

ECONOMIC DISTRESS, SOCIAL SUPPORT, AND DEPRESSION IN TURKEYAyşe Yetiş BAYRAKTAR¹, Işık A. AYTAÇ², Bruce H. RANKIN³¹Altınbaş University, School of Economics, Administrative and Social Sciences, Department of Sociology, Istanbul.²Boğaziçi University, The Faculty of Art and Sciences, Department of Sociology, Istanbul.³Koç University, College of Social Science and Humanitis, Department of Sociology, Istanbul.
ayse.yetis@altinbas.edu.tr , iaytac@boun.edu.tr, brankin@ku.edu.tr**Abstract**

Using data from a sample of 1100 married couples residing in urban Turkey, we examine the effects of economic hardship, household economic strain, and social support on depressive symptoms. Since previous literature showed gender differences in these relationships, the analysis is conducted separately on husbands and wives. Controlling for socio-demographic characteristics, we find that job loss is associated with higher depressive symptoms as measured by a modified CES-D index of depression, the effects of which are largely mediated by the resulting economic strain on the household. Contrary to much of the previous literature showing social support to promote better mental health outcomes, we found that the effect of financial and in-kind support depends the amount received relative to need. Those men receiving insufficient support have significantly higher CES-D scores, even higher than those not receiving any support when needed. There is no significant association between receipt of financial support and female CES-D scores. For both men and women, receipt of in-kind support is associated with significantly higher CES-D scores. The results are discussed in light of previous literature linking economic distress, social support and mental health outcomes.

Keywords: Turkey, Global economic crisis, Economic distress, Economic hardship, Social support, CES-D.

EKONOMİK SIKINTI, SOSYAL DESTEK VE DEPRESYON: TÜRKİYE ÖRNEĞİ**Özet**

Bu çalışmada, kentsel Türkiye'de yaşayan 1100 evli çiftten toplanan bir örnekleme, ekonomik zorluk, hanede yaşanan ekonomik sıkıntı, ve sosyal desteğin depresyon ile olan ilişkisi incelenmektedir. Bu konuda yapılmış önceki çalışmalar cinsiyet farklılıkları ortaya koyduğu için, analizler her iki eş için de ayrı olarak yapılmıştır. Çoklu regresyon analizleri sonucunda, hanenin sosyo-demografik özelliklerin etkilerinden arındırıldığında, iş kaybının, CES-D depresyon indeksi ile ölçülen, depresyon üzerinde kuvvetli pozitif etkisi olduğu görülmüştür. Bu pozitif etki, dolaylı olarak hanede yaşanan ekonomik sıkıntıdan kaynaklanmaktadır. Daha önceki çalışmalarda ortaya konduğunun aksine, sosyal destek almanın ruh sağlığı açısından pozitif bir etkisi görülmemiştir. Nakdi ve aynı sosyal desteğin etkisi, ihtiyaca karşılık ne kadar alınabildiği ile bağlantılıdır. Yetersiz nakdi destek aldığı belirten erkeklerin depresyon puanları, ihtiyacı olduğu halde yardım alamamış erkeklere göre istatistiksel olarak daha yüksektir. Kadınlardaysa nakdi desteğin depresyon üzerinde bir etkisi görülmemiştir. Aynı desteğin hem erkeklerde hem de kadınlarda kuvvetli pozitif etkisi görülmüştür. Bulgular ekonomik sıkıntı, sosyal destek ve ruh sağlığını ilişkilendiren literatürün önceki bulguları ışığında değerlendirilmiştir.

Anahtar Kelimeler: Türkiye, Ekonomik kriz, Ekonomik sıkıntı, Ekonomik zorluk, Sosyal destek, Depresyon.

1. INTRODUCTION

The effects of economic hardship and strain on workers' mental health have been studied extensively: involuntary job loss and extended unemployment periods are worse for mental health outcomes (Daly & Delaney, 2013; Jefferis et al., 2011; Mandal, Ayyagari, & Gallo, 2011; Theodossiou, 1998). Others who have studied the effects of social support on mental health are in less agreement. While the degree of social support is found to reduce the negative effects of economic strain on mental health (Kawachi & Berkman, 2001; Schulz et al., 2006; Thoits, 1986; Vinokur, Price, & Caplan, 1996); emotional support in the case of economic hardship (e.g. job loss, extended unemployment) is detrimental to mental health because it decreases the recipients' self-esteem and efficacy (Bolger, Zuckerman, & Kessler, 2000).

Turkey's recent economic history is influenced by many financial crises. The global financial crisis of 2008-2009 has also affected the Turkish economy, where unemployment rate increased from 10.6% to 13.6% from December 2007 between December 2008 (Turkstat 2009). Şenses (2003) argues that the traditional forms of social support from extended family that Turkish families have weakened, and economic crises such as the ones in 2001 and 2008-2009 can easily jeopardize economic well-being of families and family dynamics (Aytaç and Rankin, 2009). Thus, the focus of this paper is financial hardship, economic strain and social support. We investigate how presence of economic hardship and strain is related to depressive symptoms, as measured by the Center for Epidemiologic Studies Depression Scale (CES-D) (Radloff, 1977), experienced by urban-dwelling adults in Turkey, while also investigating the impact of different forms and levels of social support.

2. LITERATURE REVIEW

2.1 Economic Hardship And Mental Health

Experiencing economic hardship in the form of involuntary job loss, as well as extended unemployment periods, is associated with increased risk of depression and other mental health problems (Butterworth, Rodgers, & Windsor, 2009; Daly & Delaney, 2013; Green, 2011; Jefferis et al., 2011; Schmitz, 2011; Theodossiou, 1998; Thomas, Benzeval, & Stansfeld, 2005; Whooley et al., 2002). In general, job loss and involuntary layoffs are associated with more depressive symptoms, as well as strained relationships with family and friends.

The negative effect of job loss on individual mental health seems to occur mainly because of the loss of perceived self-control and self-efficacy (Berchick, Gallo, Maralani, & Kasl, 2012), suggesting that the experience of unemployment not only affects individuals' financial well being, but also their social status within the society and in their family relationships; as well as their mental well being. Using Australian panel data, scholars (Butterworth et al., 2009) conclude that those individuals with recent hardship experiences at time 2 were at a higher risk of current depression than those who did not experience hardship, or those who only reported financial difficulty at time 1, suggesting a short-term effect of economic hardship on depression. Using the same dataset, comparison of the self-rated physical and mental health, as measured by the Goldberg Depression and Anxiety Scale, of adults aged 60 to 65 prior to and during the 2008-9 global financial crisis conclude that those who report being under stress before the crisis scored higher on the depression scale in both waves, in addition to reporting worse anxiety symptoms (Sargent-Cox, Butterworth, & Anstey, 2011).

In another study on Australia, Green (2011) uses the Household, Income and Labour Dynamics in Australia Survey to investigate the effects of employability, defined by the ability to find and keep a job, on life satisfaction and mental health. On the one hand, unemployment is negatively correlated with life satisfaction, as well as negative effects of probability of job loss and reemployment difficulty. On the other hand, perceived employability in case of unemployment is positively associated with life satisfaction. These findings show that unemployment does not only create distress to the individual *per se*, but the perception of employability is a significant factor in the relationship between unemployment and mental health. These three studies from Australia suggest that how economic hardship and strain influence vulnerability to, and likelihood of depression may in fact depend on where individuals are on their life course. The experience of unemployment and related economic strain is very much influenced by age and prior experiences of economic hardship and strain (Aytaç & Rankin, 2008; Vinokur et al., 1996). Economic strain provides context for economic hardship, defined by job loss and unemployment duration. In addition, perceptions of one's employability also play an important part in the relationship between unemployment and mental health.

Researchers have also found that involuntary job loss due to layoffs is associated with significantly worse depressive symptoms (Burgard, Brand, & House, 2009; Daly & Delaney, 2013; Jefferis et al., 2011; Schmitz, 2011). Analysis of white- and blue-collar workers' experiences with job loss, as well as consecutive reemployment in the U.S. indicates that while involuntary job loss due to workplace closure increases the odds of reporting a decline in physical health (Strully, 2009). In addition to the adverse effects of job churning on workers with and without previous health conditions, there is also no difference in how job churning affects white- and blue-collar workers' health (Strully, 2009). This implies that an unemployed person feels the burden of unemployment whether they are white- or blue-collar workers. Artazcoz and others' (2004) article on the effects of gender, unemployment and mental health start with previous research that shows unemployment is more detrimental for men's mental health compared to women (Ensminger & Celentano, 1990; McKee-Ryan, Song, Wanberg, & Kinicki, 2005). This is especially important because it implies that there are gender differences among how mental health of white collar workers are affected by unemployment.

Although not directly focusing on gender differences in mental health responses to economic hardship, there is ample evidence of gender differences in mental health outcomes. It is well established, based on studies from around the world, that women are more prone to mental illness than men (Cho, Nam, & Suh, 1998; Gove, 1984; Inaba et al., 2005; Kendler, Thornton, & Prescott, 2001; Simon, 2002). There are also gender differences in the types of mental health disorders individuals experience (Hill & Needham, 2013). In addition, others find that women and men report vulnerability to different life events (Kendler et al., 2001). Unemployment affects men more than women, due to socially constructed traditional gender roles that stigmatize unemployed men as failed breadwinners (Ensminger & Celentano, 1990; McKee-Ryan et al., 2005; Theodossiou, 1998). In sum, literature indicates that involuntary job loss due to plant closures or layoffs is detrimental to workers' physical and mental health. Involuntary job loss and job insecurity play an important role not only in affecting individual health, but also influence their family and community relationships, causing them to question their sense of control and self-worth. In what follows, we turn to literature that sheds light on how social support and mental health outcomes are related.

2.2 The Relationship Between Social Support And Mental Health Outcomes

The second set of literature focuses on how receiving social support affects mental health, a literature for which there is less of a consensus on the relationship. On the one hand, social support is regarded as a coping mechanism that protects the individual against environmental stressors (Dalgard, Bjork, & Tambs, 1995; Kawachi & Berkman, 2001; Pearlin, Menaghan, Lieberman, & Mullan, 1981), while it is regarded as a threat to self-esteem on the other (Artazcoz, Benach, Borrell, & Cortès, 2004; Bolger et al., 2000). Cohen and Syme (1985) report the positive effect of social support on disease recovery and maintenance of health. Using non-representative urban data from Turkey, Sümer, Solak and Harma (2013) report a moderating effect of social support and perceived employability on life satisfaction, as well as a moderating effect of perceived employability on depression between employed and unemployed individuals. Overall, they find a positive moderating effect of social support and perceived employability on adult mental health.

There is also evidence that social support can be a threat to self-esteem and competence, thereby increasing stress levels and the likelihood of depression. Research shows that receiving emotional support increases levels of stress by lowering self-esteem (Artazcoz et al., 2004; Bolger et al., 2000). Thoits (1995) discusses the costs of social relationships and provision of social support, suggesting that the presence of social support may in fact be a cause of chronic stress. Although almost all of the relevant literature on social support and mental health pertains to emotional support, we argue that these findings may also apply to material support. As we have discussed earlier, economic hardship and strain influence peoples' mental health outcomes through decreasing their sense of control, self-worth and self-esteem. At the same time, receipt of material support may put more strain on their self-worth because it is a tangible evidence of their dependency (Dalgard et al., 2006).

Sümer, Solak and Harma (2013) also find that unemployed individuals perceive that they do not get enough support from their social networks, contrary to common belief that the society has closely knit social ties and support networks. Moreover, unemployed men perceive lower levels of social support from friends, family and significant others compared to unemployed women, whereas no statistically significant difference between employed men and women is found. This gender difference points out to the traditional gender norms that govern social life in Turkey, which is shared by different ethnic groups. Female labor force participation rate in Turkey is very low compared to other OECD countries and EU standards. Unemployed men may in fact feel more distressed when they lose a job, as well as feeling inadequate in fulfilling expected gender roles which in turn may influence their perception of support from their social networks (Ilkcaracan, 2012).

Sufficiency of social support is another important factor to consider in addition to receipt of social support. Introducing sufficiency of support adds self-esteem and efficacy issues to measurement of depression, because needing and receiving sufficient support does not evoke the same feelings of inadequacy as needing and not receiving any or enough support (Cramer, 2000; Cramer, Henderson, & Scott, 1996; High & Steuber, 2014; Lawrence et al., 2008). Cramer, Henderson and Scott (1996) approach the issue of differentiating receipt and sufficiency of social support by questioning how mental health and perception of social support is related. Their findings suggest two possible explanations as to how those individuals

experiencing low-esteem and depressive issues prefer to engage in relationships that are less supportive, and distressed people may not be given or may be rejected the support they need.

These sets of literature on the relationship between social support and mental health, as well as gender differences in the experiences of economic hardship, strain and receipt of social support, highlight both the detrimental and positive effects of social support on depressive symptoms and the gender differences in depressive symptoms. The economic hardship literature consistently finds negative effects of unemployment on the mental health of unemployed workers, except when workers are reemployed after a short period of unemployment. We also see that while social support usually acts as a coping mechanism for mental health, there are cases where the link between unemployment distress, social support, and mental health is not so clear. Moreover, the gender literature consistently finds differences with respect to mental health; while some find overall gender differences, others find that these stressors are gender-specific. Our research examines the relationship between adult depressive symptoms (CES-D), economic hardship, and receipt and sufficiency of social support. We test whether unemployment of the husband influences his wife's depressive symptomology as well as his own, in addition to investigating whether the sufficiency of social support (both financial and in-kind) has any effect on both partners' depressive symptomology.

3. HYPOTHESES

H1. Both male and female CES-D scores are positively correlated with male job loss, unemployment duration, and household economic strain.

H2. Failure to receive any financial or in-kind support when needed, and receipt of insufficient financial or in-kind support is positively associated with CES-D scores for both men and women.

H3. Failure to receive any or receiving insufficient in-kind support is associated with higher CES-D scores for women than men.

H4. Receipt of sufficient financial or in-kind support that cover needs is positively associated with CES-D scores for men than women.

4. DATA AND METHODS

4.1 Data

This paper analyzes the first wave of a dataset that was collected in 2011 and 2014. The 2011 dataset includes 1100 urban married (through civil marriage) couple households, who have been married for at least two years, in which both husband and wife were interviewed.. One household was dropped out of the analysis due to incomplete questionnaire, and the final sample size in the analysis is therefore, 1099. The data was collected from married couples who fit the above mentioned criteria to measure the effects of the economic hardship and strain on family dynamics We have chosen to focus on married couples to measure the effects of spousal economic distress (job loss and long term unemployment) on the family dynamics, and socio-emotional well-being of the other spouse. The sample was designed to be nationally representative and used a multi-stage systematic random sampling at the district, neighborhood and street level to ensure representativeness across rural and urban location, population sizes, regions, and

socioeconomic levels. Households at the street level were selected using cluster sampling, due to the lack of a sampling frame in Turkey.

4.2 Variables

4.2.1 Dependent Variable

The dependent variable in this study is the Center for Epidemiologic Studies Depression Scale (CES-D) (Radloff, 1977), and has been widely used in studies of depression. The CES-D is a self-report questionnaire with a 20-item scale that is designed to measure depression in the general population. It measures the current level of depressive symptoms with emphasis on depressed mood. The scale has been translated into Turkish, and its psychometric characteristics have been confirmed for use in that societal context (Tatar & Saltukoglu, 2010). The Cronbach's alpha for the CES-D scale is .90 for women and .89 for men.

4.2.2 Independent Variables

The three main concepts of interest are economic hardship, economic strain and social support. *Economic hardship* is measured with two variables—husband's job loss and unemployment duration. The job loss indicator is a three-response categorical variable: 1) lost job after the 2008 crisis (roughly two and a half years prior to the interview) and is still unemployed, and 2) lost job after the 2008 crisis and is reemployed at the time of the interview. No job loss is the reference category. Unemployment duration is a continuous variable measuring how many months they were unemployed during that period. We use the job loss indicator and unemployment duration of men only because female labor force participation in urban Turkey is low. Our data shows that only 10% of women were employed in 2008 (before the crisis) compared to 80% of men.

4.2.3 Economic Strain

We measure economic strain experienced in the household at two time points using retrospective questions regarding strain immediately before the 2008 crisis and in the two and a half years following it. Household *economic strain* is measured as a construct using four indicators: 1) Difficulty paying bills (1 = no, 2 = some, and 3 = a lot); 2) financial circumstances at the end of the month (1 = some money left after covering monthly expenses, 2 = only had enough money to cover monthly expenses, and 3 = were not able to cover monthly expenses); and 3) how often household adults reduced food consumption (responses ranged from 1 = never through 5 = always), and how often household children's food consumption was reduced based on the same response categories. For each household economic strain measure, we took the average of husband and wife responses. Since the items are scaled differently, they were first standardized and then summed, and then restandardized ($\alpha=.86$).

4.2.4 Social Support

We ask whether the households needed any support, and whether the amount received (if any; from parents, children, siblings, other relatives, neighbors, and friends) was sufficient. The questions do not ask

whether the respondents receive any social support from the government. The different forms of support suggested in the questionnaire are financial support (whether the respondent received a loan or an outright monetary support), in-kind support (whether the respondent received any support in terms of food, clothing or other household needs), job support (whether any of the individuals listed above helped the respondent find a job, or hired them), emotional support (whether any of the individuals listed above shared the respondents emotional burdens by verbal communication), and childcare and household support (whether the respondent received any support regarding childcare, household chores, and shopping). We chose financial support and in-kind support as our measures of social support. We use a set of four-response categorical variable to measure the need for, receipt of and sufficiency of these two types of social support—*financial support* and *in-kind support*--as reported by husbands and wives separately. The dummies indicate: 1) needed support but could not receive any, 2) support received was not enough, and 3) received support was enough. No support needed and none received is the reference category.

4.2.5 Control Variables

Socio-demographic variables include respondent's age, education, Kurdish ethnicity¹ (=1, 0=Turkish), whether the family pays rent(=1, 0=homeowner), and the natural logarithm of total household income. In the questionnaire, level of education is asked through a self-report of last completed educational institution. Using these self-reports, we created to different measures of education of husbands and wives. We use four education indicators for husbands' education; completion of primary school (reference category) completion of junior high school, high school and college. For wives, education is measured using only three indicators; completion of primary school (reference category), completion of junior high school and completion of high school or higher. We chose to combine high school and college categories for women because only 4% of the women in our sample are college graduates. Household size is also controlled for. The variable household size does not only include the members of the nuclear family, but all individuals who live in the household, as based on reports of the household head.

5. FINDINGS

Table 1 shows descriptive statistics for all variables broken down by gender. On average, men and women in our sample have similar CES-D scores (the mean difference is not statistically significant). The correlation coefficient between men's and women's depression levels is 0.64, is significant at $\alpha=0.05$. Of the men, 84% were employed at the time of the interview with no job loss between 2008-2011, whereas 13% were reemployed and 3% did not find a job after losing a job. Less than 20% of the men in the sample had lost their jobs following the 2008 financial crisis. The average unemployment duration for those who lost their jobs were five and a half months ($n=149$). The average age for men is 41, and for women, it is 37. 13% of our sample identifies as Kurdish. The average household size for households whose head identifies as Kurdish is 5.09 ($SD=1.95$), and that for household whose head identifies as non-Kurdish is 3.67 ($SD=1.43$). The difference is statistically significant ($\alpha=0.001$).

¹ The questionnaire item is a closed-ended question which asks to check Turkish/Kurdish or Other (listing the actual ethnic group). We have added the Other category to the Turkish category, as none of the answers pertained to the Kurdish ethnicity.

Variables	Males			Females		
	Mean	SD	Range	Mean	SD	Range
Depression score	14.77	9.03	0-49	15.13	9.35	0-56
Whether depressed	.40		0-1	.43		0-1
Socio-demographic characteristics						
Age	41.20	10.11	21-75	37.53	9.92	18-60
Primary school education or less	.46	-	0-1	.60	-	0-1
Junior high school education	.14	-	0-1	.11	-	0-1
High school education	.31	-	0-1	.24	-	0-1
College education	.09	-	0-1	.04	-	0-1
Kurdish ethnicity	.13	-	0-1	.12	-	0-1
Pays rent	.37	-	0-1	-	-	-
Ln (Household income)	7.17	.60	4.25-9.39	-	-	-
Economic hardship and economic strain						
<i>Job loss indicator</i>						
No job loss	.84	-	0-1			
Lost job, still unemployed	.03	-	0-1			
Lost job, reemployed	.13	-	0-1			
Unemployment duration (males)	5.55	6.47	0-24			
Economic strain before crisis ^a	0	1	-1.29-3.59			
Economic strain after crisis	0	1	-1.44-3.17			
Sufficiency of social support						
<i>Financial Support</i>						
Not needed	.51		0-1	.50	-	0-1
Needed, not received	.28		0-1	.26	-	0-1
Not enough received	.10		0-1	.11	-	0-1
Enough received	.12		0-1	.13	-	0-1
<i>In-kind Support</i>						
Not needed	.70		0-1	.70	-	0-1
Needed, not received	.23		0-1	.22	-	0-1
Not enough received	.04		0-1	.05	-	0-1
Enough received	.03		0-1	.03	-	0-1

These are averages for the household obtained from the husbands and wives.

Table 1. Sample characteristics.

Table 2 presents mean CES-D scores for all categories of our independent variables. We test for group differences in CES-D means using ANOVA and t-tests. CES-D mean differences and levels of significance are only reported in relation to the reference group labeled as such.

Variables	Male		Female	
	n	CESD Mean	n	CESD Mean
Age groups				
20 or younger (ref.)	141	12.51	285	13.32
30-39	363	14.69	355	15.63*
40-49	342	14.95*	289	16.52***
50 +	253	15.91**	170	14.76
Education categories				
Primary school or less (ref.)	513	16.12	661	15.75
Junior high school	152	14.42	126	13.55*
High school	335	13.70**	-	-
College	99	11.91***	-	-
High school or above (for women only)	-	-	310	14.35
Kurdish				
Yes	138	18.01***	86	17.36*
No	961	14.31	1013	14.94
Pays rent				
Yes	406	15.39*	407	16.31**
No	693	14.40	693	14.44
Income quintiles				
1(ref.)	217	18.85	217	18.25
2	240	14.71***	240	15.52***
3	259	13.65***	259	14.08***
4	164	13.15***	165	14.51***
5	201	12.62***	202	12.98***
Whether husband lost job indicator				
No job loss (ref.)	774	13.71	774	14.27
Lost job; still unemployed	29	22.07***	29	21.34***
Lost job; reemployed	120	16.98***	120	17.48**
Husband unemployment duration				
0 months (ref.)	869	13.98	869	14.38
1-6 months	75	15.23	75	14.47
7-12 months	81	18.32***	81	18.85***
13-18 months	38	19.32**	38	20.66***
19-24 months	36	20.25***	36	20.38**
Economic strain before crisis				
Low (ref.)	369	10.73	369	11.17
Medium	367	14.16***	367	14.96***
High	363	19.49***	363	19.33***

Economic strain after crisis				
Low	367	10.38	367	10.77
Medium	368	13.96***	368	14.22***
High	363	20.04***	363	20.46***
Financial support categories				
No support needed (ref.)	547	11.86	554	12.61
Support needed, not received	281	17.54***	304	17.18***
Not enough support	119	20.55***	104	21.28***
Enough support	148	15.58***	136	16.05***
In-kind support categories				
No support needed (ref.)	766	12.49	763	12.93
Support needed, not received	244	19.10***	257	19.29***
Not enough support	55	24.89***	44	25.16***
Enough support	32	18.56***	34	19.97***

Notes: *** p< .001 ** p< .01, * p< .05

Table 2. Distribution of CES-D and percent depressed by socio-demographic characteristics, economic distress and social support.

5.1 Factors Affecting Levels of Depression

Tables 3 and 4 investigate the relationship between CES-D scores and our independent variables for males and females, respectively, using stepwise ordinary least squares regression. Variables are entered in three blocks: Socio-demographics, economic hardship and strain, and the sufficiency of social support.

The Men In model 1 of Table 3, we regress male CES-D scores on demographic measures. This initial analysis reveals that CES-D scores are positively associated with age, Kurdish ethnic identity, and homeownership. CES-D scores are negatively associated with household income.

In model 2, we introduce job loss categories and unemployment duration. Losing a job after the 2008 crisis and remaining unemployed, reemployment after job loss, as well as unemployment duration is associated with higher CES-D scores, compared to those who have not lost their jobs. Model 3 adds economic strain to the regression model. Including economic strain renders reemployed after job loss category and unemployment duration non-significant while the detrimental effect of remaining unemployed is significant throughout the remaining models. The two economic strain measures are positively significant. In models 4 and 5, we test the effect of receipt and sufficiency of received financial and in-kind support, respectively. Failure to receive any financial support when needed, as well as not receiving sufficient financial support is positively associated with CES-D scores. Receiving sufficient financial support to cover needs is not statistically significant. For in-kind support, not receiving any support when needed, and receiving insufficient as well as sufficient support, are positively and significantly associated with CES-D scores. In this model, we also see that the previously non-significant household size becomes, and remains significant, and is negatively associated with men's depression scores.

	1	2	3	4	5
Socio-demographic characteristics					
Husband age	.13*** (.03)	.15*** (.04)	.07** (.04)	.07** (.04)	.08** (.04)
Husband-junior HS graduate	-.98 (.93)	-.43 (.99)	-.41 (.92)	-.49 (.92)	-.45 (.91)
Husband-HS graduate	-.88 (.73)	-.20 (.80)	.85 (.76)	.73 (.77)	.78 (.75)
Husband-college graduate	-1.17 (1.09)	-1.49 (1.08)	.26 (1.02)	.39 (1.01)	.25 (1.00)
Husband-Kurdish ethnicity	3.52*** (1.01)	3.40*** (1.09)	2.33** (1.02)	2.10** (1.03)	1.79* (1.01)
Pays rent	1.71*** (.63)	1.59** (.67)	.19 (.63)	.17 (.63)	-.01 (.62)
Natural logarithm of household income	-3.74*** (.55)	-2.62*** (.61)	.00 (.60)	.06 (.61)	.31 (.60)
Economic hardship and strain					
Lost job-currently unemployed	-	5.78*** (2.05)	4.19** (1.83)	3.79** (1.82)	4.36** (1.83)
Lost job-currently reemployed	-	2.79*** (1.02)	1.62 (1.03)	1.35 (1.04)	1.03 (1.03)
Husband unemployment duration	-	.17** (.08)	.03 (.07)	.03 (.07)	.01 (.07)
Economic strain before crisis (z-score)	-	-	3.05*** (.68)	2.63*** (.69)	2.55*** (.65)
Economic strain after crisis (z-score)	-	-	1.72*** (.65)	1.68*** (.64)	1.41** (.63)
Sufficiency of social support					
<i>Financial support</i>					
Needed, not received	-	-	-	1.61* (.88)	-
Not enough received	-	-	-	2.52** (1.21)	-
Enough received	-	-	-	1.27 (.97)	-
<i>In-kind support</i>					
Needed, not received	-	-	-	-	2.93*** (.83)
Not enough received	-	-	-	-	7.61*** (1.79)
Enough received	-	-	-	-	3.84* (2.13)
Constant	34.94***	25.15***	10.00**	8.89**	6.86*
Observations	1,082	911	911	908	909
R-squared	.10	.12	.24	.25	.27

Notes: *** p < .001, ** p < .01, * p < .05

^a reference category: no job loss

^b reference category: no support needed

Table 3. OLS regression models for male CES-D by socio-demographic characteristics, economic distress and social support. Figures are unstandardized b-coefficients and standard errors (in parenthesis).

Introducing economic strain into the model reduces the hardship effect, as well as the effect of household income, which suggests that the effects of job loss and periods of unemployment on depression are partially mediated by the economic strain. Nevertheless, the mental distress associated with unemployment is not easily remedied by taking economic strain and social support into consideration.

Adding social support, we see that not receiving any when needed, as well as receiving insufficient financial or in-kind support is significantly associated with higher CES-D scores. Receipt of sufficient financial support that covers individuals' needs is not statistically associated with CES-D scores, while there is a significantly positive association between receiving in-kind support that cover individual needs and CES-D scores. By its nature, receiving in-kind support may be psychologically more stressful than receiving financial support, which can be repaid after the hardship or strain, has passed. The recipient may in fact be more humiliated, feel ashamed or incompetent for receiving in-kind support, because in-kind support is not usually repaid.

The Women The same analysis is provided for women in Table 4. Results in model 1 similarly reveal statistical significance. Being older, having a Kurdish ethnicity, and paying rent are positively associated, while household income is negatively associated with CES-D scores. In model 2, while still significant, husband's job loss and unemployment duration has less of an effect on wives' CES-D scores than husbands' own. The magnitude of unemployment duration is higher for women compared to men, and these are only significant in the second model. Similar to men, the effect of household size becomes significant, and is negatively associated with depression scores, in model 3. Adding the economic strain measures renders reemployment indicator and unemployment duration non-significant. However, the introduction of the sufficiency of financial and in-kind support measures in models 4 and 5 reveals a different pattern for women than men. In model 4 of Table 4, none of the financial support measures are statistically significant. Model 5 indicates that not receiving any in-kind support when needed, and receiving insufficient in-kind support is positively associated with CES-D scores. Receiving sufficient in-kind support to cover needs is not statistically significant. Similar to the results in Table 3, magnitudes of the effects for in-kind support measures are larger than those for financial support.

	1	2	3	4	5
<i>Socio-demographic characteristics</i>					
Wife age	0.16*** (.03)	0.19*** (.04)	0.10*** (.04)	0.10** (.04)	0.10*** (.04)
Wife-junior HS graduate	-1.07 (1.06)	-1.76 (1.15)	-1.22 (1.12)	-1.28 (1.12)	-1.31 (1.14)
Wife-HS or college graduate	1.21 (.83)	1.02 (.86)	1.75** (.79)	1.70** (.79)	1.76** (.79)
Wife-Kurdish ethnicity	1.50 (1.36)	1.99 (1.50)	1.21 (1.35)	1.21 (1.36)	0.86 (1.31)
Pays rent	2.70*** (.68)	2.43*** (.74)	0.85 (.68)	0.82 (.68)	0.55 (.67)
Natural logarithm of household income	-4.03*** (.56)	-2.72*** (.64)	0.41 (.65)	0.48 (.66)	0.87 (.66)

Economic hardship and strain					
Lost job-currently unemployed	-	5.67*** (2.18)	3.75* (1.96)	3.31* (1.94)	2.77 (1.98)
Lost job-currently reemployed	-	1.95* (1.08)	0.58 (1.12)	0.56 (1.12)	0.00 (1.15)
Husband unemployment duration	-	0.25*** (.09)	0.09 (.08)	0.09 (.08)	0.07 (.08)
Economic strain before crisis (z-score)	-	-	3.80*** (.91)	3.46*** (.94)	3.44*** (.88)
Economic strain after crisis (z-score)	-	-	1.39 (.85)	1.50* (.85)	0.90 (.85)
Sufficiency of social support					
<i>Financial support</i>					
Needed, not received	-	-	-	0.02 (.90)	-
Not enough received	-	-	-	2.67** (1.33)	-
Enough received	-	-	-	1.33 (1.17)	-
<i>In-kind support</i>					
Needed, not received	-	-	-	-	3.24*** (.95)
Not enough received	-	-	-	-	8.24*** (2.24)
Enough received	-	-	-	-	2.97 (2.46)
Constant	36.32***	25.01***	6.82	6.09	2.64
Observations	1,082	911	911	911	911
R-squared	.07	.10	.24	.24	.26

Notes: *** p < .001, ** p < .01, * p < .05

^a reference category: no job loss

^b reference category: no support needed

Table 4. OLS regression models for female CES-D by socio-demographic characteristics, economic distress and social support. Figures are unstandardized b-coefficients and standard errors (in parenthesis).

Contrasting findings in Tables 3 and 4 with regard to the differential effects of financial and in-kind support by gender suggests that the difference lies in gendered division of labor in the household. The fact that none of the financial support categories for females points out to the patriarchal division of labor of many families in Turkey, as well as the prevalence of male breadwinners, explains the fact

that asking for and receipt of financial support puts more strain on men's mental health compared to women. On the other hand, although the dominant gender ideology labels women as the primary caregivers, we see that the magnitude and the significance of asking and receiving in-kind support puts strain on both men's and women's mental health. Nevertheless, the fact that receiving sufficient in-kind support significantly increases male rather than female depression suggest that the nature and meaning of receiving in-kind support hurts men more than women (McKee-Ryan et al., 2005; Sümer et al., 2013; Thoits, 1986).

The analyses provided by these two tables reveal that economic hardship measures of job loss and unemployment duration are significantly associated with depression scores prior to controlling for economic strain and social support. Introduction of economic strain renders some of the economic hardship measures non-significant. Nevertheless, economic strain after crisis prevails significant across all models and tables, suggesting that difficulty with paying bills and meeting other household expenses is a significant source of mental distress for both men and women. While all measures of job loss are significant in model 2 of each table, we see that only current unemployment indicator remains significant once we introduce economic strain and/or social support measures in male models. This finding suggests that being labeled as unemployed is a more problematic issue than unemployment duration per se. In addition, the effect of household size, which is not significant for the first two models of both tables, becomes significant once we add economic strain and social support measures respectively. Household size is negatively associated with male and female depression scores. This suggests that having multiple sources of income or support in a family may prove to be a relief in times of hardship. Also in analysis not shown, we have investigated the interaction effects between household size and support measures, but these were not statistically significant.

The statistically significant effect of current unemployment on men's depression scores in Table 3 remains significant when we add measures of economic strain, and financial and in-kind support separately. Not receiving enough financial and in-kind support, not receiving any financial and in-kind support when needed, as well as receiving sufficient in-kind support is significantly associated with higher depression scores for men, while the effect of current unemployment and household economic strain continue to be significant. Receipt of financial and/or in-kind support does not compensate for the economic strain that is experienced in the household, or the fact that the individual has been experiencing current unemployment. In fact, in model 5 of Table 3, we see that the effect of current unemployment indicator is higher than that of model 4, when the receipt of enough in-kind support is also significant, suggesting that receipt of, or inability to receive in-kind support has a stronger effect on men's depression scores.

For women, the effect of unemployment status is rendered non-significant in the presence of household economic strain and financial support measures; suggesting that receipt of insufficient financial support, is not necessarily significantly associated with higher depressive symptoms for women. Women's CES-D scores are also positively associated with inability to receive any in-kind support when needed, as well as not receiving sufficient in-kind support.

6. DISCUSSION AND CONCLUSION

In this paper, we investigated the relationship between adult CES-D scores and economic hardship, economic strain, and social support using a nationally representative dataset from urban Turkey. Our aim was to provide an explanation as to how the mental health of married adults in urban Turkey was affected by the 2008 financial crisis in terms of economic hardship and strain, and how they responded to social support received from family and friends.

We found that the economic hardship caused by job loss and longer unemployment duration of adult males is significantly associated with higher CES-D scores for both husbands and wives in the household without taking economic strain and social support into consideration. This finding provides partial support for Hypothesis 1. However, in the presence of measures of economic strain before the crisis, the effect of economic hardship measures disappears in some of our models, suggesting that economic strain mediates the effects of hardship on depression. While job loss and extended periods of unemployment obviously contributes to problems paying bills and meeting other household needs, the resilience of economic hardship measures for CES-D scores provides evidence that economic strain alone cannot explain adult depression. Moreover, the fact that the effect of losing a job and finding reemployment renders statistically non-significant once we take economic strain into consideration is in line with Burgard, Brand and House's (2009) study that finds reemployment in a short period of time lowers stress.

In general, our findings resonate with the literature that deals with the effects of economic hardship on mental health, and the effects of social support on mental health. The effect of economic hardship, in the form of job loss and longer unemployment duration, on CES-D scores are mostly due to the more proximal factors of hardship-induced household economic strain and the need to rely on resources from social support networks. Husbands and wives in such households have higher CES-D scores and, thus, are at greater risk of depression. This finding provides support for Hypothesis 2. We also find that both job loss and unemployment duration is significantly associated with higher CES-D scores for men and their wives, even after taking economic strain and receipt of social support into consideration (Berchick et al., 2012). In addition, the timeline of our study covers 2008-2011, implying that the high media coverage of the crisis increases stress and causes depressive symptoms in the medium-run, as Sargent-Cox, Butterworth and Anstey's comparison (2011) of individual mental health prior to and during the global financial crisis of 2008 suggests. Thus, the effects of the crisis on mental health may not be seen in full force until later.

Most of the previous research suggests that receiving financial or in-kind support would alleviate depressive symptoms in the context of economic hardship and strain, since it would help households to cope by paying the bills or putting food on the table (Devereux, 2002; Hashima & Amato, 1994). However, our results indicate just the opposite and are more consistent with Thoits (1995) and Bolger, Zuckerman and Kessler (2000). Unlike Bolger, Zuckerman and Kessler (2000) whose measures of social support focus on emotional support, we focus on financial and in-kind support. Nevertheless, our findings provide further support for Hypothesis 2, and are similar to theirs in nature, where both find a direct relationship between social support and depressive symptoms. The findings imply that social support may have negative consequences in the form of stress and stigmatization that result in a worsening of mental health, and

in our case, higher CES-D scores, especially when no social support is received when needed, or when enough is received.

Rather than an overall association between receipt of social support and CES-D scores, we find that for males, not receiving enough financial or in-kind support, and needing but not receiving any in-kind support is associated with higher depression scores. In addition, receiving enough in-kind support to cover needs is associated with higher male depression scores, as we expected in hypothesis 3. For women, not receiving enough financial and in-kind support, as well as needing but not receiving any in-kind support is associated with higher depression scores. Receiving sufficient in-kind support that covers household needs is more stressful for men than women, presumably because men are the primary breadwinners in Turkey, and are hurt more because what they cannot provide through work is covered by outside help. Not receiving in-kind support when needed, and not receiving enough in-kind support is significantly associated with higher CES-D scores for both genders. Magnitudes of the effects are certainly higher for in-kind support measures compared to those of financial support. The difference may lie in the nature of the support received, perhaps because reciprocity norms are not as clear and obligations are not as easily calculable. Alternatively, receipt of in-kind support may indicate a more desperate—and depressing—situation that is not captured by our measures of economic hardship and strain. Moreover, not receiving in-kind support when one actually needs it, or not receiving enough to meet their needs may even be more stressful, and thus, more strongly associated with elevated CES-D scores.

Our results are suggestive of gender differences, albeit minor, in how receipt of different kinds of support affects men and women. While men are more significantly affected by not receiving financial support when needed and by not receiving enough financial support, the magnitude of the effect of not receiving enough in-kind support is larger for women. These findings provide further support for Hypothesis 3, and partial support for Hypothesis 4. Due to the dominant patriarchal family structure observed in Turkey, it is not surprising to find that men are more depressed about not receiving enough financial support, whereas women are more depressed about not receiving any in-kind support when needed, or for receiving insufficient amounts of in-kind support. Moreover, men's CES-D scores are positively associated with receipt of sufficient in-kind support, due to higher prevalence of male primary breadwinners in Turkey.

6.1 Limitations and Future Research

Although this study uses a cross-sectional dataset, the timeline of the questionnaire items provides a partial longitudinal aspect to the study. Nevertheless, we refrain from making any causal arguments, and only use correlational language in explaining our findings, and in our discussion of those findings. We measure experiences of individuals' before and after the crisis, and use current depression measures to investigate time-order of events. We have refrained from using emotional support as another measure of social support in this study because of potential measurement errors due to wording of the questionnaire items. While items measuring emotional support referred to the last two and a half years (between Fall 2008 and Spring 2011), the dependent variable (CES-D) referred to last week. Thus the independent and the dependent variable may as well cover the same time frame, making it impossible to make a temporally systematic causal argument.

In addition, we are aware of the issue of dependency of husbands' and wives' depression levels, and the fact that our separate analyses for husbands and wives assume independency between men and women. To remedy this potential problem, we use household strain measures that are experienced by each member of the household. We also use men's economic hardship measures to predict not only their own depression levels (in Table 3), but also women's depression as well (in Table 4). Future research would benefit from longitudinal data to investigate the long-term effects of economic hardship, strain and receipt of social support on adult mental health outcomes.

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