norm), and reports empirical results. It concludes with the theoretical implications of this study for future research.

## **LITERATURE REVIEW: RECEIVED SUPPORT, UNSOLICITED SUPPORT, UNSOLICITED JOB LEADS, AND HEALTH**

Social support is a multidimensional construct (Cohen, Underwood, and Gottlieb 2000; Song et al. 2011). Among its various forms, received support is one of the most examined in the four-decade-long literature on social support and health across society. Despite the voluminous prior research, we remain challenged to extricate one persistent puzzle pertinent to the discrepant health consequences of received support: sometimes weak protective effect, sometimes null effect, and more often adverse effect (for reviews see Barrera 1986; Turner and Turner 2013; Uchino 2004, 2009). Its less salubrious and more destructive effects are possibly accounted for by multiple social psychological mechanisms, such as mismatch with recipients' actual situation and need (e.g., untimely, from the wrong source, or misunderstood needs) (Pearlin and McCall 1990; Shinn, Lehmann, and Wong 1984; Umberson 1995), miscarriage by support providers (e.g., excessive control) (Beehr, Bowling, and Bennett 2010; Revenson et al. 1991; Wortman and Lehman 1985), violation of reciprocity norm (Nahum-Shani, Bamberger, and Bacharach 2011; Rook 1987), threat to recipients' self-esteem (Fisher, Nadler, and Witcher-Alagna 1982; Liang, Krause, and Bennett 2001), and negative social comparison with support providers as reference groups (Barrera 1986; Bolger and Amarel 2007).

Beyond the above social psychological explanations, the mixed health impacts of received support can be due to its complex typology. Received support per se is

multidimensional with diverse subtypes. These subtypes are likely to influence health through disparate pathways in different directions, which consequentially contributes to the manifestation of the overall divergent health consequences of received support in the prior research. This present study is interested in one long-argued but little systematically examined dichotomous classification of received support: differentiation between solicited and unsolicited support based on who—the recipient or the provider—initiates the actual support transaction. Barrera (1986) first suggests the distinction between active solicitation of aid and passive help receipt as one essential strategy to resolve the puzzling distressful effect of received support. In a qualitative study on marital support activation, Pearlin and McCall (1990:59) note that “support is a built-in feature of ongoing social relationships that support may often be received without a deliberate effort either to seek it or to give it.” Eckenrode and Wethington (1990:91) point out that “solicited and unsolicited support comprise the domain of support mobilization,” and call for researchers’ appreciation of unsolicited support. Based on her literature review, Thoits (1995:66) makes another call for the unexamined question of whether the utility of received support for health is contingent on “who marshalls support”—the receiver or the provider.

Among the two different forms of received support, unsolicited support is the focus of the existing health research. The direction of its health impact is controversial. Some scholars argue that unsolicited support may be salubrious through reinforcing recipients’ perceived support, protecting their self-esteem without their acknowledging weakness, or reducing their exposure to stress (Eckenrode and Wethington 1990; Thoits 2011). In contrast, some scholars warn that unsolicited support may be deleterious if it is unwanted and inappropriately delivered, mismatches recipients’ needs, threatens their self-concept, triggers upward social comparison, or

generates burdensome indebtedness (Barrera 1986; Bolger and Amarel 2007; Deelstra et al. 2003; Eckenrode and Wethington 1990; Song and Chen forthcoming).

Four empirical studies find negative health and well-being consequences of receiving unsolicited support. Volunteer respondents in Germany assess 80 percent of received unsolicited support as being more unpleasant than pleasant with support providers' indicating a sense of incompetence to them as the most important reason (Smith and Goodnow 1999). In one experimental study in Netherlands, recipients of unsolicited support report more negative psychological reactions (i.e., depressed, melancholic, unhappy, anxious, worried, and tense), more negative physiological reactions (increased heart rate and decreased respiratory sinus arrhythmia), and lower self-esteem than non-recipients (Deelstra et al. 2003). In three experimental studies in the United States, receipt of invisible unsolicited support has a smaller distressful effect than that of visible unsolicited support or no support, and these distressful effects are partially explained by providers' communicating a sense of inefficacy to recipients (Bolger and Amarel 2007). A recent analysis of nationally representative data of U.S. working-age adults reports that recipients of unsolicited job leads have more depressive symptoms than non-recipients (Song and Chen forthcoming).

The above empirical studies are all conducted in individualistic societies. Whether their findings are generalizable to collectivistic societies remain unclear. The transaction of social support is embedded in broader structural contexts (Berkman et al. 2000). Among other structural factors that vary by society, relational culture—individualistic versus collectivistic—can influence health consequences of social support through shaping individuals' use and evaluation of social support (for reviews see Kim, Sherman, and Taylor 2008; Taylor 2007; Thoits 2011). Individualistic culture (as exemplified in the United States and Western European

societies) fosters personal autonomy and independence from each other, while collectivistic culture (characteristic of Asian and Eastern European countries) promotes instrumental connections and harmonious interdependence between individuals (Lin 2001a; Markus and Kitayama 1991; Song 2013a). Two recent studies argue for culture-specific responses to unsolicited support, and find evidence for a reinforced collectivistic norm argument (Chentsova-Dutton 2012; Mojaverian and Kim 2012). That argument states that receipt of unsolicited support is in accordance with the expectation of the collectivistic rather than the individualistic relational norm, and thus can be interpreted and experienced more positively in collectivistic than in individualistic societies. Chentsova-Dutton (2012) reports that Russian young volunteer participants are more likely than European American counterparts to perceive unsolicited (versus solicited) support from family members as motivated by well-intentioned social networking rather than unpleasant interference. As two experiments by Mojaverian and Kim (2012) show, receiving unsolicited (versus solicited) advice on mathematical questions leads to higher self-esteem, less task stress, and more positive emotions among Asian American college students, but exerts no such effects among European American ones.

In summary, despite its prevalence in routine social interaction, its promise in the disentanglement of the divergent health effects of received support, and repeated calls for research on its health functions, unsolicited support has received limited systematic examination. According to available findings, it is detrimental to recipients' health in individualistic societies. But its corresponding role in collectivistic societies remains a question. Whether and how the expected more positive interpretation of unsolicited support in collectivistic culture is convertible into positive health consequences is unexamined. Furthermore, most prior results are from experimental or volunteer sample studies, and have limited generalization.



This present study focuses on receipt of unsolicited job leads and systematically examines its direct and indirect functions for depression using nationally representative data of working-age adults in urban China. As introduced earlier, solicited and unsolicited job leads provided by social contacts act as one unique form of received informational support, and can facilitate job search and mobility. Unsolicited job leads are as equally crucial for job search as solicited ones. They exemplify the “invisible hand” of network resources on the labor market (Lin 2000:791, 2001a; Lin and Ao 2008; McDonald and Day 2010). Despite its ubiquity in ordinary social discourse and its long-recognized importance for working life, “the largest slice of life for most adults” (Granovetter [1974]1995:141; House 1981), receipt of unsolicited job leads remains underexamined for its health implications. As introduced earlier, it has a positive association with depression in the individualistic United States (Song and Chen forthcoming). We are now challenged to examine whether that adverse health effect is generalizable to collectivistic societies such as China.

## **HYPOTHESES:**

### **RECEIPT OF UNSOLICITED JOB LEADS AND DEPRESSION**

Drawing on prior research, this study first develops competing hypotheses on the direct and indirect roles of receipt of unsolicited job leads for depression from four theoretical approaches (see Figure 1): direct effects from the perspectives of distress reducing and distress inducing (path a: H1a, H2a), and indirect effects through financial dissatisfaction based on the stress prevention model and comparative reference group theory (path b: H1b, H2b). Also this study examines the extension of the reinforced collectivistic norm explanation to depression (paths c and d: H3a, H3b). Note that available data are from only one collectivistic society, urban China.

This study cannot investigate how relational culture (collectivistic versus individualistic culture) moderates the association between receipt of unsolicited job leads and depression. Rather, it analyzes whether that association is negative in collectivistic urban China as the reinforced collectivistic norm explanation expects.

First, the distress-reducing perspective conceives of received support as valuable social resources that prevent depression through diverse mechanisms (Berkman et al. 2000; House et al. 1988; Thoits 2011; Uchino 2004, 2009). Receipt of unsolicited social support can be protective through four pathways. First, it may reinforce recipients' perceived support and their anticipation that help will be available even without asking should the need for job information arise (Thoits 2011). Second, it may strengthen recipients' psychological resources (e.g., self-esteem and sense of control) that help cope with job uncertainty and insecurity (Eckenrode and Wethington 1990). Third, it may reduce the temporal, social, financial, and psychological costs of recipients' job information search (Kramer 1993). Finally, to extend the stress prevention model (Lin 1986; Wheaton 1985), it may prevent the occurrence of certain economic strain and stress. Unsolicited job leads can connect recipients with unknown job opportunities even when they are not searching (Granovetter [1974]1995; McDonald and Day 2010; McDonald and Elder 2006). Such job leads can further contribute to attainment of jobs with more authority and income (Lin and Ao 2008). Consequentially, they can help reduce recipients' fear of job insecurity, employment uncertainty, and income reduction or loss, and protect recipients from financial worries, difficulties, and crisis (Avison and Turner 1988; Pearlin et al. 1981).

Therefore, from the distress-reducing perspective, the direct-effect hypothesis states that receipt of unsolicited job leads is negatively associated with depression (H1a). Although without information on economic strain, available data contain one measurement of financial

dissatisfaction. Financial dissatisfaction plays a mediating role in the social production of psychological distress. Schieman and colleagues (Schieman 1999; Schieman, van Gundy, and Taylor 2001), for example, demonstrate that financial satisfaction mediates the effect of age on depression, anger, and distress. Financial dissatisfaction has been used as one proxy of economic strain in prior work (Gudmunson et al. 2007; Schieman et al. 2001). Joo and Grable (2004) find that economic stressors and stress predict financial dissatisfaction (Joo and Grable 2004). Gudmunson and colleagues (2007) report that financial dissatisfaction and financial worries are positively correlated with each other, and together they seem to measure the same latent construct. Also, financial dissatisfaction is one established precursor of mental health and well-being (Schieman 1999; Schieman et al. 2001). In China, people with more financial dissatisfaction report more depressive symptoms and lower levels of happiness and life satisfaction (Brockmann et al. 2009; Shu and Zhu 2009; Yu 2008). To extend the stress prevention model, the indirect-effect hypothesis states that receipt of unsolicited job leads exerts an indirect negative effect on depression through financial dissatisfaction (H1b).

Second, from the distress-inducing perspective, unsolicited job leads may be more likely to increase recipients' depression through the five mechanisms reviewed earlier due to their nature of not being actively sought by recipients: mismatch, miscarriage, violation of reciprocity, self-esteem threat, and elicitation of comparative reference group behavior (Barrera 1986; Bolger and Amarel 2007; Deelstra et al. 2003; Song and Chen forthcoming). Available data allow the test of the last mechanism. Individuals tend to evaluate themselves in comparison to others (Festinger 1954; Pettigrew 1967). As comparative reference group theory argues, when individuals compare their own situation upward with those of others in better situations, their feelings of relative deprivation and discontent will be provoked (Merton 1968; Merton and Kitt

1950).<sup>1</sup> Receipt of unsolicited support can lead recipients to compare themselves upward with possibly better-off support providers (Barrera 1986; Bolger and Amarel 2007; Song and Chen forthcoming). Unsolicited job leads are closely related to economic well-being. Indeed, receipt of such leads can lead to obtainment of jobs with higher authority and salaries (Lin and Ao 2008). Recipients of such leads are more likely to make upward social comparison in terms of occupational status and earnings not only with job leads providers but also with occupants of related jobs. Thus, such negative social comparison is further more likely to elicit recipients' discontent, especially with their financial situation. Although without empirical research on the effect of social comparison on financial dissatisfaction, there is some indirect evidence for that effect. Relative income, relative occupational status, and sense of relative deprivation are major predictors of life dissatisfaction in general as well as happiness in China especially urban China (Knight and Gunatilaka 2011; Wang and VanderWeele 2011; Wu and Li 2012; Zhang, Wang, and Chen 2011). The higher the occupational status of social contacts, the higher the levels of depressive symptoms and occupational dissatisfaction among urban Chinese (Song 2011, 2013b). Furthermore, as introduced earlier, financial dissatisfaction acts as one critical antecedent of life satisfaction and depression in China (Brockmann et al. 2009; Yu 2008).

Thus, from the distress-inducing perspective, the direct-effect hypothesis states that receipt of unsolicited job leads is positively associated with depression (H2a); and based on comparative reference group theory, the indirect-effect hypothesis states that receipt of unsolicited job leads has an indirect positive effect on depression through financial dissatisfaction (H2b).

Finally, to extend the reinforced collectivistic norm explanation (Chentsova-Dutton 2012; Mojaverian and Kim 2012), receipt of unsolicited job leads is more likely to reduce rather than

induce depression, directly and indirectly, in collectivistic societies. As introduced earlier, that explanation argues that collectivistic culture tends to foster recipients' positive construction and interpretation of unsolicited support, while the opposite applies to individualistic culture. Thus in collectivistic societies, recipients of unsolicited job leads are more inclined to appreciate providers' connecting efforts and emphasize the instrumentality of such aid rather than its any negative attribute (e.g., mismatch, miscarriage, violation of reciprocity, self-esteem threat, and elicitation of comparative reference group behavior). China is characterized by its collectivistic culture of *guanxi* traceable to Confucian ethics on collectives and interdependence (Hwang 1987; King 1985; Yang 1994). *Guanxi* is a particular social network composed of "enduring, sentimentally based instrumental relations that invoke private transactions of favors and public recognition of asymmetric exchange" (Lin 2001b: 159). Chinese are committed to cultivate and mobilize their *guanxi* as a major support source for various purposes, in particular for job attainment and mobility (Bian 1997, 2001; Lin and Ao 2008; Song 2013a, 2013b; Walder 1986).

Therefore, the reinforced collectivistic norm hypotheses (H3a, H3b) states that the distress-reducing perspective and the stress-prevention model (H1a, H1b) have stronger explanatory power than the distress-inducing perspective and comparative reference group theory (H2a, H2b) in urban China.

## **DATA AND METHODS**

### ***Data***

Unique data were drawn from the research project "Social Capital: Its Origins and Consequences" (Lin, Ao, and Song 2009), which represent the only existing nationally

representative data on unsolicited support collected in collectivistic culture. A face-to-face personal interview survey was conducted by professional interviewers from November 2004 to March 2005 using a national representative sample of working-age adults registered or residing in urban China, aged twenty-one to sixty-four, currently or previously employed.<sup>2</sup> The sampling plan was a multistage systematic probability sample. At the initial stage, clusters of households in all urban cities were selected with 19 consecutive households in each cluster. The sampled clusters of households were located in 167 urban cities in 29 provinces. At the second stage, all qualified respondents in each sampled household were identified, and the one whose birth date was closest to June 30 was designated as the sample respondent. The sample consisted of 3,500 respondents with a response rate of 40 percent.<sup>3</sup> It is difficult to find the appropriate census data from the sampled cities for currently or previously employed adults, aged twenty-one to sixty-four. In comparison with the one-percent Population Survey of China 2005 (also known as the 2005 mini-census), the sample is representative in terms of five key variables (i.e., age, gender, marital status, work unit, and income) (Lin et al. 2009). There are two exceptions. The sample has more educated respondents. Since this research project targeted adults currently or previously employed, an elevation of education should be expected (Lin et al. 2009). Related to occupation, the sample is representative in term of four out of six occupational groups (i.e., administrators/managers, professional/technical personnel, clerical personnel, production workers, and agricultural laborers) but not of the other two (i.e., sales/service personnel and production workers). The sample has fewer sales/service personnel but more production workers. To further guard against possible sample biases, the present study incorporated critical control variables in all analyses. The listwise deletion of cases with missing values on the variables of interest incurred the loss of a very small percent of the sample (6 percent). A multiple imputation

method was employed to impute missing values in independent variables based on ten imputations through one Stata program (Ice) written by Royston (2005).<sup>4</sup>The imputed data included 3,453 respondents. Table 1 shows sample characteristics averaged over the ten imputed data sets.

Insert Table 1 Here

### ***Dependent Variables***

Depression during the past week was measured by thirteen items from the Center for Epidemiologic Studies Depression (CES-D) scale that proves applicable among Chinese adults (Lin 1989; Radloff 1977).<sup>5</sup> These items were rated on a four-point scale (0=rarely or none of the time: less than one day in the past week; 1=some or little of the time: one to two days in the past week; 2=occasionally or moderate amount of time: three to four days in the past week; 3=most or all of the time: five to seven days in the past week). The summed total score ranged from 0 to 39, with higher values indicating higher levels of depression. Its distribution was rightly skewed. A logarithmic transformation was applied to normalize this variable. The reliability test of this 13-item CES-D scale produced an alpha coefficient of .89, indicating high internal consistency. The reliability of this scale was further tested by calculating alpha coefficients with each item deleted. The alphas were between .88 and .89, indicating that these items measure the unidimensional latent construct of depression very well.<sup>6</sup>

Financial dissatisfaction was measured as an ordinal variable. Respondents evaluated their dissatisfaction with financial situation on a four-point scale (1=very satisfied, 2=moderately satisfied, 3=a little dissatisfied, and 4=very dissatisfied).<sup>7</sup>

### *Independent Variables*

Receipt of unsolicited job leads in the past twelve months is the key explanatory variable in this study (1=receipt of unsolicited job leads, 0=no receipt of unsolicited job leads). Its measurement was based on respondents' response to the following question: "Now I would like you to think of the last 12 months, did someone mention job possibilities, openings or opportunities to you, without your asking, in casual conversations? (This may include face-to-face, telephone, email, fax, etc.)" About 17.5 percent of respondents answered "Yes."

All analyses controlled for two demographic factors, two indicators of social integration, two employment variables, three socioeconomic factors, one indicator of physical health, and three unique social stratifiers in China. Two demographic factors included age and gender (1=female, 0= male). Two indicators of social integration included marital status (1=married, 0=unmarried) and social participation (number of memberships in voluntary organizations). Two employment variables included full-time employment (1=full-time employed, 0=not full-time employed) and duration of lack of full-time employment (years). Three socioeconomic indicators included education (1=middle school or lower, 2=high school diploma, 3=associate college degree, 4= college degree or higher), occupational socioeconomic status of current or last job coded through the International Socioeconomic Index (ISEI) scores (Ganzeboom, De Graaf, and Treiman 1992), and annual family income. A dummy variable for each category of education was created with middle school or lower as the reference group. Annual family income had twenty seven ordinal ranges. A logarithmic transformation of medians of all the ranges was applied for a normal distribution of income. Self-reported health limitation is one indicator of physical health. Respondents were asked, "Now I would like you to think of the last twelve months; how often was your daily life disrupted for more than a week due to health related



matters?" This item was rated on a four-point scale (1=frequently, 2=occasionally, 3=seldom, 4=never). The order of values was reversed so that the higher the score, the higher the degree of health limitation respondents reported. Three unique social stratifiers in China included residential location (1=municipalities/provincial capital cities, 0=other cities), political capital (1=communist party member, 0=non-communist party member), and sectors of work units of current or last job (1=state-owned, 0=other work units).

### ***Instrumental Variable***

As described below in the analytic strategy, this study applied the instrumental variable (IV) method to identify the causal order in the cross-sectional associations between receipt of unsolicited job leads and dependent variables. The IV in this study is receipt of unsolicited job leads when respondents started their current or last job if they were not full-time employed at the survey time. Its dummy measurement (1=receipt of unsolicited job leads, 0=no receipt of unsolicited job leads) was based on respondents' response to the following question: "At the time you started your current or last job, did someone mention job possibilities, opening or opportunities to you, without your asking, in casual conversations?" About 23 percent of respondents answered "Yes."

Similar to the explanatory variable, the IV also measures receipt of unsolicited job leads. But its time frame is earlier than that of the explanatory variable for most respondents. The data set was collected from November 2004 to March 2005. It contained information on the beginning year of current or last job. About 18 percent of respondents (N=631) reported 2003, 2004, or 2005 as the beginning year of their current or last jobs. Thus roughly at least 82 percent of respondents started their current or last jobs twelve months before the survey. Current social

conditions are more predictive of mental well-being than prior ones (see Hughes and Waite 2009 for the stronger response of depression to current marital status than to prior marital history). Therefore, the IV is expected to be highly correlated with the explanatory variable, and the explanatory variable is expected to have much stronger explanatory power in the prediction of depression and financial dissatisfaction than the IV.

### *Analytic Strategy*

The direct and indirect-effect hypotheses were examined simultaneously through one path analysis model using the Mplus program (Muthén and Muthén 1998-2012). The model included two equations respectively for the two dependent variables (see Equations 1-2): financial dissatisfaction ( $Y_1$ ), and depression ( $Y_2$ ). The first equation was an ordinal logistic regression of financial dissatisfaction on receipt of unsolicited job leads ( $X_1$ ) and control variables ( $X_2$ ). The second equation was an OLS regression of depression on financial dissatisfaction, receipt of unsolicited job leads, and control variables. Parameter estimates were averaged across these ten imputed data sets. Two approaches in Mplus (i.e., the Sobel test and the bootstrapping method) were employed to test the hypothesized indirect effects of receipt of unsolicited job leads through financial dissatisfaction (Bollen and Stine 1992; Sobel 1982).

$$Y_1=f(X_1+X_2) \quad (1)$$

$$Y_2=f(Y_1+X_1+X_2) \quad (2)$$

Furthermore, the IV method was used to test the endogeneity of the explanatory variable using one Stata user-written program (*ivreg2*) (Baum, Schaffer, and Stillman 2007). OLS estimates are biased and inconsistent if receipt of unsolicited job leads in the past twelve months is an endogenous explanatory variable, that is, is correlated with the error terms of Equations 1 and 2 due to reasons such as measurement error, sample selectivity, reverse causality (i.e., depression or financial dissatisfaction triggers spontaneous offer of job leads), and omitted variables (such as recipients' unconscious disclosure of job anxiety that can increase not only receipt of unsolicited job leads but also depression and financial dissatisfaction) (Bollen 2012). An IV needs to satisfy two conditions that it is correlated with the suspected endogenous explanatory variable but not with the error term of the model of interest. The first condition can be easily checked, but the latter assumption cannot be tested (Cameron and Trivedi 2010; Greene 2003).

## **RESULTS**

A path analysis model was estimated to simultaneously examine the direct- and indirect-effect hypotheses. Table 2 reports the raw parameter estimates. Figure 2 shows standardized parameter estimates of only significant paths (fully standardized parameter estimates for continuous variables and Y-standardized parameter estimates for noncontinuous variables). Taken together, the results support the direct-effect hypothesis from the distress-inducing perspective (H2a), the indirect-effect hypothesis derived from comparative reference group theory (H2b). But they do not support hypotheses from the other three theoretical perspectives: distress reducing, stress prevention, and reinforced collectivistic norm.

Insert Table 2 Here

Insert Figure 2 Here

### ***Direct Effect***

Receipt of unsolicited job leads was directly associated with depression in a positive direction (.145) net of control variables. Recipients reported higher levels of depression than non-recipients. Among control variables, women (.181), residents in municipalities or provincial capital cities (.084), adults reporting more health limitation (.310), and adults with more financial dissatisfaction (.141) felt more depressed than men, residents in other cities, those with less health limitation, and those with less satisfaction with financial situation. Based on the standardized coefficients (see Figure 2), the effect of receipt of unsolicited job leads (.147) was greater than that of residential location (.085) but weaker than those of gender (.184), financial dissatisfaction (.198), and self-reported health limitation (.315).

### ***Indirect Effect***

Net of control variables, receipt of unsolicited job leads was positively associated with financial dissatisfaction (.161), which in turn was positively associated with depression (.141). Results from the Sobel test and the bootstrapping method in Mplus consistently showed a positive indirect effect of receipt of unsolicited job leads through financial dissatisfaction (.023,  $p < .01$ ). Financial dissatisfaction mediated a small proportion of the total effect of receipt of unsolicited

job leads (14 percent). Recipients were more dissatisfied with financial situation than non-recipients, and adults with more financial dissatisfaction reported more depression.

Among other predictors of financial dissatisfaction, older adults (-.010), women (-.161), the married (-.156), and adults with more annual family income (-.506) reported less financial dissatisfaction than younger adults, men, the unmarried, and those with less annual family income. Residents in municipalities or provincial capital cities (.157) and adults with more health limitation (.098) felt more financially dissatisfied. Based on the standardized coefficients (see Figure 2), the effect of receipt of unsolicited job leads (.147) was greater than those of age (-.010) and self-reported health limitation (.091), close to those of gender (-.148), residential location (.145), marital status (-.144), but weaker than that of annual family income (-.506).

#### ***IV Method and Endogeneity Test***

The IV method was applied to test the endogeneity of the explanatory variable (receipt of unsolicited job leads in the past twelve months). An IV must be correlated with the suspected endogenous explanatory variable. As partial correlation analysis shows, conditional on all other covariates, the IV (receipt of unsolicited job leads at the beginning of current job or last job) was significantly correlated with the explanatory variable ( $r=.404$ ,  $p<.001$ ) but not with depression and financial dissatisfaction. One Stata user-written program (`ivreg2`) can perform the weak identification test and the endogeneity test for continuous dependent variables (Baum et al. 2007). IV estimators for ordinal dependent variables, such as four-category financial dissatisfaction in this study, are rare, and one approximation is to treat them as continuous (Bollen 2012; Cameron and Trivedi 2010). The strength of the IV was evaluated using the Cragg-Donald F statistic (for

joint significance of the IV in the first-stage regression of the explanatory variable on the IV and other covariates). The IV was clearly not a weak one with the F statistic around 350, which greatly exceeded the critical value of 16.38 (Stock and Yogo 2005). Furthermore, results from the endogeneity test using that Stata program (ivreg2) failed to reject the null hypothesis that the key explanatory variable can actually be treated as exogenous in the prediction of depression and financial dissatisfaction.<sup>8</sup>

## **CONCLUSION AND DISCUSSION**

This present study examines competing hypotheses on the direct and indirect effects of receipt of unsolicited job leads on depression using national representative data of working-age adults in collectivistic urban China. Results from path analysis indicate that receipt of unsolicited job leads is positively associated with depression, and part of that effect is indirect through financial dissatisfaction. Results of the endogeneity tests through the IV method support the causal flow from receipt of unsolicited job leads to financial dissatisfaction and depression.

This study is the first to systematically investigate the direct and indirect health effects of receiving unsolicited support in a collectivistic society. It contributes to relevant literature in three important ways and opens up promising future research directions. First, this study finds the direct negative impact of receiving unsolicited job leads on mental health in urban China, and extends the existing limited (and still controversial) literature on unsolicited support and health. In accord with the distress-inducing perspective rather than the opposite distress-reducing perspective, receipt of unsolicited job leads in the past twelve months is positively related to recipients' depression in the past week. Consistent with prior work on health consequences of

unsolicited support (Deelstra et al. 2003; Song and Chen forthcoming), this study indicates that receiving unsolicited job leads can exert a detrimental effect on mental health.

Note that the IV (receipt of unsolicited job leads around the time of entry into the current or last job), which has an earlier time frame for most respondents than that of the explanatory variable, is not associated with depression in the past week. Similar to prior work (Hughes and Waite 2009), these results imply that depression is more sensitive to current than prior receipt of unsolicited job leads. Also note that some major social determinants of mental health (i.e., age, socioeconomic status, marital status, and social participation) and two unique social precursors in China (e.g., political capital and work units) do not predict depression. Among those significant predictors, the effect size of receiving unsolicited job leads is greater than residential location but smaller than those of gender, financial dissatisfaction and self-reported health limitation.

Furthermore, considering the existing minimal systematic attention to unsolicited support, it is definitely too early to make any conclusion about its direct adverse impact on recipients' health. Unsolicited job leads represents only one unique form of work-related informational support, which "is not in and of itself helpful" but "helps people to help themselves" (House 1981: 25). Future research needs to examine whether findings in this study are generalizable to other content areas of unsolicited support (e.g., emotional, instrumental, and appraisal support) in other social contexts (e.g., family, neighborhood, and school).

Second, this study demonstrates financial dissatisfaction as one pathway linking receipt of unsolicited job leads to depression, and advances our knowledge of the social psychological mechanisms for the relationship between receiving unsolicited support and mental health. According with comparative reference group theory but not with the stress prevention model, recipients express more financial dissatisfaction than non-recipients; and adults with more

financial dissatisfaction in turn report higher levels of depression. These results are inconsistent with those of the experimental study by Bolger and Amarel (2007). They report no evidence for the mediating effect of upward social comparison with support providers as reference groups. As they speculate, that may be due to their limited measurement of comparison dimensions (i.e., relative knowledge and nervousness). Unsolicited information about job opportunities, in contrast, is closely related to access to economic resources such as income (Lin and Ao 2008), and can be more likely to trigger recipients' upward social comparison with providers in the financial life domain. Finance-related unsolicited support is indeed more likely to be perceived as unpleasant by recipients than other content areas of unsolicited support (e.g., age identity, tangible aid, health, cognition, and competence) (Smith and Goodnow 1999). Prior social comparison research also suggests that individuals are more likely to choose social contracts they are closely tied to as comparative reference groups (Gartrell 1982, 2002). Thus, the mediating effect of financial dissatisfaction may be stronger for recipients in close connection with job leads providers. But available data do not contain information on the nature of the tie between job leads providers and recipients. Future research needs to collect detailed data on recipients' reference group behaviors and particularly on the role relationship between job leads providers and recipients for a more direct examination of comparative reference group theory.

Note that as the first effort to examine the indirect health effect of receiving unsolicited support using nationally representative data, this present study finds that financial dissatisfaction mediates only a small percentage (14 percent) of the total impact of receiving unsolicited job leads on depression. In order to draw a fuller picture of the distressing role of unsolicited job leads, future research needs to explore and compare other possible mechanisms, in particular



self-esteem, the mediating effect of which has been documented in experimental research (Bolger and Amarel 2007; Mojaverian and Kim 2012).

Also note that in this study women report more financial dissatisfaction than men in urban China. There are very few prior studies to compare with this study (Brockmann et al. 2009; Shu and Zhu 2008). Shu and Zhu (2008) use nationally representative data from the 2006 Asia Barometer Survey of adults aged 20-69 in China. They report that men are more dissatisfied with material life (i.e., housing, standard of living, and household income) than women. But they do not examine urban and rural China separately. Brockmann and colleagues (2009) find that urban and rural China may witness opposite gender patterns in the distribution of financial dissatisfaction. They analyze two nationally representative data sets from the World Values Survey in 1990 and 2000. As their descriptive analysis shows, urban men report more financial dissatisfaction than urban women in 1990 but less in 2000. The opposite gender pattern is observed in rural China. These descriptive results on urban China appear to be consistent with findings in this present study. There is no evidence for gender difference in financial dissatisfaction in the United States (Hsieh 2001, 2003; Joo and Grable 2004). More financial dissatisfaction among urban women than among urban men may result from three major aspects of the expanding gender inequality in urban China: the sharply growing gender gap in income, the increasing gender segregation in occupations, and women's more experience of family-work conflict (Cohen and Wang 2009; Shu 2005; Zhang, Hannum, and Wang 2008).<sup>9</sup>

Third, this study is the first to examine health consequences of receiving unsolicited support in collectivistic culture, and adds to our comprehension of culture and social support. Consistent with prior work on unsolicited support and health in individualistic societies and replicating results on unsolicited job leads in the United States (Deelstra et al. 2003; Song and

Chen forthcoming), this study reports results in favor of the distress-inducing perspective and comparative reference group theory in collectivistic urban China. These results do not seem to be in accord with the reinforced collectivistic norm explanation. As this explanation argues, receipt of unsolicited support is congruent with and can further enhance collectivistic relational norms, and thus is more likely to be positively interpreted and salubrious in collectivistic societies. The seeming inconsistency in results between this present study and the two prior studies that document the more positive interpretation of unsolicited support in collectivistic culture can be due to both methodological and theoretical reasons (Chentsova-Dutton 2012; Mojaverian and Kim 2012).

Methodologically, this present study and the two prior studies in collectivistic contexts use different measurements and research designs. First and foremost, they use different base groups in their dichotomized measurements of unsolicited support, and thus their results are not comparable. This study examines the effect of receipt of unsolicited support relative to the base group of no receipt of such support (i.e., receipt of solicited support plus no received support at all), but the other two studies analyze the impact of receipt of unsolicited support versus the base group of receipt of solicited support. Taken together, if available results hold up, they imply that the reinforced collectivistic norm explanation may be applicable to the contrast between unsolicited and solicited support but not to that between unsolicited and no unsolicited support. They further imply that unsolicited support is salubrious relative to solicited support but destructive relative to the combination of solicited support and no received support in collectivistic culture. No received support may have to be much more protective relative to unsolicited support so that its combination with solicited support can cover the relative psychological costs of solicited support in comparison with unsolicited support. This speculation

is in line with the often detrimental effect of received (versus no received) support (for reviews see Barrera 1986; Thoits 2011; Turner and Turner 2013; Uchino 2004, 2009). Future research is needed to investigate these tentative implications and speculations by measuring the trichotomized typology of social support (i.e., unsolicited support, solicited support, and no received support) in one single study and particularly examining the health effect of no received support relative to solicited as well as unsolicited support.

Second, this present study and the two prior studies in collectivistic culture measure different forms of unsolicited support. Chentsova-Dutton (2012) asks volunteer participants questions on unsolicited support in general, and Mojaverian and Kim (2012) measure unsolicited advice on mathematical questions. Unsolicited job leads, the focus of this present study, may be more likely to be interpreted negatively by recipients to the extent that they can elicit negative social comparison behaviors and further depression. In other words, prior evidence on recipients' more positive response to unsolicited support in collectivistic contexts may be inapplicable to unsolicited job leads, one distinctive type of informational support and one big trigger of financial discontent. Future efforts need to compare recipients' subjective evaluation of unsolicited job leads and other types of unsolicited support across cultures.

In addition, this present study and the other two prior studies in collectivistic societies measure different outcomes and use different research designs. This present study examines depression, one major indicator of mental health, using nationally representative data. The other two studies do not analyze health outcomes, and their experimental or volunteer sample research design can be questioned for lack of sample representativeness and limited generalizability. Future examination of the reinforced collectivistic norm explanation requires high-quality data on unsolicited support and health in collectivistic settings.

Theoretically, the inconsistency in results between this present study and the two prior studies may be due to the stronger tendency toward upward social comparison in more collectivistic societies. Upward social comparison is more common in more collectivistic contexts (Chuang and Mallery 1999/2000; Triandis 1995; White and Lehman 2005). Chinese are more collectivistic than Russians, European Americans, and other Asian populations such as Japanese and Koreans (Hsu 2005; Michailova and Worm 2003; Oyserman et al. 2002). Therefore, Chinese may be more likely to make distress-inducing negative social comparison with providers of unsolicited support and interpret such support more negatively than European Americans, Japanese and Koreans as well as Russians, the study population of Chentsova-Dutton (2012). The comparison of Asian Americans as a whole with European Americans in the study of Mojaverian and Kim (2012) may conceal the possibly negative rather than positive interpretation of unsolicited (versus solicited) support among Chinese Americans due to their stronger tendency toward upward social comparison than other groups of Asian Americans. Additional research across different degrees of collectivism is needed to address this theoretical speculation.

In sum, considering that this present study is only the first step to address health impacts of unsolicited support in a collectivistic context, it is certainly inconclusive about whether and how culture-specific interpretations of unsolicited support may shape its health consequences. Future research needs to address the above methodological and theoretical speculations, and systematically examine and compare diverse contents of unsolicited support in the social production of different health outcomes in various individualistic and collectivistic societies.

This study represents only a beginning effort to investigate the role of receipt of unsolicited job leads for depression in collectivistic culture. Its findings should be interpreted with caution due to four data limitations. First, this study uses cross-sectional data. The

application of the IV method shows that the positive associations of receiving unsolicited job leads with depression and financial dissatisfaction are not artifacts of endogeneity bias due to reasons such as reverse causality, omitted variables, measurement error, and sample selectivity. But there is no perfect way of solving the causality issue using cross-sectional data. The IV method is not without limitation. As introduced earlier, the assumption that an IV is uncorrelated with the error term of the model of interest cannot be tested.<sup>10</sup> To obtain stronger causal inference, longitudinal data are needed.

Second, the used data are from a national sample of working-age adults who were currently or previously employed in urban China. Data are not available from the elderly, never-employed adults, and rural residents. The direct depressive effect of receiving unsolicited job leads may be weaker for these three groups of adults. Elderly and never-employed adults are less likely to attract or need job leads. Rural residents have much less access to job leads than urban residents due to the lack of employment opportunities and job information sources in rural China (Knight and Song 2003). The elderly and rural residents may also be under less influence of the distress-inducing mechanisms because of their more preservation and internalization of the collectivistic culture of *guanxi* (Kipnis 1997; Yang 1994). The mediating effect of financial dissatisfaction may also be weaker for these three groups of people. Financial dissatisfaction and its positive association with depression decrease with age (Mirowsky and Ross 2001; Schieman 1999; Shu and Zhu 2008). Adults without employment histories may be less likely to use job leads providers as comparative reference groups. Rural residents feel less financial dissatisfaction than urban residents in China due to their less exposure to high-income reference groups (Shu and Zhu 2008). Future studies need to collect data from respondents of all ages and employment backgrounds in both urban and rural China in order to examine these issues.

Furthermore, the sample has more educated respondents than the 2005 mini-census. The direct and indirect effects of receiving unsolicited job leads found in this present study may be overestimated since the less educated are not only less likely to attract or receive such job leads but also more likely to need or appreciate such job leads as well as other resources from social contacts (Lin and Ao 2008; Song and Lin 2009). Future research needs to collect more representative data in terms of education to address these speculations.

Finally, the retrospective measurement of receiving unsolicited job leads in the past twelve months can have recall errors from two sources. On the one hand, people often receive invisible unsolicited support that they do not recognize or perceive as support (Bolger, Zucherman, and Kessler 2000; Shrout, Herman, and Bolger 2006). On the other hand, depressed people are more likely to recall negative encounters, for example, receipt of distress-inducing unsolicited job leads in this case (Contrada and Baum 2010). The used data may underestimate the occurrence of unsolicited offers of job leads and the mental health impact of such offers in the presence of the first type of recall error but overestimate in the presence of the second type.

While its results must be interpreted with appropriate reserve, this present study is the first effort to systematically examine the health effect of receiving unsolicited support in a collectivistic culture using the only available nationally representative data. This study centers on receipt of unsolicited job leads and illustrates its direct and indirect positive roles for depression in urban China. Collectivistic relational norms do not make Chinese immune to the distress-inducing impact of unsolicited job leads. Unsolicited support represents one promising line of inquiry for us to disentangle the persistent enigma of the mixed health impacts of received support across different cultural contexts (Barrera 1986; Thoits 2011; Turner and Turner 2013; Uchino 2009).

## ENDNOTES

1. Support providers can have two functions as reference groups: the standard of comparison in recipients' self-evaluation and the source of norms for recipients' behaviors and attitudes (Hyman 1968; Kelley 1952). The former, but not the latter, function is applicable to receipt of unsolicited job leads in this study.

2. The research project, "Social Capital: Its Origins and Consequences," targets working-age adults because it is designed to study the effect of social capital (measured as connections with social contacts occupying different jobs) on status attainment on the job market as well as its social causes across societies (Lin and Ao 2008; Lin et al. 2009). It focuses on the 21-64 age group because it also collects data simultaneously from the United States for the purpose of comparative analysis. The full retirement age is 60 for men and 50 for women in China but 65 in the United States. In urban China, respondents of all ages received unsolicited job leads except for those aged 63.

3. Lin et al. (2009) discuss multiple reasons for this low response rate. "We held the sampled respondents rigidly and without replacement. Respondents who could not be contacted and interviewed after the initial attempt and follow-ups were counted as lost. We also found that more and more urban residents in China are becoming less willing to be interviewed, and we made no effort to force their participation" (168). Note that this response rate is similar to those of other national surveys in urban China. The response rates for the Chinese General Social Survey in urban areas in 2005 and 2006, for example, are respectively 41.7 percent and 40.1 percent (Bian and Li 2012).

4. Cases with missing values in dependent variables (depression and financial dissatisfaction) were dropped (N=47). Then, the majority (88 percent) of cases with missing values involve three independent variables: annual family income, occupational status, and work units.

5. The thirteen items were: “I did not feel like eating; my appetite was poor,” “I felt like everything I did was an effort,” “My sleep was restless,” “I felt depressed,” “I felt lonely,” “People are unfriendly,” “I felt sad,” “I could not get going,” “I was bothered by things that usually do not bother me,” “I felt I could not shake off the blues even with the help of my family/friends,” “I felt fearful,” “I had crying spells,” and “I felt that people disliked me.”

6. Cacioppo and colleagues (2006) argue that the loneliness item should be removed from the CES-D scale. Supplemental analyses followed that suggestion and found similar results. Results are available upon request. Also, one reviewer suggests that I discuss the representativeness of the sample in terms of depression. Unfortunately there are no census or other nationally representative data that contain information on depression in China.

7. One reviewer suggests that I discuss the representativeness of the sample in terms of financial dissatisfaction. No census data contain information on financial dissatisfaction. Also it is difficult to find nationally representative data that contain information on financial dissatisfaction and are from the sampled cities for currently or previously employed adults, aged twenty-one to sixty-four. This present study measures financial dissatisfaction on a four-point scale and report an average score of 2.6. One nationally representative data set from the World Values Survey in 2000 measures financial dissatisfaction on a ten-point scale (Brockmann et al. 2009). Financial dissatisfaction has an average score of 5.5 in urban China (Brockmann et al. 2009: Table 4). Both of these two average scores are slightly above the means of the two corresponding scales.



8. Under conditional homoskedasticity, the endogeneity test statistic in `ivreg2` is numerically equal to a Hausman test statistic (Hausman 1978; Hayashi 2000). Detailed results from the endogeneity test are available upon request.
9. Supplemental analysis finds no evidence that gender or socioeconomic status moderates the effect of unsolicited job leads on financial dissatisfaction or the effects of unsolicited job leads and financial dissatisfaction on depression.
10. Even if in the overidentified case (i.e., the use of multiple IVs for one suspected endogenous variables), the overidentification test assumes the exogeneity of at least one IV (Greene 2003).

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Table 1. Summary of Sample Characteristics (N=3,453)

	Mean/ Percent	SD
<i>Dependent Variables</i>		
Depression (CES-D Scale) in the Past Week	5.61	5.94
Financial Satisfaction		
Very Dissatisfied	9.64%	
A Little Dissatisfied	32.67%	
Moderately Satisfied	48.51%	
Very Satisfied	9.18%	
<i>Independent Variables</i>		
Receipt of Unsolicited Job Leads in the Past Twelve Months	17.52%	
Age	39.37	10.31
Gender (1=Female)	50.45%	
Work Location (1=Municipalities/Provincial Capital Cities)	18.40%	
Marital Status (1=Married)	82.97%	
Social Participation (Number of Memberships in Voluntary Organizations)	.16	.55
Political Capital (1=Communist Party Member)	21.87%	
Education	14.59	3.58
Middle School or Lower	29.26%	
High School Diploma	25.22%	
Associate College Degree	26.51%	
College Degree or Higher	19.01%	
Full-Time Employment (1=Full-Time Employed)	77.12%	
Duration of Lack of Full-Time Employment (Years)	1.49	3.73
Work Units (1=State-Owned) (Current/Last Job)	53.25%	
Occupational Socioeconomic Status (ISEI) (Current/Last Job)	47.30	14.66
Annual Family Income		
Less Than 12,500 (Chinese Yuan)	30.42%	
12,500-22,500	33.19%	
22,500-37,500	20.65%	
37,500 and More	15.74%	
Self-Reported Health Limitation		
Never	72.52%	
Seldom	17.61%	
Occasionally	7.59%	
Frequently	2.29%	
<i>Instrumental Variable (IV)</i>		
Receipt of Unsolicited Job Leads When Starting the Current/Last Job	22.85%	

Note: ISEI= the International Socioeconomic Index (Ganzeboom, De Graaf, and Treiman 1992).

Table 2. Parameter Estimates of the Path Analysis Model of Depression, Financial Dissatisfaction, Receipt of Unsolicited Job Leads, and Control Variables (N=3,453)

Independent Variables	Dependent Variables	
	Financial Dissatisfaction	Depression
Age	-.010*** (.002)	.000 (.002)
Gender (1=Female)	-.161*** (.039)	.181*** (.033)
Residential Location (Reference: Municipalities\ Provincial Capital Cities)	.157*** (.049)	.084* (.041)
Married	-.156** (.055)	-.048 (.048)
Social Participation (Number of Memberships in Voluntary Organizations)	-.036 (.036)	.052 (.028)
Education (Reference: Middle School or Lower)		
High School Diploma	.010 (.053)	-.024 (.045)
Associate College Degree	-.077 (.059)	.002 (.053)
College Degree or Higher	-.080 (.069)	-.011 (.061)
Political Capital (1=Communist Party Member)	-.049 (.051)	.009 (.043)
Full-Time Employment	.060 (.070)	-.053 (.054)
Duration of Lack of Full-Time Employment (Years)	.009 (.008)	-.003 (.006)
Sectors of Work Units (1=State-Owned)	.015 (.043)	.029 (.037)
Occupational Socioeconomic Status (ISEI) (Current/Last Job)	-.002 (.002)	-.001 (.001)
Annual Family Income (log)	-.506*** (.030)	-.024 (.025)



Self-Reported Health Limitation	.098*** (.027)	.310*** (.022)
Financial Dissatisfaction		.141*** (.018)
Receipt of Unsolicited Job Leads	.161*** (.048)	.145*** (.043)
Intercept		2.060*** (.247)
Cut1	-4.077*** (.306)	
Cut2	-5.294*** (.309)	
Cut3	-6.943*** (.314)	
Adjusted R-Squared/Pseudo R-Squared	.156	.104

*Notes:* ISEI= the International Socioeconomic Index (Ganzeboom, De Graaf, and Treiman 1992); standard errors in parentheses; \*  $p \leq .05$ ; \*\*  $p \leq .01$ ; \*\*\*  $p \leq .001$  (two-tailed test)

Figure 1. The Conceptual Path Analysis Model of Depression, Financial Dissatisfaction, and Receipt of Unsolicited Job Leads

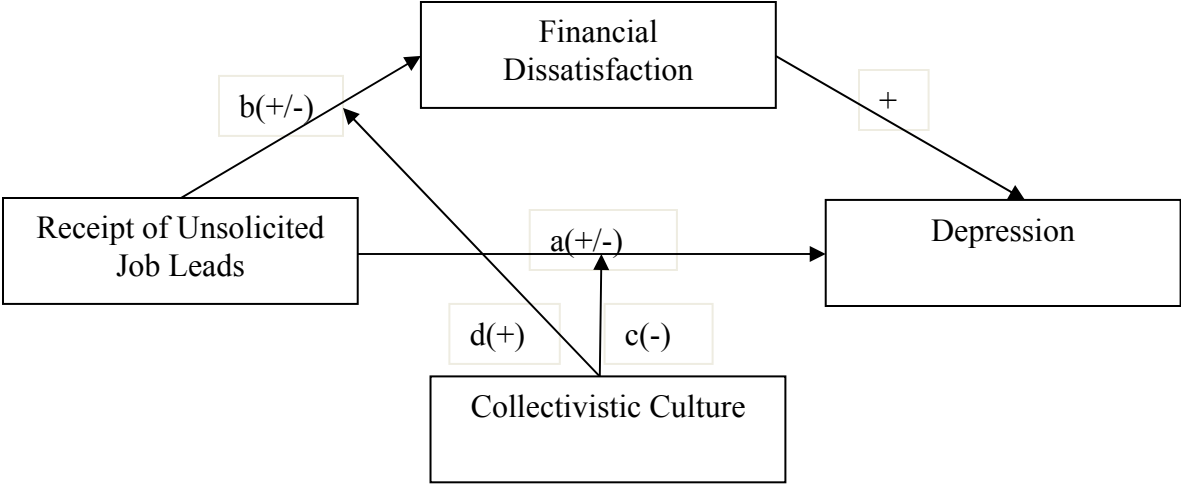
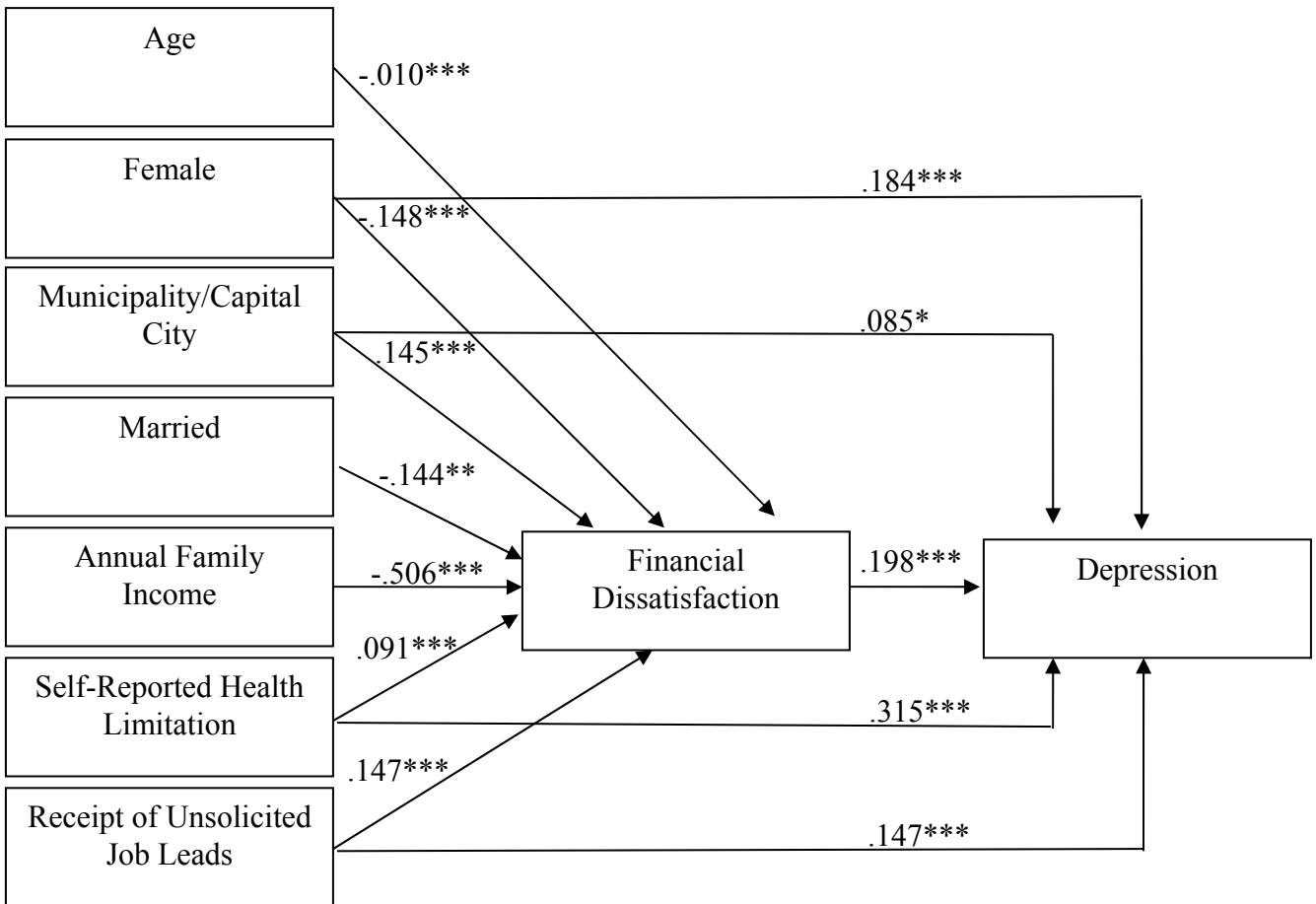


Figure 2. The Path Analysis Model of Depression, Financial Dissatisfaction, Receipt of Unsolicited Job Leads, and Control Variables (N=3,453)



Notes: Standardized parameter estimates of significant paths (fully standardized parameter estimates for continuous variables and Y-standardized parameter estimates for noncontinuous variables); \*  $p \leq .05$ ; \*\*  $p \leq .01$ ; \*\*\*  $p \leq .001$  (two-tailed test).