

Chronic Stressors and Daily Hassles: Unique and Interactive Relationships with Psychological Distress*

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Using daily telephone interviews of a U.S. national sample of adults, aged 25–74 (N = 1,031), the present analyses draw from theories of the stress process and recent research to examine how chronic role-related stressors and daily hassles affect psychological distress. Four separate hypotheses are examined. The first explores the association between chronic stressors and daily hassles. The second tests whether daily hassles function as an intervening variable between chronic stressors and psychological distress. The third tests whether a chronic stressor moderates the relationship between daily hassles and psychological distress. The fourth hypothesis tests for cross-domain effects of chronic stressors and daily hassles. Findings indicate that chronic stressors and daily hassles are distinct types of stressors with unique contributions to psychological distress. The study provides support for chronic home stressors functioning as a moderating factor on the relationship between daily hassles and psychological distress both within and across domains.

The study examines the unique and interactive effects of role-related chronic stressors and daily hassles in the domains of work and family on psychological distress. For these purposes, the use of a two-stage longitudinal data collection made it possible to measure chronic work and family role-related stressors separate from, and prior to, subsequent reporting of daily hassles in the areas of work and family. More specifically, the study explores the relationship between chronic role-related stressors and role-related daily hassles from

three different perspectives derived from theories of the stress process.

Stressors may be classified into two broad categories: discrete and continuous (Pearlin, Menaghan, Lieberman, and Mullan 1981; Wheaton 1996). Most research on discrete stressors centers on the study of major events, that is, observable and objectively reportable life changes. These relatively rare events, for example divorce or job loss, require some significant adjustment on the part of the individual (Wheaton 1997). Continuous stressors, defined generally as the ongoing problems of life, permeate our daily reality. A growing body of research has suggested that it is the myriad of these everyday, commonplace events, or “quotidian” stressors (Pearlin and Skaff 1995), that more strongly affect well-being, rather than major but less frequent life events (Lazarus and Folkman 1984; Pearlin 1982; Repetti and Wood 1997). Past theory and

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research have highlighted two classes of quotidian stressors: chronic stressors and daily hassles.

Chronic stressors are the persistent or recurrent difficulties of life. One source of chronic stressors may be the strains associated with the interaction of the individual and conditions encountered in carrying out the responsibilities of major social roles (Pearlin 1982, 1999a; Pearlin et al. 1981; Wheaton 1996), such as work overload or the combination of excessive demands and lack of control over work tasks (Karasek 1979). Another source of chronic stressors may arise from conflict between social roles, such as the sometimes incompatible demands of being a parent and a worker (Eckenrode and Gore 1990; Pearlin 1999a; Repetti, McGrath, and Ishikawa 1999). Yet another source is the excessive complexity and restriction of choices experienced in everyday life (Wheaton 1997). Chronic stressors may also originate at the ecological level, such as noise, crowding, or crime in a neighborhood (Evans and Lepore 1997); ecological stressors are distinguished from role-related stressors by originating at a level above the individual and his or her interaction with role partners and peers (Wheaton 1999a). Regardless of the origins, there is agreement that it is the ongoing and open-ended nature of the stressor that qualifies it as chronic. What makes chronic stressors particularly debilitating to the individual is the uncertainty associated with the timing and resolution of the stressor. It is difficult to identify when the stressor began, and it is often more difficult to know when or even if it will end (Repetti and Wood 1997; Wheaton 1996, 1999b). Thus, another aspect of chronic stressors that contributes to their individual impact is the lack of control one may have over the onset or remission of the stressor (see also Pearlin and Schooler 1978; Pearlin 1983).

Daily hassles are defined as relatively minor events arising out of day-to-day living, such as the everyday concerns of work, caring for others, and commuting between work and home. They can also refer to small, more unexpected events that disrupt daily life, "little" life events such as arguments with children, unexpected work deadlines, and a malfunctioning oven. Wheaton (1999b) referred to this as the distinction between "automatic or ritualized concerns of life" and "episodic, irregular, microevents that cannot be anticipated daily"

(p. 284). Generally, the emotional effects of daily hassles as well as the hassle itself are expected to moderate or disappear in a day or two (Bolger, DeLongis, Kessler, and Schilling 1989). Several studies find that the frequency and type of daily hassles experienced by an individual provide a better explanation for associated psychological and somatic health outcomes than do major life events in the recent past or chronic role-related stressors (Bolger, DeLongis, Kessler, and Schilling 1989; Eckenrode 1984; Lazarus 1984).

Several studies have established an association between psychological distress and chronic stressors (Bolger, Foster, Vinokur, and Ng 1996; Cohen, Frank, Doyle, Skoner, Rabin, and Gwaltney 1998; Eckenrode 1984; Pillow, Zautra, and Sandler 1996), or psychological distress and daily hassles (Almeida and Kessler 1998; Almeida, Wethington, and Kessler 2002; Bolger, DeLongis, Kessler, and Schilling 1989; Folkman, Lazarus, Pimley, and Novacek 1987; Grzywacz, Almeida, Neupert, and Ettner 2004). The present study extends this previous research by examining the theoretically-based linkages that exist between the experiences of chronic *role-related* stressors and daily hassles *in the same roles*, including their potential combined association with distress. Studies that include multiple levels of stressors, such as those combining the measurement of major life events and chronic stressors, suggest that it is the interaction of stressors and their accumulation over time that lead to poor health outcomes rather than the immediate and unique effects of a single stressor or type of stressor (Brown, Adler, and Bifulco 1988; Chiriboga 1997; Pearlin et al. 1981; Turner, Sorenson, and Turner 2000). Furthermore, Grzywacz and colleagues (2004) for an article in this issue use the same data set as we do in the present article to show that respondents from lower socioeconomic statuses were more vulnerable to psychological and physical effects of daily stressors. One explanation for this result may be increased chronic stress among more socially disadvantaged individuals (Turner, Wheaton, and Lloyd 1995). The present study will examine daily hassles and chronic stressors related to work and family roles and how they may combine or interact to affect psychological well-being.

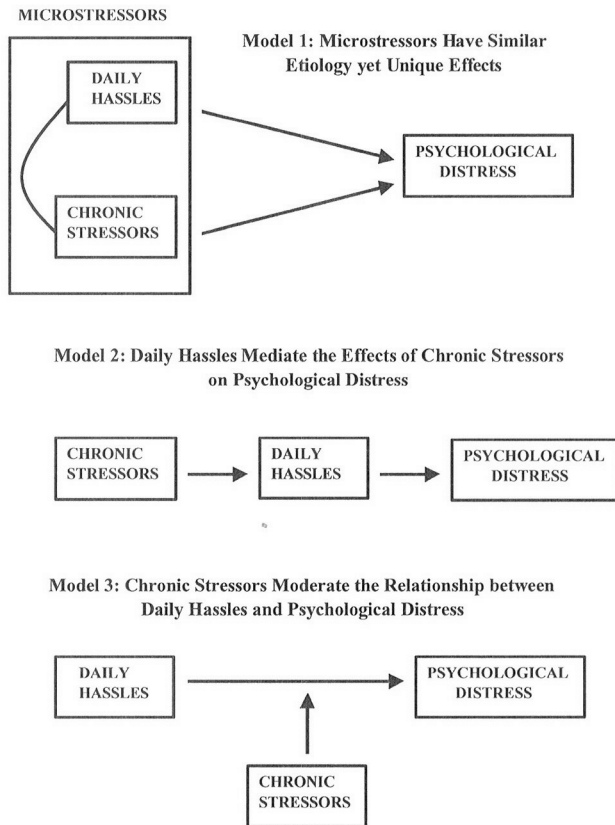
THE RELATIONSHIP BETWEEN ROLE-RELATED CHRONIC STRESSORS AND DAILY HASSLES

While several studies have explored the effects of both daily hassles and chronic stressors on psychological distress, there is no general agreement whether these stressors are the same, distinct, or related. The present study explores three possible models for understanding the link between role-related chronic stressors and daily hassles and their relationship to psychological distress. The models are depicted in Figure 1.

In the first model we will explore the possibility that within a given social role daily hassles and chronic stressors share a common context but are unique types of stressors (Wheaton 1999b). Some research has found that chronic stressors and daily hassles are

each unique predictors of psychological distress (Almeida and Kessler 1998; Lazarus and Folkman 1984; Pearlin 1982; Repetti and Wood 1997), even when they are connected to the same social roles. General support for this model comes from studies suggesting that any disruption challenging the cognitive-emotional stability of the individual will have an impact on psychological well-being (Bolger, DeLongis, Kessler, and Schilling 1989; Brown and Harris 1989; Chiriboga 1997; Kessler, Magee, and Nelson 1996; Lazarus 1984; Repetti 1982). Because they emanate from a common role context, the two types of measures will be correlated; however, each would have independent associations with psychological distress. The measures of chronic stressors we use ask for an evaluation or appraisal of the *potential* of a current life situation to produce stress, based on previous exposure to stressors

FIGURE 1. Three Models of the Relationship Between Chronic Stressors and Daily Hassles and their Effects on Psychological Distress



in that situation (Lazarus 1999). In contrast, daily hassle survey questions ask about situations that arose that day. Whereas chronic stressors represent an ongoing threat of disruption to daily routines, daily hassles represent tangible, albeit minor interruptions that may have a more proximal effect on well-being. In terms of their physiological and psychological effects, reports of chronic stressors may be associated with prolonged arousal or anticipation of stressors, while reports of daily hassles may be associated with spikes in arousal or psychological distress that day (McEwen 1998).

The second model depicted in Figure 1 posits that role-related daily hassles emerge from pre-existing levels of chronic stressors in that role. If that is the case, daily hassles will largely mediate the impact of chronic stressors on psychological distress. Another way of conceptualizing the relationship between chronic stressors and daily hassles is that one stressor may lead to experiencing other stressors (Pearlin and Skaff 1998). It is possible that objective chronic stressor exposure in a role produces more exposure to daily hassles, and that daily hassles mediate the effects of chronic role-related stressors on distress (Eckenrode 1984; Wheaton 1996). For example, chronic work stressors (such as chronic level of demands at work) result in more exposure to daily hassles, such as being under a deadline, which in turn results in distress. Another aspect of work, lack of control over its pace, can also lead to exposure to daily hassles. Those who have more control over work may be exposed to fewer deadlines by being able to pace exposure to them (Repetti and Wood 1997).

The third model examines the possible exacerbating function that role-related chronic stressors play between daily hassles and psychological distress (Repetti et al. 1999; Wheaton 1996). On days when the individual experiences a minor hassle, the presence of the chronic stressor could exacerbate the emotional reaction to the hassle, primarily by increasing negative appraisal (Lazarus 1999). For example, a broken copy machine could prevent meeting a deadline. In the absence of the chronic stressor (e.g., a job that involves meeting many deadlines) the individual might not experience a copy machine breakdown as a "hassle." Thus, the effect of daily hassles at

work would be greater for individuals experiencing chronic work stress (Chiriboga 1997). Another possibility is that chronic stressors may usurp resources that might otherwise be available for coping with minor stressors, such as resolving a disruption before it becomes a "daily hassle" or promoting a more positive appraisal of the disruption. Thus, we believe that it is possible that chronic stressors deplete resources such as time or finances needed to cope successfully with daily hassles.

THE INTERACTION OF WORK AND FAMILY ROLE-RELATED STRESSORS

As incumbents of multiple roles, people's experiences in one domain may influence their actions in another domain (Pearlin 1999b). Since the domains of work and home occupy the greatest percentage of waking hours for a large majority of American men and women (Robinson and Godbey 1997), this study will consider the relationship of chronic stressors and daily hassles in these two domains as a second research question. Studying the linkages of chronic stressors and daily hassles with psychological distress in the context of work and home domains offers an opportunity to see if the effects of stressors in one domain in fact transfer into another domain (Cohen et al. 1998; Repetti 1982; Repetti and Wood 1997). Some research has focused on the effects of chronic job stress on individuals' emotions and behaviors at home (Perry-Jenkins, Repetti, and Crouter 2000). Yet there are fewer studies examining the potential transfer effects of chronic home stressors on increased exposure or reactivity to daily hassles at work, or chronic work stressors on daily hassles at home.

There is considerable evidence that daily hassles cross from work to home, and vice versa (Bolger, DeLongis, Kessler, and Wethington 1989, 1990), and that chronic stress "spills over" between work and home. Many research studies have investigated the associations between reports of chronic stressors at work and at home (e.g., Moen and Yu 1999), while a smaller number of research studies (e.g., Bolger, DeLongis, Kessler, and Wethington 1989, 1990) have examined the co-occurrence of daily hassles across work and home. Some studies (e.g., Grzywacz, Almeida, and McDonald 2002) have linked chronic

work and home conditions to reports of daily hassles in those roles. Furthermore, some studies (e.g., Almeida, Wethington, and Chandler 1999; Repetti 1994) have documented a relationship between chronic work stressors and mood at home. No study has linked chronic work and home stressors to reports of increased exposure or reactivity to daily hassles across these domains

RESEARCH HYPOTHESES

The purpose of this study is to examine the links between work and home role-related chronic stressors and daily hassles to better understand how they uniquely and in combination affect psychological distress. Using the three models depicted in Figure 1, we test four hypotheses.

Hypothesis 1: The presence of chronic stressors in one domain will be associated with increased experiences of daily hassles in that same domain. Application of a contextual framework supports this hypothesis, as both chronic stressors and the daily hassles experienced in the same domain share a common context. However, daily hassles and chronic stressors are distinct types of stressors and therefore will have unique effects on measures of psychological distress.

Hypothesis 2: The relationship between chronic stressors and psychological distress will be mediated through increased exposure to daily hassles. The chronic stressor contributes to increased exposure to daily hassles resulting in psychological distress.

Hypothesis 3: Chronic role-related stressors will exacerbate the relationship between daily hassles in that role and psychological distress. The presence of chronic stressors will result in increased reactivity to daily hassles, thus leading to higher levels of psychological distress. The chronic stressor becomes the context for interpreting the effect of the daily hassle on psychological distress.

Hypothesis 4: Chronic role-related stressors may also exacerbate the impact of daily

hassles across domains, specifically across the domains of work and family. The pervasive context of a chronic role-related stressor may influence the experiences in a separate domain through conflicting expectations or increased demands among multiple roles.

METHOD

Participants

The data for these analyses is merged from the National Survey of Midlife Development in the United States (MIDUS) and the National Study of Daily Experiences (NSDE) carried out under the auspices of the John D. and Catherine T. MacArthur Foundation Network for Successful Midlife Development (for descriptions of the MIDUS project see Keyes and Ryff 1998; Mroczek and Kolarz 1998; Lachman and Weaver 1998). The original purpose of the MIDUS and related studies was to examine the predictors and consequences of successful aging in the areas of physical health, psychological well-being, and social responsibility. Respondents are a general U.S. population sample of noninstitutionalized adults aged 25 to 74, selected through random-digit dialing procedures, who participated in a telephone interview and who completed two mail questionnaires (N = 3,032). All of the data were collected during 1995.

Respondents in the NSDE were randomly selected from the MIDUS sample and received \$20 for their participation in the NSDE project. Over the course of eight consecutive evenings, respondents completed short telephone interviews about their daily experiences. There was an average 15 months lag time between completion of the MIDUS questionnaire and the daily diary, with a minimum nine months lag to a maximum 23 months lag. Data collection consisted of 40 separate "flights" of interviews, with each flight representing the eight-day sequence of interviews from approximately 38 respondents. The initiation of interview flights was staggered across days of the week to control for the possible confounding between day of study and day of week. Of the 1,242 MIDUS respondents contacted, 1,031 (562 women, 469 men) agreed to participate,

yielding a response rate of 83 percent. Respondents completed an average of seven of the eight interviews resulting in a total of 7,221 daily interviews.

The NSDE subsample and the MIDUS sample from which it was drawn had very similar distributions for age, marital status, and parenting status. The NSDE sample had a slightly greater percentage of women (54.5% vs. 51.5% of the samples, respectively), was better educated (60.8% of the MIDUS sample had at least 13 years of education vs. 62.3% of the NSDE subsample), and had a smaller percentage of minority respondents than the MIDUS sample. Of the NSDE sample, 90.3 percent were white, 5.9 percent African American, and 3.8 percent all other races, versus 87.8 percent white, 6.8 percent African American, and 4.4 percent all other races for the MIDUS sample. Respondents for the present analysis were on average 47 years old. Thirty-eight percent of the households reported having at least one child under 18 years old in the household. The average family income was between \$50,000 and \$55,000. Men were slightly older than women, had similar levels of education, and were more likely to be married at the time of the study (77% of the women vs. 85% of the men).

Chronic Stress Measures

Chronic stress measures were obtained from the self-administered MIDUS questionnaires. There were a total of 13 items selected from the questionnaire that assessed current job stress and current home stress (Rossi 2001). In an attempt to reduce the overlap between the two domains, questions assessing home and work stressors were placed in separate sections of the questionnaire. Principal components analysis with varimax rotation across the 13 items provided empirical evidence for independence across domains. Four factors with simple structure were extracted, corresponding to the four scales used in subsequent analyses as chronic stressor measures: work demands, lack of work control, home demands, and lack of home control. Within each of the factors the loadings ranged from .53 to .87.¹

Work demands were assessed using two questions (Grzywacz 2000). Respondents were asked to rate (1) how often they have too many demands made on them *at their job* and (2)

how often they have a lot of interruptions *at their job*. Response choices ranged from 1 (all of the time) through 5 (never). Items were reverse coded so that higher numbers represented more demands at work. Scores across the items were summed. Cronbach's alpha for the scale was .64.

Lack of work control was assessed using seven questions (Marmot et al. 1991). Respondents were asked to rate the amount of control they felt they had in each of the following areas of work: (1) the amount of time they spend on tasks, (2) initiating things, (3) deciding how to do tasks, (4) choosing the tasks to be done, (5) deciding what needed to be done, (6) planning the environment, and (7) working on a variety of interesting things. Response choices ranged from 1 (all of the time) through 5 (never), with lower numbers representing feeling more in control at work. Scores across the eight items were summed. Cronbach's alpha for the scale was .86.

Home demands were assessed using two questions (Rossi 2001). Respondents were asked to rate (1) how often they have too many demands made on them *at home* and (2) how often they have a lot of interruptions *at home*. Response choices for both questions ranged from 1 (all of the time) through 5 (never). Items were reverse coded so that higher numbers represented more demands at home. Scores across the items were summed. The alpha between the two items was .68.

Lack of home control was operationalized as the amount of control respondents felt they had over their time at home based on two questions: (1) "How often do you control the amount of time you spend on tasks?" (2) "How often do you have enough time to get everything done?" Response choices ranged from 1 (all of the time) through 5 (never), with lower numbers representing feeling more in control at home (Rossi 2001). Scores across both items were summed. Cronbach's alpha for the scale was .55.

The small number of items in each scale may contribute to the low alpha levels for three of the measures. Though these reliability estimates suggest caution in interpreting the results, the principle components analysis provided support for treating the four measures as discrete in the subsequent analyses. These items have been used in previous research to predict health risk behaviors (Marmot et al. 1991), poorer physical health (Rossi 2001),

depression (Griffin, Fuhrer, Stansfeld, and Marmot 2002), anxiety (Griffin et al. 2002), and work and home satisfaction (Rossi 2001).

Daily Measures

Daily hassles were assessed through a semi-structured Daily Inventory of Stressful Experiences (DISE; Almeida, Wethington, and Kessler 2002). The inventory consisted of a series of stem questions asking whether certain types of daily hassles had occurred in the past 24 hours, along with a set of interviewer guidelines for probing affirmative responses to rate stressor content, severity, and threat as well as a series of structured questions that measured respondents' initial appraisal of the hassles. The stem questions and examples of the probe questions can be found in the appendix of Grzywacz et al. (2004). The aim of this interviewing technique was to acquire a short narrative of each stressor that included descriptive information (e.g., topic or content of the stress, who was involved, how long the stressor lasted) as well as what was at stake for the respondent. Open-ended information for each reported stressor was tape recorded, then transcribed and coded for several characteristics. Coders were graduate and advanced undergraduate students who received approximately 10 hours of initial training. Subsequent two-hour weekly meetings were held to check accuracy and discuss discrepant ratings. As new coders joined the project, they were required to demonstrate inter-rater reliability similar to other coders. This interview-based approach allowed us to distinguish between a stressful event (e.g., conflict with spouse) and the affective response to the hassle (e.g., crying or feeling sad). Another benefit of this approach was its ability to identify overlapping reports of hassles. In the present study, approximately 5 percent of the reported hassles were discarded because they were either solely affective responses or they were identical to hassles that were previously described on that day. In the present analyses information regarding the content of the event was used to create two variables: (1) daily hassles experienced at home and (2) daily hassles experienced at work. The inter-rater reliability for these categories was .95.

Daily work hassles. A respondent was given

a score of 1 if they experienced a hassle at work on a particular day and a 0 if they did not.

Daily home hassles. Calculated in the same way as work hassles, a respondent was given a score of 1 if they experienced a hassle at home on a particular day and a 0 if they did not.

Psychological Distress. The "Non-Specific Psychological Distress Scale" (Mroczek and Kolarz 1998) was used to measure psychological distress. Respondents indicated how much of the time they experienced a series of emotions on a five-point scale from 1 (none of the time) to 5 (all of the time). The inventory includes emotions such as sadness, hopelessness, anxiety, and restlessness. The scale was developed using item response models and factor analysis, yielding a single factor structure representing current, general psychological distress. The measure was validated in eight administrations using samples from different populations (for complete information on the psychometric properties of the scale, refer to Kessler et al. 2002; Mroczek and Kolarz 1998). Cronbach's alpha ranged from .75 to .85 across the eight administrations of this scale. The items were recoded to reflect a five-point scale from 0 (none of the time) to 4 (all of the time). *Distress* was calculated as the sum of the items on each day. Cronbach's alpha for the scale was .89.

Analytic Strategy

Hierarchical linear modeling (Raudenbusch and Bryk 2002) was used to examine whether chronic stressors, daily hassles, and their interaction were associated with daily reports of psychological distress. These analyses were based on the following model:

$$\text{Distress}_{it} = b_0 + b_1 \text{Chronic Stressors}_{it} + b_2 \text{Daily Hassles}_{it} + b_3 (\text{Chronic Stressors}_{it} \times \text{Daily Hassles}_{it}) + c_i + d_{it} \quad (1)$$

where Distress_{it} represents the reported psychological distress for respondent i on day t , $\text{Chronic Stressors}_{it}$ is the amount of chronic stress (in a given work or home domain) reported by respondent i during the baseline interview, $\text{Daily Hassles}_{it}$ indicates whether respondent i reported a daily hassle on day t ,

Chronic Stressors, \times Daily Hassles, i_t is respondent i 's score for the interaction effect of Chronic Stressors and Daily Hassles on day t , b_1 through b_3 are coefficients defining the effects of Chronic Stressors, Daily Hassles, and their interaction on daily Psychological Distress, c_i is random variation in the individuals, and d_{it} is the random variation in the diary days.²

RESULTS

Description and Intercorrelations

Table 1 presents descriptive statistics and the intercorrelations of variables used in the analysis. Psychological distress represents the daily distress experienced averaged across the eight-day study period. On any given day, the possible distress scores ranged from a minimum of 0 to a maximum of 24. Since the daily hassles were coded as either experiencing a hassle (coded 1) or not experiencing a hassle (coded 0), the scores for the daily measures of work and home hassles are represented as the percentage of study days (i.e., daily frequency) on which individuals experienced at least one hassle in the respective domain. In the home domain, individuals experienced, on average, at least one home hassle on 14 percent of the study days and at least one work hassle on 19 percent of the study days. For the chronic demand variables, participants reported higher levels of work demands than home demands ($p < .001$). For the chronic lack of control variables, participants reported more lack of work control than lack of home control ($p < .001$).

The intercorrelations form three main patterns. The first pattern shows that all stressor measures were positively correlated with psychological distress. A second pattern emerged

from the association between daily hassles and chronic stressors. Work hassles were significantly correlated with both measures of chronic home stress but not with either measure of chronic work stress, whereas home hassles were significantly correlated with chronic demands at home and at work but not with the lack of control measure in either domain. The third pattern that emerged is the significant association among five of the six intercorrelations of the chronic stressor variables.

Daily Level Analysis

Four sets of HLM analyses were conducted, one for each measure of chronic stress, to test each of the three possible models from Figure 1. Each set is comprised of three steps. Steps 1 and 2 of each set of analyses investigated model 1 to examine if there were independent main effects for both chronic stressors and daily hassles on psychological distress. Comparison of steps 1 and 2 of the analysis tested for possible mediating effects of daily hassles as depicted in model 2. Step 3 investigated the possible moderating effects of chronic role-related stressors both within the same domain and across the domains of work and home as depicted in model 3.

The analyses were repeated, including six demographic and social structural measures to control for their contribution to the association between different types of stressors and psychological distress: socioeconomic status as assessed by level of education (see Grzywacz et al. 2004); age (Aldwin, Sutton, Chiara, and Spiro 1996; Cohen et al. 1998); gender (Almeida and Kessler 1998; Cohen et al. 1998); parental status (Quittner, Glueckauf, and Jackson 1990); work status (Spector, Chen, and O'Connell 2000; Theorell and

TABLE 1. Descriptive Statistics and Intercorrelations

	M	SD	1	2	3	4	5	6
Daily:								
1. Distress	11.85	2.99						
2. Work	.19	.20	.27***					
3. Home	.14	.19	.11***	.06*				
Chronic:								
4. Lack of Work Control	19.42	8.06	.14***	.07	-.05			
5. Work Demands	6.32	1.68	.09**	.06	.18***	-.07***		
6. Lack of Home Control	5.05	2.48	.10**	.07*	.01	.32***	.17***	
7. Home Demands	5.57	1.67	.19***	.29***	.12***	.02	.32*	.40***

* $p < .05$; ** $p < .01$; *** $p < .001$

Note: $n = 1,031$.

Karasek 1996); and marital status (Roy, Steptoe, and Kirschbaum 1998). Addition of these demographic and social structural variables did not change the pattern of results. The results of the HLM analyses are displayed in Table 2. The same basic pattern of results holds, even when controlling for the effects of prior day distress in addition to the social structural variables.

In the first step of each analysis, a single chronic stressor variable and control variables were entered. As expected, in each analysis there was a significant main effect for the chronic stressor variable, suggesting that individuals experiencing more chronic stress reported higher levels of psychological distress. To complete the test for unique effects of chronic stressors and daily hassles as depicted in model 1, both the chronic stressor and daily hassle variables were entered into the equation

at step 2. The main effect for the daily hassle variables was significant, suggesting that on days when individuals experience daily hassles they report higher levels of psychological distress, even after controlling for the effects of ongoing chronic stressors and the control variables. Further, the results of step 2 show that the main effects for the chronic stressors remained significant as well, providing little evidence of the mediation effects predicted by model 2. This latter finding suggests that exposure to more daily hassles does not explain the higher levels of psychological distress reported by individuals under chronic stress. The lack of a mediating relationship for daily hassles, however, may in some cases be due to the average 15 months lag time between the MIDUS and NSDE data collections; some people may have changed their work and home environ-

TABLE 2. Hierarchical Linear Models (Estimates and Standard Errors Predicting Daily Psychological Distress)

Variables	Step 1		Step 2		Step 3	
	B	SE B	B	SE B	B	SE B
<i>Lack of Work Control:</i>						
Lack of Work Control	.055***	.015	.055*	.014	.048**	.015
Work Hassles			1.264***	.10	.946**	.374
Home Hassles			1.176***	.103	.77**	.277
Lack of Work Control * Work Hassles					.016	.015
Lack of Work Control * Home Hassles					.020	.013
<i>Work Demands:</i>						
Work Demands	.165*	.067	.141*	.066	.135*	.067
Work Hassles			1.258***	.106	.430	.437
Home Hassles			1.179***	.104	1.631***	.391
Work Demands * Work Hassles					.124	.064
Work Demands * Home Hassles					-.069	.058
<i>Lack of Home Control:</i>						
Lack of Home Control	.119**	.044	.111**	.042	.067	.043
Work Hassles			1.124***	.101	-.000	.314
Home Hassles			1.195***	.090	.446	.244
Lack of Home Control * Work Hassles					.254***	.061
Lack of Home Control * Home Hassles					.145**	.044
<i>Home Demands:</i>						
Home Demands	.352***	.061	.301***	.059	.250***	.053
Work Hassles			1.235***	.099	.052	.355
Home Hassles			1.134***	.088	.524	.339
Home Demands * Work Hassles					.201***	.058
Home Demands * Home Hassles					.100	.053

* $p < .05$; ** $p < .01$; *** $p < .001$

Note: Models adjust for socioeconomic status, age, gender, work status, marital status, and parental status; $n = 1,031$.

ments in order to reduce their exposure to daily hassles (Thoits 1994).

Step 3 of the analyses examined the effects of the interactions of daily hassle and chronic stressor variables on psychological distress both within the same domain and across the domains of work and home. There was some support for both within-domain moderation, as suggested by Hypothesis 3, and across domain moderation, as suggested by Hypothesis 4. Three of the four interaction terms involving chronic home stressors were significant: lack of home control by work hassles, lack of home control by home hassles, and home demands by work hassles. These interactions were investigated by plotting high and low levels of daily hassles with high and low levels of chronic stressors (± 1 SD from the mean). In each case, higher levels of chronic home stressors exacerbated the impact of daily hassles in the work and home domains on psychological distress. For example, on days when individuals experienced work hassles, those who also experienced higher levels of chronic home stressors reported higher levels of psychological distress (see Figure 2). For each variable, reactivity to daily hassles was greater for the high chronic stressor group than in the low chronic stressor group.

DISCUSSION

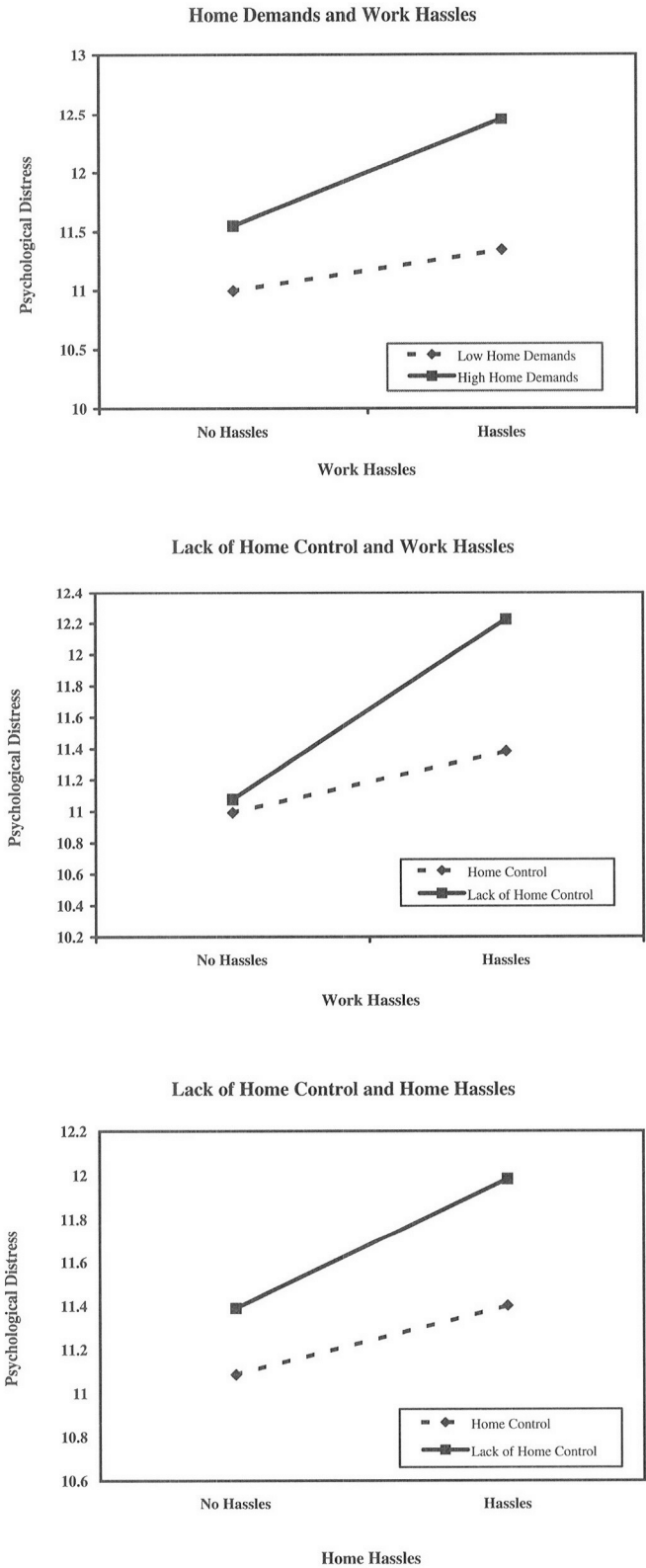
In the present study, we examined the intersection between two types of quotidian stressors, role related chronic stressors and daily hassles, and their combined effects on psychological distress. Four hypotheses based on three possible models for the relationships were examined within the domains of work and home. Findings indicate that the presence of chronic home stressors is associated with more frequent daily hassles in both work and home domains. Further, results show that there is an association between chronic home demands and home hassles and between chronic work demands and home hassles. Findings also suggest that chronic stressors and daily hassles may be distinct types of stressors with unique effects on psychological distress. Finally, the study provides support for chronic stressors as a moderator of the effects of daily hassles on psychological distress. The findings as they relate to the study's hypotheses are discussed below.

Hypothesis 1: The presence of chronic stressors in one domain will be associated with increased experiences of daily hassles in that same domain. Chronic stressors and daily hassles will have unique effects on psychological distress. Findings support this hypothesis. All six stressor variables were correlated with psychological distress, with only modest levels of overlap among daily hassles and chronic stressors (the correlations ranged between .01 to .29). The stronger associations among work hassles and home hassles suggest that the frequency of hassles in one domain may predispose one towards experiencing, or simply reporting, more hassles in another domain. Three of the four chronic stressor measures were associated with higher frequency of reported daily hassles. The association of chronic stressors and daily hassles across work and home domains is notable. While it is possible that experiencing some daily hassles is unconnected to the presence of chronic stressors, it is also plausible that the influence of role-related chronic stressors transfers into another domain (see below, Hypothesis 4).

It is also important to note the association among the chronic stressors themselves. Chronic stressors co-occur, both within and across life domains. This finding is in line with a contextual interpretation of accumulated life experiences influencing the individual across domains (Wheaton 1999b). Finally, it is interesting to note that a lack of control at home is related to more demands at home, whereas the opposite relationship is found in the work domain: Lack of control at work is related to fewer work demands. While this disparate association of control and demands may suggest that "control" is perceived or experienced differently in different social roles, it is more likely that the questions in the MIDUS measure different aspects of control.

HLM analyses provided additional support for model 1. First, all four chronic stressor variables uniquely predicted psychological distress. Second, after controlling for the effects of the chronic stressors, all daily hassle variables were significantly associated with distress. It appears that measures of chronic stressors and daily hassles are tapping distinct features of everyday life, providing additional support for the need to measure chronic stressors as distinctive from daily hassles (Wheaton 1996). Chronic stressors may represent a current life situation with the potential to disrupt

FIGURE 2. Interactions between Chronic Stressors and Daily Hassles



life in numerous ways. In contrast, daily hassles are real-life issues that require immediate attention. Whereas chronic stressors represent an ongoing threat of disruption to daily routines, daily hassles represent tangible, albeit minor interruptions brought about by chance or circumstance.

Hypothesis 2: The relationship between chronic stressors and psychological distress will be mediated through increased exposure to daily hassles. Results of this study do not provide much support for the hypothesis that daily hassles provide an explanatory mechanism for the effects of chronic stressors on psychological distress. Pearlin (1983, 1999a) has theorized that chronic stress arises from the enacted social roles of individuals and that it is the strain associated with attempting to perform those roles well that results in psychological distress, rather than the objective daily demands of the roles themselves. One possible reason for the lack of evidence of mediating effects may be that the chronic stressor measures selected are confined to specific roles rather than considering the relationships or "balance" among them for individuals (Marks and MacDermid 1996). For example, the role strain arising from concurrent roles as employee, parent, caregiver for aging parents, and civic leader may influence an individual's reported distress level, regardless of the hassles experienced on a given day. It is possible that a chronic stressor not specifically related to a social role, for example, a chronic illness or other health condition, might result in higher levels of psychological distress mediated by the daily hassles associated with the illness or condition.

Another possibility is that the chronic stressor leads to distress through concerns about the possible conditions causing the stressor. For example, chronic work demands may engender fear of being fired or passed over for promotion in a climate of corporate downsizing or increased competition for higher status positions (Hepburn, Loughlin, and Barling 1997). Thus, it may be the pervasive long-term threat to well-being derived from chronic stressors rather than the immediate demands of daily hassles that explains reported levels of distress.

Yet another possibility for the weak support for mediation by daily hassles is that the lag time between the MIDUS and NSDE data collection (9–23 months) was long enough for people to have taken action to reduce their

level of chronic stress at work and at home. Thoits (1994) has demonstrated that those with higher levels of chronic stress take action to resolve their problems in order to reduce their psychological distress. To address this possibility, we used additional follow-up data on participants in the MIDUS sample (Wethington 2002) and in the NSDE to estimate the proportion of people who may have experienced events that changed their levels of chronic stress. Marital status changes were very rare: 2 percent of subjects divorced or otherwise changed spouses in 1996–1997. In that same period, only 6 percent of participants are estimated to have added an additional child or no longer have children under 18 living in the household. Changes in work conditions, however, were much more common: 24 percent of the participants were promoted or otherwise changed their jobs in 1996–1997. If a larger number of changes in work reduces the estimate of daily hassles mediating the effects of chronic stress, then we would find that controlling for daily hassles (in step 2) would reduce the coefficient for home demands more than it would reduce the coefficient for work demands. However, the coefficients for both measures of chronic stress were reduced about equally (approximately 14%).

Hypothesis 3: Chronic stressors will exacerbate the relationship between daily hassles and psychological distress. Results of this study provide partial support for model 3, in that chronic home stressors exacerbate the effects of daily hassles on psychological distress, both in the home and work domains. Previous studies have found support for chronic stressors as a moderator of the relationship between life events and well-being (Cohen et al. 1998; Eckenrode 1984; Lepore, Miles, and Levy 1997; Pike et al. 1997). The present study further refines this work by examining these relationships at the quotidian stressor level. Further, if we envision chronic stressors as representing the contextual attributes of the individual, then we can examine these stressors as a separate set of variables to provide a more complete understanding of how daily hassles combine with chronic stressors to affect psychological distress.

Hypothesis 4: Chronic role-related stressors may also exacerbate the impacts of daily hassles across domains, specifically across the domains of work and family. The significant association between chronic work demands

and daily home hassles is consistent with findings from other studies on the transfer of chronic job stress into families (Cohen et al. 1998; Crouter, Bumpus, Maguire, and McHale 1999; Repetti 1982; Repetti and Wood 1997). In addition, both measures of chronic home stressors were associated with higher reported frequency of work hassles, such that what goes on at home may find its way into work and is played out in the form of more frequent daily hassles there. This interpretation suggests that the transfer of job stress into the home may be a reciprocal association and deserves further exploration (Perry-Jenkins et al. 2000).

It is important to note that the relationships between the types of stressors and psychological distress hold despite controls for demographic and social factors. Though social conditions such as socioeconomic factors and work status may indeed shape the path of our daily lives, other situational factors contribute to the context within which we experience stressors (Grzywacz et al. 2004; Wheaton 1996). The overall pattern in these findings suggests even more strongly that reports of chronic stressors and daily hassles have independent associations with daily distress. This pattern of findings, moreover, tends to question the assertion that daily hassles in a particular setting, experienced over a period of time, "pile up" over time as chronic stressors (Lazarus 1999). The design of the present study, which measured daily hassles after the assessment of chronic stressors, does not make it possible to evaluate this proposition directly. However, if daily hassles routinely accumulated into situations likely to be perceived as chronic stressors, we believe that the correlations observed between work and home chronic stressors and work and home daily hassles in this study would be higher than they were.

Chronic work stressors did not exacerbate the effects of daily hassles in either domain. Because relatively few research studies have considered the actual relationships between chronic stressors and daily hassles at work and home, explanations are speculative. One possible explanation may be that people appraise daily work hassles as simply "part of the job;" you are compensated for the effort by being paid a salary and other benefits. Furthermore, in some households or circumstances, work (no matter what its difficulties) may be experienced as a respite from the cares and problems at home (Hochschild 1997), thus muting the

emotional effects of stressors associated with other roles (see also Thoits 1992). Moreover, past theory and research (e.g., Karasek 1979) have suggested that high demands at work combined with the ability to control the pace or demands at work may result in increased ability to cope with stressors over time, including in other domains of life. Another possibility is that chronic home stressors may occur in an area of deeper emotional involvement, responsibility, or commitment. Rook, Dooley, and Catalano (1991) suggest that people who have more responsibility at home (e.g., more home demands and less control over them) will find daily work and other hassles more upsetting. Marks and MacDermid (1996) argued more generally that the hierarchy or "balance" of commitments people assign to their concurrent social roles may affect levels of distress. We suggest that the concepts of emotional involvement, responsibility, and commitment are distinct entities that require more specification in future research. Researchers should consider replicating the analyses in this paper on another sample specifying qualities and characteristics of role involvement that are apt to influence the appraisals of daily events as stressful, as well as reducing the lag time between the collection of data for the different types of stressors.

CONCLUSIONS

Several recent studies have examined the effects of quotidian stressors on health and well-being, but the efforts have proceeded along two separate streams: one examining the effects of chronic stressors (e.g., Bolger et al. 1996; Cohen et al. 1998; Eckenrode 1984; Lepore et al. 1997), and a separate approach examining the effects of daily hassles (e.g., Almeida and Kessler 1998; Bolger, DeLongis, Kessler, and Schilling 1989; Folkman et al. 1987). Indeed, recent reviews of stress and health literature have highlighted similarities and differences between chronic stressors and daily hassles (Pearlin 1999a; Taylor, Repetti, and Seeman 1997; Wheaton 1996). In this study we attempt to integrate these two lines of research empirically. Thus, our approach highlights the importance of understanding how stressors interact, rather than concentrating on the effects of a single type of stressor.

Further, this study distinguishes the unique

and combined effects of different types of quotidian stressors on psychological distress. In this sense, it offers further clarification of the differences between chronic stressors and daily hassles. Our findings indicate that while there is some association between chronic stressors and daily hassles, they each have unique effects on psychological distress, both at the aggregate and daily levels. The next step in research should test the explanations for these differences. We believe our findings strongly suggest that chronic stressors and daily hassles have a different etiology. Chronic stressors present an ongoing threat to the individual, the *ever-present potential* to erupt in ways both large and small in an individual's daily life. Daily hassles, in contrast, are the vast array of minor *disruptions* that actually do occur, forcing the individual to act on them. Additional research examining these issues offers the potential for advancing our understanding of the stress process beyond the findings presented here (see also Lazarus 1999).

Our findings also indicate that although chronic stressors and daily hassles may be different, they may share a common context and therefore act in concert to affect well-being. In this way, the combined effect of the two types of stressors is greater than the additive effects of both. In the present study, the presence of chronic home stressors exacerbates the relationship of daily hassles on psychological well-being. There is extensive research showing individual and group differences in exposure and vulnerability to chronic stressors (e.g., Cohen et al. 1998; Lepore et al. 1997; Pike et al. 1997; Quittner et al. 1990) and daily hassles (e.g., Almeida and Kessler 1998; Bolger and Zuckerman 1995; Bolger, DeLongis, Kessler, and Schilling 1989; Gunthert, Cohen, and Armeli 1999). We believe that the present study initiates a new and important approach that more fully encompasses the stress process. New research may benefit by assessing how the combined effects of chronic and daily stress processes may account for socioeconomic and demographic disparities in health and well-being. Future research would benefit by extending this approach to examine the linkages of chronic stressors and daily hassles in combination with life events.

NOTES

1. The items in each scale with their respective loadings follow: Work Demand—1) too many demands (.76), 2) too many interruptions (.71); Lack of Work Control—1) control over time on tasks (.53), 2) initiate things (.65), 3) choice in how to do tasks (.79), 4) choice in what to do (.85), 5) a say in decisions (.87), 6) a say in planning environment (.79), 7) variety of interesting tasks (.71); Home Demand—1) too many demands (.81), 2) too many interruptions (.83); Lack of Home Control—1) control over time on tasks (.83), 2) enough time to get tasks done (.57).
2. It is important to point out that this estimation procedure takes into consideration the amount of data available from each person, so that missing data on some occasions are taken into account by giving more weight to persons with complete data than those with some missing data (Dempster, Laird, and Rubin 1977). Based on this feature of the analysis method, data analysis will work with respondent records even if they only completed two of the eight diary days. Missing days in the middle of the series, such as when a respondent completed interviews on days 1–4 and 7–8 but missed days 5–6, can be handled in the same way. Thus, instead of deleting all of the respondent's data due to a missed interview, this approach has the advantage of using all available data from a given respondent.

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