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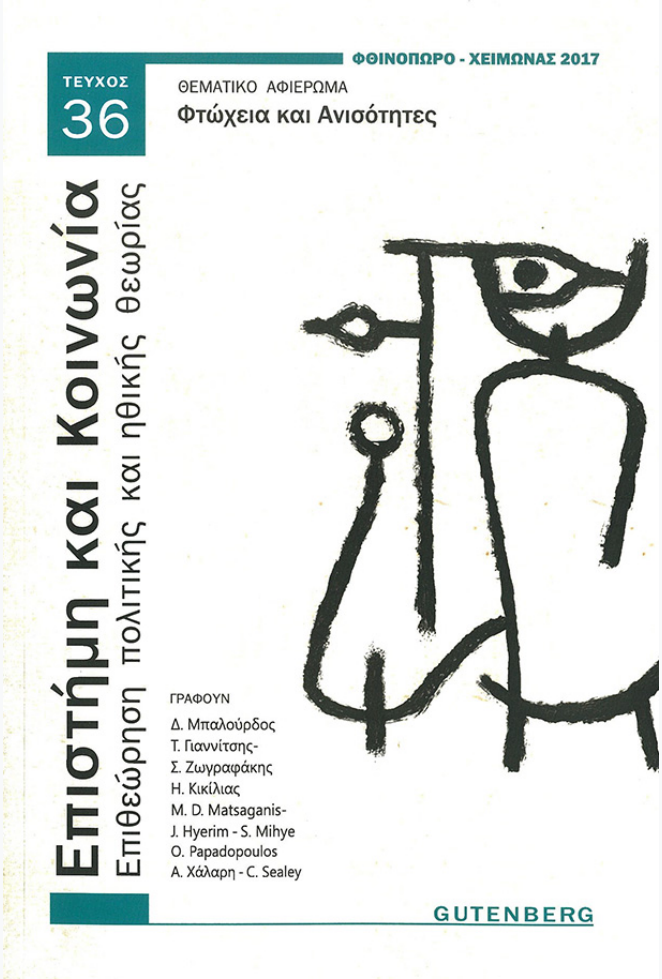

Individuals' Psychological Responses to the Economic Crisis and the Media: Lessons Learned From New York

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INDIVIDUALS' PSYCHOSOCIAL RESPONSES TO THE ECONOMIC CRISIS AND THE MEDIA: LESSONS LEARNED FROM NEW YORK

In this paper we synthesize findings from two studies conducted in the context of a larger research project launched in the metropolitan area of New York City – the epicenter, in the U.S., of what evolved into a global economic crisis in 2008. The larger project's overarching goal has been to investigate social factors, individual and contextual, that shaped residents' responses to the crisis. In the first study we draw on data collected through an online survey in 2011 ($N = 387$), and data from the U.S. Census Bureau and the U.S. Department of Labor; in the second study we rely on survey data collected from New York City residents in 2012 ($N = 338$). Through this synthesis, we

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investigate the role of differences among residents living in 23 counties in the broader NYC metropolitan area with respect to media use, as well as the pathways though which media consumption shaped psychosocial stress related to the economic crisis. Additionally, flipping the question around, we explore what individual-level differences influenced residents' dependency on media for information that helped them make sense of the economic crisis. In the first study, although analyses showed that media use had no direct effects on psychosocial stress, it did shape community belonging, conceived as a type of social support derived from secondary social ties (i.e., neighbors). In the case of the second study, media dependency differences were accounted by disparities in individuals' socioeconomic status, financial literacy, perceived threat tied to the crisis and coping strategy employed. We conclude with a discussion of implications of these findings for future research, practice and policymaking.

In 2007, a combination of factors led the U.S. and the global economy into a crisis, the magnitude of which the world had not seen since the 1920s Great Depression (Bernanke 2009). In September 2011, according to a Gallup poll, 80% of Americans believed that the economy remained in a recession, even though the Federal Reserve announced the end of the crisis in 2009 (Gallup 2011). In fact, according to Gallup's Economic Confidence Index, even through 2016 Americans' assessment of their current and future economic condition was consistently negative (Gallup 2016). In this paper we synthesize findings from two studies conducted in the context of a larger research endeavor, Project ReBOUND, launched in the metropolitan area of New York City (NYC) – the epicenter, in the U.S., of what evolved into a global economic crisis in 2008. The larger project's overarching goal was to investigate social factors, individual and contextual, that shaped residents' responses to the crisis. The project focused on an urban area as early research indicated that cities, including New York, were severely affected by the economic downturn (Cokes & Kornblum 2010; Fiscal Policy Institute 2008). Moreover, the multiple effects of the recent economic

crisis on urban residents' lives, including effects on their mental health, had drawn the attention of the World Health Organization (WHO) and the broader scientific community (Anderson 2011; Stuckler, Basu & McDaid 2011). Through this synthesis we investigate the role of differences among residents living in 23 counties in the broader metropolitan area of New York City with respect to media use, as well as the pathways though which media use influenced psychosocial stress related to the economic crisis. Additionally, flipping the question around, we explore what individual-level differences determined residents' dependency on media for information that helped them make sense of the economic crisis. We conclude with a discussion of implications of these findings for future research, professional practice, and policymaking.

Study 1: Media Consumption and Stress during the Economic Crisis

Shortly after the onset of the global economic crisis, there were researchers who argued that the media had created a sense of 'collective mass panic' (Sperling, Bleich & Reubach 2008: 973). Such claims underscore the potential significance of media effects on individuals' sense of threat and vulnerability during an economic crisis. There is, in fact, considerable communication research that shows that media play an important role in framing crises, including financial ones. Moreover, studies document that media pay more attention to the economy when it is in turbulence (Haller & Norpoth 1997; Shah, Watts, Domke, Fan & Fibison 1999). The combination of increased media attention to the economy and a propensity for media to produce sensational news during a crisis in order to increase their market share (Burns, Peters & Slovic 2012) can amplify individuals' sense that they are under threat, which in turn can have negative consequences for their mental health.

Perceived threat, or the expectation of harm, is based on an individual's cognitive appraisal of a particular event (Carpenter 2005), and it is likely to increase that person's level of stress. Lever (2008) defines stress as 'the relationship between an individual and his or her environment when it is evaluated by the individual as exceeding his or her resources and endangering his or her well-being' (p. 229). Lever's definition underscores the contextual nature of stress. During a financial crisis, stress may be caused by myriad factors, such as becoming unemployed or being unable to pay the mortgage on your home (Adda, Banks & von Gaudecker 2009; Kim et al. 2005). However, the foregoing definition of stress and other research suggest that perceived threat alone of losing a valued resource may suffice to raise someone's level of stress. In thinking about the economic downturn, a person may conclude that his or her job is at risk. This could trigger as much stress as actually being laid off (Dooley, Catalano & Wilson 1994).

As perceived economic threat is tied to individual appraisals of anticipated harm, not every person will feel equally threatened by an economic downturn. Perceptions of threat and the stress they produce depend on (a) individuals' evaluation of how vulnerable they are to a danger they are facing and (b) the appraisal of their ability to address the threat effectively (Lazarus & Folkman 1984). This capacity is related to individuals' material, but also their social support resources. Social support refers to 'the various resources provided by one's interpersonal ties' (Cohen & Hoberman 1983: 100) and several studies have illustrated the positive effects of social support on individuals' mental health (Almedom 2005; Wenzel, Glanz & Lerman 2002). People who feel that they have people around them whom they can count on for help in the case of a lay off (e.g., to find a new job) are likely to experience less stress than people who do not have such social resources.

Typically, social support is thought to derive from primary social relationships; from ties to kin, a spouse or partner. However, social support can in fact come from a variety of sour-

ces, as individuals are 'embedded within social structures that determine exposure to stress, stress mediators at their disposal, and perceptions of stress' (Stockdale et al. 2007: 1868). Thoits (2011a), for example, notes that social support may also come from secondary groups. In Project ReBOUND, we have focused on residential communities as a type of social structure individuals are embedded in and one in which secondary group relationships develop (e.g., Sampson 2012).

In this paper, specifically, we focus on a type of social support, which we label community belonging. Drawing on research based on communication infrastructure theory, we define community belonging as individuals' feelings and behaviors of attachment to their neighbors and residential communities (Ball-Rokeach, Kim & Matei 2001; Kim & Ball-Rokeach 2006a). Studies on depression among earthquake survivors (Li, He, Sun & Chan 2011) and stress among college students living in an armed conflict zone (Nuttman-Shwartz & Dekel 2009) point to the positive effects of attachment to one's own residential community on mental health. That said and even though, in a recent report, the World Health Organization (WHO) (2011) explicitly suggests that community belonging can help individuals weather economic crises, the role of community belonging at times of economic crisis has not been adequately studied. Our work in NYC was designed to help fill this gap.

The effects of social support on health can vary under different circumstances (Thoits 2011b). Wenzel et al. (2002) argue that as perceived threat becomes more severe, people with strong social support will fare better with respect to mental health indicators than people with weak social support. Therefore, here, in Study 1, we investigate the role of belonging to one's residential community as a mechanism of social support and we examine (a) its direct effects on stress related to the economic crisis, as well as (b) the impact of the interaction between community belonging and perceived threat on stress.

In line with the notion that where individuals live influences how they respond to a crisis (and what stores of social support

they may have to draw on), we considered the compelling research suggesting that the effects of the economic crisis on cities and communities across the United States have been uneven. In 2015, in approximately 1,000 counties across the U.S., the number of 'underwater' homes (i.e., properties in which the owner owes more on a mortgage than the house is worth) was stagnant or increasing, threatening regions of the country already struggling to recover with the potential of more foreclosures, more empty and abandoned homes (Zonta & Edelman 2015). At the same time, only 73 counties accounted for half of the jobs created between 2010 and 2014 (i.e., 2.5% of counties across the entire U.S.); and by the end of 2014, only 3 out 5 middle-waged jobs lost during the 'Great Recession' were recovered by the U.S. economy (Economic Innovation Group 2016). These data motivated us to explore if living in one county or another in the greater metropolitan area of New York City had an impact on how residents experienced the economic crisis and, specifically, on the level of stress they experienced.

Methodology

Participants were recruited from 23 counties that are included in the metropolitan statistical area (MSA) New York City is part of and were asked to complete an online survey. All participants ($N = 387$) were part of an online panel provided by an online survey company. This online panel was recruited through homepages of partner websites or pop-ups distributed across a network of partner websites (e.g., airline companies, travel sites, credit cards and restaurant VIP clubs). Those who completed a survey were compensated with cash-equivalent points that could be traded for various rewards (e.g., Amazon gift cards, dining gift cards). For this study, e-mail solicitations were sent to eligible panels (i.e., residents of all five New York City boroughs). Data collection lasted from mid-December 2010 to mid-January 2011. The response rate was 15.1%. Table 1 pre-

sents the demographic profile of the sample and compares it to that of the MSA's population.

Table 1.
Socio-Economic Status of Sample (Study 1)

	Study Sample	New York City Residents American Community Survey (2005-2009)
Age	44.4 years old	35.6 years old
Gender		
Female	46.6%	47.7%
Male	53.4%	52.3%
Race/Ethnicity		
White	47.7%	45.4%
Black	17.7%	25.1%
Asian	15.9%	11.7%
Latino	11.2%	15.1%
Median Household Income	$50,000 ~ $59,999	$50,173
Bachelor's degree or higher	51%	33.1%
Household Size	2.83	2.67

Individual-Level Measures

Perceived stress. A four-item version of a scale of perceived psychosocial stress (Cohen, Kamarch & Mermelstein 1983) was used to tap the level of stress that participants experienced in the month prior to the study (1 = never; 5 = very often). The average of the items was computed; higher scores

indicated greater perceived stress (M = 2.82, SD = .73, Cronbach's a = .70).

Perceived economic threat. Ten items were used to assess how threatened individuals felt by the economic conditions in different areas of their everyday lives.Participants were asked how concerned or afraid they were (1 = not at all concerned or afraid; 5 = extremely concerned or afraid) about 'losing their job', for instance, and 'being able to make their mortgage payments or pay their rent'. A composite measure of perceived economic threat was created by averaging the answers of all ten items (M = 3.21, SD = 1.15, Cronbach's a = .93). An exploratory factor analysis with principal axis factoring extraction indicated that all ten items loaded on one factor (eigenvalue = 6.01), which accounted for 60.14% of the variance.

Community belonging. The respondent's community belonging was assessed using a modified version of the belonging index developed in prior research (Ball-Rokeach et al. 2001; Kim & Ball-Rokeach 2006b). The belonging measure captures residents' feeling of attachment to a residential area that motivates everyday acts of neighborliness (Ball-Rokeach et al. 2001). The modified version used in this study included 11 items, instead of eight. The first four items captured a *subjective* dimension of belonging, while the latter seven items reflect an *objective* dimension. For the first dimension, on a 5-point scale, respondents are asked how much they agreed or disagreed with statements such as: 'You are interested in knowing what your neighbors are like;' 'Your neighbors always borrow things from you and your family'. For the second dimension, respondents were asked seven questions, three of which were more specifically related to financial challenges. The introduction for all questions was the same. Regarding financial issues specifically, participants were asked: 'How many of your neighbors do you know well enough to ask them to (respondent specifies a number):' 'Ask for a small amount of money, as a loan, when you are in need?' 'Discuss your personal/family financial difficulties?' And 'ask for advice regarding your fi-

nancial investments?' Transformations were performed to standardize all items to a 5-point scale, and the items were then summated into an aggregate variable (M = 31.95, SD = 9.52, Cronbach's a = .89). An exploratory factor analysis with principal axis factoring extraction and promax rotation was conducted. As expected, seven items loaded onto the objective dimension factor, which accounted for 49.04% of the variance and four items loaded onto the subjective dimension factor, which accounted for 12.36% of the variance.

Media use and communication ecology integration. Participants answered how frequently they connected to or used a variety of different media over the course of the week prior (1 = never; 5 = every single day). Individuals reported on their use of five different forms of media: Mainstream TV (M = 2.95, SD = .82), defined as 'major, English-language TV channels;' Mainstream newspapers (M = 2.95, SD = .82), defined as 'major, English-language newspapers;' Local TV (M = 2.95, SD = .82), defined as 'over-the-air or cable television channels that target your local area;' Local newspapers (M = 2.95, SD = .82), defined as 'newspapers that target your local area;' and the Internet (M = 4.63, SD = .92).

In addition to looking at individual media, we also considered the level of integration of individuals' communication ecologies; that is; the combination of communication resources —including media and interpersonal— that individuals relied on in order to achieve a variety of everyday life goals (Wilkin et al. 2007). Informed by the work of Kim and Ball-Rokeach (2006a, 2006b) on the construction of the measure of an integrated connection to a person's local storytelling or communication network (comprising local media, local organizations, and other residents), we calculated the integration of a resident's communication ecology as the sum of three interactions terms (see the formula below). In the formula, MM is individuals' average use of mainstream media (newspapers, TV, radio), LM the average use of local media, and INP captures use of interpersonal communication resources.

The underlying rationale suggests that a person's communication ecology is more integrated the more a person relies on multiple communication resources for information that is helpful for making sense of the economic crisis. The formula also reflects the notion that connecting to one source of information can prompt connections to others (in order, e.g., to elaborate or confirm information obtained from the first source) and this can have additional benefits for the individual. In this study, we considered the following communication resources: mainstream media, local media, as well as interpersonal communication channels ($M = 8.41$, $SD = 3.01$).

Communication Ecology Integration (CEI) = $\sqrt{(MM \times LM)} + \sqrt{(INP \times MM)} + \sqrt{(INP \times LM)}$

Control variables. Six socio-economic status variables were included in the analyses: Age ($M = 44.38$, $SD = 14.58$), household income ($M = 7.30$, $SD = 4.27$), education ($M = 4.47$, $SD =$. 96), ethnicity (white, 47.7%), gender (male, 46.7%), and employment status (full time, 44.3%).

Community-Level Measures (Counties)

Poverty rate change. In order to calculate poverty rate change before and after the 2008 financial crisis, we used the percentage of individuals who lived under the federal poverty level in 2007 (i.e., before the recession) and in 2009 (i.e., after the recession was officially over). The poverty rate of 2007 varied from 3.30 to 27.10 across the 23 different counties of metropolitan New York City ($M = 10.01$, $SD = 8.40$). The poverty rate in 2009 ranged from 3.80 to 28.30 ($M = 10.90$, $SD = 9.10$). Based on the abovementioned figures, we calculated changes in the poverty rate just before and in the year that experts determined the recession was technically over. The average change was .84 ($SD = .83$), indicating that, on average, the number of individuals who lived under the poverty level was higher in 2009 compared to 2007.

Median household income change. Median income change was calculated based on the median income of 2007 and 2009 in each of the 23 counties comprising our study area. Data for the 2007 and 2009 median income levels were drawn from the U.S. Census' American Community Survey (2007 Median income = $65,847, Min = $34,031, Max = $96,792; 2009 median income = $68,495, Min = $32,888, Max = $96,300). The difference between the median income levels in these two years was used to capture median income change (M = $929.65, SD = $2,502.35).

Ethnic heterogeneity. Ethnic heterogeneity was calculated in each county by using the formula below (Alesina & La Ferrara 2000), in which Si is the proportion of ethnic group i in an area (i.e., a county in this study). Based on the formula, a community without any ethnic diversity (i.e., a community comprising a single ethnic group) will score 0. As community becomes increasingly ethnically diverse, the score will get closer to 1. In this study, we considered Whites, Latinos, African Americans, Asians and others to calculate ethnic heterogeneity scores for each county in the metropolitan New York City area (M = .52, SD = .16, Min = .19, Max = .76).

Ethnic Heterogeneity = $1 - \Sigma_i S_i^2$

Analysis

To investigate the individual - and contextual factors that shaped individuals' stress response to the economic crisis, we conducted hierarchical OLS regression analyses, via SPSS, and multilevel modeling, completed with the statistical package HLM (Raudenbush, Bryk & Congdon 2004).

Results

Relationships among Media Consumption, Perceived Threat, and Community Belonging

Most media use variables were not directly related to stress. Only local TV use was positively associated with stress ($b = .071$, $p < .05$). However, as indicated in Table 3, this direct effect disappeared when perceived threat was introduced to the model ($b = .043$, *n.s.*). Subsequently, we examined the possibility that media use might influence perceived threat. Contrary to our expectations based on prior research, most media use variables did not emerge as significant factors that explained individuals' perceived economic threat in their everyday life (see Table 2). The exception was local TV consumption; that is, people who watched more local television were more likely to report higher levels of economic threat ($b = .111$, $p < .05$).

In addition to the effects of individual media consumption, in the context of the crisis on both belonging and stress, we also considered whether it mattered if residents' communication ecologies were more or less integrated; in other words, if individuals' use of or connection to one communication resource triggered the use of other communication resources. Our multi-level analyses indicated that communication ecology integration did not shape stress directly. It did, however, have a significant and positive effect on community belonging, the main social determinant of individuals' stress response to the crisis (coefficient = 1.49, $SE = .16$, $p < .001$; see also Table 4).

Table 2.
Models Explaining Perceived Economic Threat and Community Belonging

	Perceived Economic Threat		*Community Belonging*	
	B	SE	B	SE
Control Variables				
Age	-.004	.004	.043	.037
Gender (male = 1)	-.311*	.130	-.762	1.062
Education	-.147*	.066	-.684	.539
Household Income	-.030	.016	.362**	.128
Ethnicity (White = 1)	-.017	.135	.564	1.104
Employment Status	.192	.130	.433	1.064
Media Use				
Mainstream TV	-.001	.056	-.698	.463
Mainstream Newspaper	.020	.046	.827*	.382
Local TV	.111*	.047	.489	.388
Local Newspaper	-.055	.059	.972*	.488
Internet	-.062	.066	-.253	.543
Constant	4.372***	.482	29.183***	3.959
Overall R^2	.077**		.116***	

Note. $N = 354$; *$p < .05$, **$p < .01$, ***$p < .001$;

How Perceived Economic Threat and Community Belonging Affect Stress

Table 3 shows the effects of various factors and specifically of perceived economic threat and community belonging on perceived stress of individual residents. Perceived economic threat emerged as a significant factor that explained the variance in stress experienced due to the recession. As predicted, those who felt more threatened by the economic crisis experienced more stress (b = .294, $p < .001$). Moreover, compared to those who felt less attached to their residential community, residents with a stronger sense of belonging experienced less stress (b = -.009, $p < .05$).

Table 3.
Models Explaining Perceived Stress

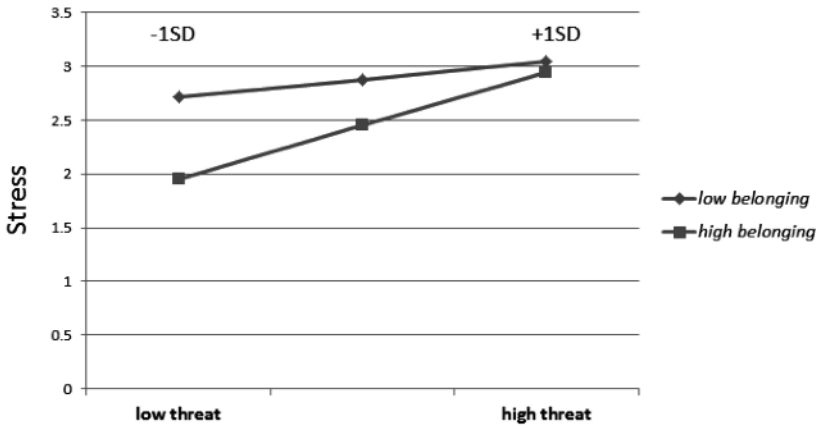
m	*Perceived Stress*			
	b	se	B	se
Control Variables				
Age	-.003	.002	-.003	.002
Gender (male = 1)	-.045	.072	-.045	.072
Education	.010	.037	.015	.037
Household Income	-.005	.009	-.004	.009
Ethnicity (White = 1)	-.098	.075	-.094	.074
Employment Status	-.020	.072	-.018	.072
Media Use				
Mainstream TV	.021	.031	.030	.031
Mainstream Newspaper	-.017	.026	-.015	.026
Local TV	.043	.026	.043	.026
Local Newspaper	-.029	.033	-.036	.033
Internet	.051	.037	.050	.037
Perceived Economic Threat	.294***	.030	.294***	.030
Community Belonging	-.009*	.004	-.009*	.004

PET × Belonging			.006*	.003
Constant	2.720***	.270	2.657***	.270
Overall R^2	.280***		.289***	

N o t e. N = 354; *$p < .05$, **$p < .01$, ***$p < .001$; Perceived economic threat (PET), Community belonging (Belonging) variables were entered around the mean for interaction terms.

Subsequently, we examined whether or not community belonging could moderate the effects of perceived threat on stress (i.e., the interaction between perceived economic threat and community belonging). From the significant interaction effects presented in Table 3 ($b = .006$, $p < .05$), we infer that the protective role of community belonging varies depending on the level of perceived threat individuals experience. More specifically, community belonging helped those who experienced low to moderate levels of threat alleviate stress. For those feeling most vulnerable or threatened by the adverse economic environment, however, attachment to the community did not help reduce their level of stress (see Figure 1).

F i g u r e 1.
Effects of the interaction between perceived economic threat and community belonging on perceived stress



The Influence of Community-Level Factors

Multilevel modeling findings indicated that all three community-level factors, poverty change in a country between 2007 and 2009, household income change between 2007 and 2009, as well as ethnic heterogeneity all had a negative effect on community belonging. The effects of poverty change (coefficient = -1.58, SE = .72, $p < .05$) and ethnic heterogeneity (coefficient = -7.46, SE = 3.39, $p < .05$) remained significant even when we accounted for control variables, but also the integration of individuals' communication ecology. In the final multilevel model (see Table 4) predicting individuals' community belonging, communication ecology integration had a positive influence (coefficient = 1.49, SE = .16, $p < .001$). Additionally, individuals reporting higher household incomes also scored higher on belonging. This pattern held true, generally, across geographical areas and communities, defined here as counties. However, individuals living in counties that were more ethnically heterogeneous and that experienced the largest changes in poverty, before and in the aftermath of the economic recession, scored the lowest on community belonging.

Study 2: Determinants of Media Dependency during Economic Crises

Although the initial focus for Project ReBOUND was to establish individual and community-level (or contextual) factors that explained individuals' response to the economic crisis and possibly their mental well-being, progressively, a series of additional questions emerged. Key among them was this: If communication and media consumption especially is indeed a determinant of individuals' psychosocial response to the economic crisis, even if only indirectly, what are the factors that influence how individuals connect to and use media in the context of an economic crisis?

Table 4.
Multilevel Models of Community Belonging

	Coefficient (SE)				
	Model 1	Model 2	Model 3	Model 4	Model 5
Individual-level fixed effects					
Mean belonging	31.77*** (.66)	31.87*** (.63)	32.17*** (.55)	32.89*** (.58)	32.44*** (.53)
Age	—	.04 (.04)	-.02 (.03)	—	-.02 (.04)
Gender (Male = 1)	—	-.52 (1.39)	-.31 (1.34)	—	-.36 (1.02)
Education	—	-.86 (.64)	-.47 (.57)	—	-.37 (.50)
Household income	—	.44 (.15)**	.31 (.13)*	—	.31 (.12)*
Ethnicity (White = 1)	—	.66 (1.14)	1.21 (1.09)	—	1.12 (1.07)
Employment status (Fulltime = 1)	—	.17 (1.04)	-.45 (1.19)	—	-.85 (1.01)
Communication ecology integration	—	—	1.50 (.15)***	—	1.49 (.16)***
Neighborhood-level: Fixed effects					
Poverty rate change (2007-2009)	—	—	—	-1.83 (.69)*	-1.58 (.72)*
Median income change (2007-2009)	—	—	—	-.00 (.00)*	-.00 (.00)
Ethnic heterogeneity	—	—	—	-7.14 (3.29)*	-7.46 (3.39)*
Random effect					
Mean belonging Variance	3.83	2.96	1.81	.76	.07
Chi-square	36.89*	32.77	26.09	23.89	15.57
p-value	.02	.07	.25	.20	> .50
Level-1 error (^{2})	87.40	87.42	66.83	87.96	66.97

N o t e: All of the variables are grand-mean centered; *p < .05, **p < .01, ***p < .001.

Considerable communication research illustrates that individuals' dependency on media as information resources increases at times of crisis, or, more precisely, when perceived threat and ambiguity in individuals' environs increases (Ball-Rokeach 1998; Loges 1994). However, we wondered whether factors beyond perceived economic threat (as defined earlier) at times of an economic crisis affected media dependency. Beyond individual socio-economic profile characteristics we focused on two variables and their interactions with each other and with perceived economic threat: (a) coping strategies that individuals employed during the crisis and (b) financial literacy. Moreover, we looked at dependency by type of communication resource; that is dependency on: local television and radio, local print media, local Internet-based resources (e.g., websites, blogs), and social networking sites (e.g., Facebook).

Individual Coping Strategies as Determinants of Media Dependency

Coping refers to those behaviors or strategies individuals employ to manage a threat and reduce the impact of a source of stress (Carver, Scheier & Weintraub 1989). Research has distinguished between engaging (e.g., planning problem solving, information seeking, and making use of social support) and disengaging coping strategies (e.g., cognitive distancing or behavioral avoidance) (Glanz & Schwartz 2016). Generally speaking, individuals adopt engaging coping strategies when perceiving a stressor as manageable, while people with lower perceived self-efficacy tend to employ disengaging coping strategies (Folkman 1984).

A number of studies show that engaging coping behaviors result in less psychological distress and, thus, facilitate individual adaptation in situations, such as terrorist attacks (Schuster et al. 2001) and in natural disasters (Jeney-Gammon Daugherty, Finch, Belter & Foster 1993). By contrast, disengaging co-

ping behaviors are frequently considered maladaptive because a person's intention to shift their attention from the stressor through denial or avoidance can generate more stress in the long term (Carver et al., 1993). Here, we argue that tuning into media for making sense of an economic crisis is something that people employing engaging coping strategies are more likely to do. In an effort to manage the source of stress, these individuals seek information about the stressor (e.g., the possibility of facing foreclosure on their home) in the media and thus depend more on them.

From the 13 types of coping strategies that Carver and colleagues tapped into with their questionnaire, in this study we focus on four that may be classified as engaging coping strategies: (a) active coping (e.g., I've been concentrating my efforts on doing something about the situation I'm in), (b) planning (e.g., I've been thinking hard about what steps to take), (c) seeking instrumental social support (e.g., I've been seeking advice or help from other people), and (d) seeking emotional social support (e.g., I've been comforted by someone).

The Role of Financial Literacy in Media Dependency

We further argue in this study that the extent to which an individual depends on media for economic understanding is related to his or her financial literacy level, defined as 'knowledge of basic economic and financial concepts, as well as the ability to use that knowledge and other financial skills to manage financial resources effectively for a lifetime of financial well-being' (Hung, Parker & Yoong 2009, p.12). Individuals with higher financial literacy are expected to feel less vulnerable to an economic crisis and have higher levels of perceived self-efficacy, compared to less financially literate individuals. That is because the former are more likely to seek and comprehend financial information that would help them make better decisions (Lusardi 2009).

The research on financial literacy and media dependency, or information seeking more broadly speaking, is scant. There is considerable research, however, on the relationship between other kinds of literacy and information seeking and processing behavior, particularly in the field of health communication. Studies indicate, for example, that patients with higher levels of health literacy are more likely to attend to health information (Koo, Krass & Asiani 2006), and to better manage their health condition (Wolf, Davis, Arozullah & Bennett 2005).

Given the aforementioned studies and that we know very little about how financial literacy influences media use at times of economic crisis, this study offered a unique opportunity to investigate this relationship. Relatedly, according to the Pew Research Center's News Interest Index survey, conducted in 2009, amidst the financial turmoil, 46% of Americans reported having a problem with following the news coverage around the financial crisis, due to their lack of sufficient financial background information (Pew 2009).

Methodology

This second study was based on data from an online survey conducted through the platform Qualtrics in December 2012 (one year after Study 1, on which we reported earlier). From the 781 completed surveys, we excluded cases in which participants did not answer the majority of questions critical for our analyses. Therefore, our final sample size was 338 (i.e., 43.28% of the completed surveys). Table 5 presents the demographic profile of the sample and compares it to that of the MSA's population.

Measures

Individual media channel dependency. To measure survey participants' dependency on specific media channels, they were asked to indicate which they considered the

Table 5.
Socioeconomic Status of Sample (Study 2)

	Study Sample	New York City Residents American Community Survey (2010-2014)
Gender		
Male	49.7%	48.5%
Female	50.3%	51.5%
Race/Ethnicity		
White	50.3%	56.5%
Black	16.9%	17.6%
Asian	11.2%	8.5%
Latino	20.1%	18.6%
Median household income	$50,000 to $59,999	$58,687
Education		
Bachelor's degree +	40.8%	33.7%
Household size	2.66	2.62

most important sources of information about the local economy. Among the various media forms listed, they were asked to select all that apply. A score of 1 was given for every selected medium (otherwise a score of 0 was given). The following five media resources were considered in the analysis: local newspapers (n = 182, 53.8%), local television news broadcasting channels (n = 200, 59.2%), local radio (n = 72, 21.3%), websites or blogs dedicated to the local community (n = 79, 23.4%), and social networking sites (SNS) (n = 49, 14.5%).

Overall media dependency. Individuals' dependency on local communication resources overall was calculated

by multiplying two scores: 1) their dependency on local print, local TV, and local radio for making sense of local economic conditions, and 2) the frequency of use of each of the aforementioned media. Along with the most important sources of information for economic understanding, participants indicated how frequently they used local media (i.e., print, TV, and radio) over the course of the week before the survey, on a scale from 1 (*never*) to 5 (*every single day*). These two sets of scores were multiplied by each media channel first, and summated into one to create the overall local media dependency measure. The score ranged from 0 to 15 (M = 3.74, SD = 3.30).

Perceived economic threat. We employed the same measure as the one described in Study 1 reported on earlier. For Study 2, M = 3.29, SD = 1.13, Chronbach's α = .87.

Coping. We used eight items from Carver's (1997) COPE scale to gauge how people dealt with a stressor related to the economic crisis. The extent to which people engaged in active coping, planning, instrumental social support seeking, and emotional social support seeking were measured with two items respectively, on a scale from 1(*strongly disagree*) to 5 (*strongly agree*). An exploratory factor analysis with principal axis factoring extraction showed that four items loaded onto the social support seeking factor, which accounted for 87.78% of the total variance, and four items loaded onto the proactive coping dimension factor, which accounted for 22.25% of the variance. We subsequently created one composite measure of social support seeking by averaging participants' scores on the first four items (M = 3.10, SD = .87, Chronbach's a = .86); and one composite measure that captured proactive coping by averaging individuals' answers to the second set of four items (M = 3.66, SD = .73, Chronbach's α = .84).

Financial literacy. We selected 7 items from Mandell (2008) and the Jump$tart Coalition for Personal Financial Literacy's survey, including 'Which of the following is true about sales taxes?', 'Retirement income paid by a company is called:', 'If you had a savings account at a bank, which of the

following would be correct concerning the interest that you would earn on this account?', to measure participants' financial literacy. A composite measure was created by counting the number of correct answers chosen by the participants (M = 4.81, SD =1.86).

Control variables. Five socioeconomic status variables were included in the models: gender (female, 50.3 %), ethnicity (White, 50.3%), education (bachelor's degree and higher, 40.8%), household income ($60k and above, 40.2%), and employment status (full-time, 37%).

Analyses

To explore how perceived economic threat, coping style, and financial literacy, both independently and in interaction, affected individuals' dependency on *individual* media resources for the purpose of understanding the local economy, we conducted a series of hierarchical logistic regression analyses. To investigate how the same independent variables shaped individuals' *overall* dependency on local communication resources, a hierarchical OLS regression analysis was performed. Below, to facilitate comparisons of findings across media, we only report and discuss the final model from each analysis.

Results

The results of the analyses regarding the role of perceived economic threat (PET), proactive coping, support seeking (as a coping strategy), and financial literacy in predicting media are reported in Table 6.

Local Newspapers. Residents who identified as White were more likely to depend more on local newspapers for information that helped them better navigate the economic crisis (*odds ratio* = 1.620, $p<.05$). Financial literacy was the only one of the three main factors we examined in this study that

Table 6.
Logistic Regression Analysis of Communication Resource Dependency and Threat Perception, Proactive Coping, Support Seeking, and Financial Literacy

	Local Newspaper (N = 338)		Local TV (N = 338)		Local Radio (N = 325)		Local Internet (N = 325)		SNS (N = 323)	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Control Variables										
Gender (1 = female)	1.00	[.63, 1.60]	.91	[.56, 1.47]	.76	[.42, 1.35]	.76	[.42, 1.36]	.65	[.32, 1.33]
Race/Ethnicity (1 = White)	1.62**	[1.01, 2.61]	1.18	[.72, 1.92]	1.38	[.76, 2.54]	.82	[.45, 1.50]	.98	[.47, 2.04]
Education (1 = Bachelor's degree+)	.77	[.48, 1.27]	1.37	[.83. 2.26]	2.10**	[1.16, 3.82]	1.22	[.66, 2.23]	1.02	[.47, 2.20]
Income (1 = $60k+)	1.23	[.73, 2.10]	1.01	[.60, 1.70]	.86	[.46, 1.63]	1.05	[.55, 2.01]	.79	[.35, 1.78]
Employment (1 = fulltime employed)	.96	[.57, 1.61]	.92	[.54, 1.55]	1.02	[.54, 1.92]	1.40	[.75, 2.60]	1.14	[.53, 2.47]
PET	.84	[.66, 1.10]	1.00	[.77, 1.25]	1.23	[.87, 1.74]	.86	[.62, 1.19]	1.39	[.91, 2.13]
Proactive Coping	1.37	[.91, 2.07]	1.70**	[1.08, 2.67]	.88	[.48, 1.63]	1.36	[.77, 2.41]	.91	[.42, 1.97]
Support Seeking	1.21	[.86, 1.69]	.98	[.70, 1.39]	1.97**	[1.15, 3.37]	2.07***	[1.29, 3.33]	2.32**	[1.21, 4.44]
Financial Literacy	1.21**	[1.04, 1.40]	1.11	[.95, 1.30]	1.24*	[1.00, 1.56]	.98	[.80, 1.19]	.77**	[.60, 1.00]

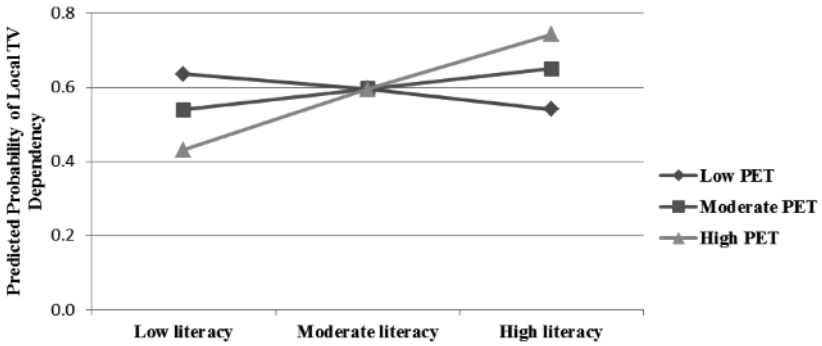
Interaction Variables										
PET x Proactive Coping	1.06	[.74, 1.53]	.96	[.64, 1.44]	1.70*	[1.00, 2.89]	.84	[.50, 1.43]	1.34	[.67, 2.70]
PET x Support Seeking	1.15	[.83, 1.60]	.90	[.65, 1.24]	.63*	[.38, 1.06]	1.07	[.68, 1.69]	.49**	[.26, .90]
PET x Financial Literacy	.96	[.83, 1.11]	1.23***	[1.05, 1.43]	.94	[.77, 1.14]	1.07	[.88, 1.29]	.99	[.77, 1.26]
Proactive Coping x Financial Literacy	1.15	[.91, 1.45]	.77**	[.59, 1.00]	.94	[.67, 1.32]	1.09	[.80, 1.47]	1.00	[.67, 1.51]
Support Seeking x Financial Literacy	.87	[.71, 1.07]	1.00	[.81, 1.23]	.83	[.61, 1.13]	.87	[.66, 1.13]	1.03	[.72, 1.48]
PET x Proactive Coping x Financiala Literacy	1.06	[.88, 1.29]	1.11	[.88, 1.39]	.80	[.60, 1.06]	1.04	[.81, 1.35]	.94	[.65. 1.37]
PET x Support Seeking x Financial Literacy	.91	[.75, 1.10]	.96	[.80, 1.16]	1.19*	[.90, 1.57]	.84	[.65, 1.10]	1.00	[.70, 1.43]
Constant	.83		1.46		.16		.24		.15	
Cox & Snell	.081		.082		.094		.120		.101	
Nagelkerke	.108		.110		.144		.182		.185	
Overall correct classification	62.7%		63.9%		78.2%		79.7%		86.7%	

N o t e. *OR* = odds ratio; *CI* = confidence interval; * $p < .10$, ** $p < .05$, *** $p < .01$, **** $p < .001$.

emerged as a significant determinant of local newspaper dependency (*odds ratio* = 1.208, $p < .05$). That is, the more likely that residents were to be financially literate, the higher the likelihood of local newspaper dependency for economic understanding.

Local TV. Dependency on local TV was more likely, when individuals were also more proactive in dealing with stress caused by the financial crisis (*odds ratio* = 1.698, $p < .05$). The analysis also indicated a significant interaction effect between PET and financial literacy. Specifically, as shown in Figure 2, the predicted probability of local TV dependency increased as individuals' financial literacy level increased, when individuals' level of PET was moderate or high. By contrast, when an individual's PET was low, higher financial literacy was associated with lower levels of local TV dependency.

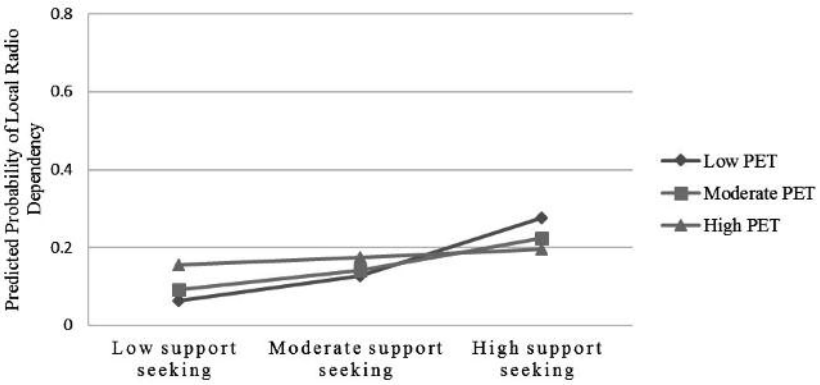
Figure 2.
Effects of the interaction between perceived economic threat and financial literacy on local TV dependency



Local Radio. Whites and more educated residents (i.e., who had at least a Bachelor's degree) were more likely to depend on local radio for making sense of the economic crisis (see Table 6). The more likely that residents were to engage in social support seeking to cope with effects of the financial crisis (*odds ratio* = 1.971, $p < .05$) and to be financially literate (*odds ratio* = 1.244, marginally significant, $p = .06$), the more likely

they were to be dependent on local radio. The analysis also revealed an interaction between PET and support seeking (*odds ratio* = .630, marginally significant, $p = .08$). As shown in Figure 3, the predicted probability of local radio dependency was higher among New York residents more likely to seek out social support, when perceived threat was low or moderate. When perceived threat was high, though, local radio dependency remained relatively stable, regardless of individuals' inclination to seek out social support.

Figure 3.
Effects of the interaction between perceived economic threat and support seeking on local TV dependency

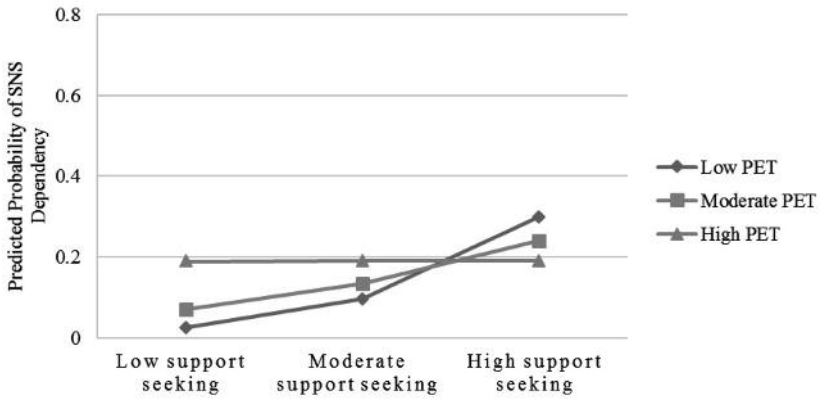


Local Internet. As shown in Table 6, social support seeking was the only significant predictor of local Internet dependency (*odds ratio* = 2.071, $p < .01$). Residents who were more likely to seek out social support as a way of coping with the crisis, also indicated a stronger dependency on local Internet information resources.

Social Networking Sites (SNS). Finally, SNS dependency for economic understanding was more likely for those with less financial knowledge compared to those who were financially more literate (*odds ratio* = .772, $p = .05$). Likelihood of SNS dependency also increased as support seeking increased

(*odds ratio* = 2.319, $p < .05$). Moreover, there was a significant interaction effect between PET and support seeking (*odds ratio* = .264, $p < .01$). As indicated in Figure 4, when individuals indicated low to moderate degrees of support seeking (as a coping mechanism), the predicted probability of SNS dependency was highest among those whose PET level was high.

Figure 4.
Effects of the interaction between perceived economic threat and support seeking on social networking site (SNS) dependency



Overall local media dependency

As indicated in Table 7, personal dependency on local media resources increased as individuals' financial literacy level increased. We also found that a combination of factors such as (a) support seeking as a coping strategy and financial literacy (b = -.331, p <.05), (b) perceived economic threat (PET) and financial literacy (b = .185, marginally significant, p = .06), and (c) PET, support seeking, and financial literacy (b = -.220, marginally significant, p =.08) simultaneously influenced the intensity of overall local media dependency. The interaction of financial literacy and support seeking behaviors made the most difference in terms of local media dependency when PET was high. Lo-

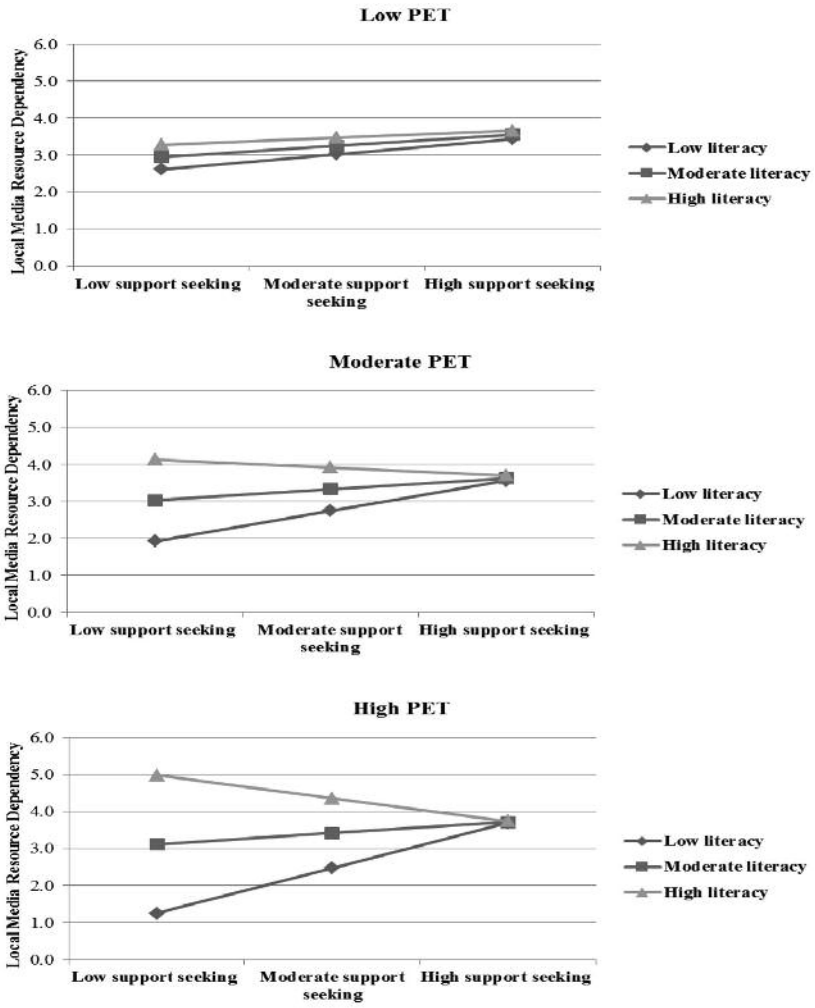
cal media dependency was virtually identical for residents of all financial literacy levels who had similar PET scores, but who also were most likely to engage in support seeking to cope with the financial crisis and its effects (see Figure 5).

Table 7.
OLS Regression Analysis of Overall Local Communication Resource Dependency and Threat Perception, Proactive Coping, Support Seeking, and Financial Literacy

	B	SE
Control Variables		
Gender (1 = female)	-.23	.32
Race/Ethnicity (1 = White)	.06	.32
Education (1 = Bachelor's degree+)	.03	.33
Income (1 = $60k+)	.04	.35
Employment (1 = fulltime employed)	.50	.34
Main Variables		
PET	.11	.16
Proactive Coping	.24	.27
Support Seeking	.36	.22
Financial Literacy	.31***	.10
Interaction Variables		
PET x Proactive Coping	.21	.24
PET x Support Seeking	-.01	.22
PET x Financial Literacy	.19*	.10
Proactive Coping x Financial Literacy	.02	.15
Support Seeking x Financial Literacy	-.33**	.13
PET x Proactive Coping x Financial Literacy	.11	.13
PET x Support Seeking x Financial Literacy	-.22*	.13
Constant	3.12	.33
Overall	.115*	

Note. $N = 323$; *$p < .10$, **$p < .05$, *** $p < .01$, **** $p < .001$.

Figure 5.
Effects of the interaction between perceived economic threat, support seeking, and financial literacy on overall local media dependency



Implications for Research, Practice, and Policymaking

Several limitations should be considered in appreciating the findings of the two foregoing Project ReBOUND studies. The most significant among these perhaps is related to the cross-sectional nature of our data. A longitudinal design in a future study would make it possible to make firmer statements regarding causal relationships among our key variables, including media use, community belonging, and psychosocial stress. Additionally, data collection was conducted online. This was an efficient method, given resource constraints the research team had to consider, and the fact that the samples for both studies generally reflected the demographic profile of the population in the larger metropolitan area of New York City. However, future survey research employing random-digit-dialing or an address-based sampling approach to investigate the relationships among the variables we focused on in these two studies would be welcomed.

These limitations notwithstanding, our findings begin to fill a significant void in the literature regarding the role of communication and media consumption, more specifically, in how individuals experience economic crises, but also how individuals' relationship to media resources in the communities they live change in the context of a crisis. Finally, it contributes to the burgeoning literature on how the places we live in impact our health (Matsaganis 2015).

Media consumption did not account for stress that individuals in the broader metropolitan area of New York experienced during the economic crisis and its immediate aftermath. It did, however, shape more proximal determinants of stress; namely: how threatened individuals felt by the economic crisis and their sense of community belonging. In this case, the effects of media differed across forms, with consumption of television contributing to higher levels of perceived threat, and use of newspapers contributing to increased levels of community belonging.

This finding is significant because perceived threat emerged as a significant predictor of increased stress, whereas community belonging performed a protective role against stress.

Prior communication research helps explain these findings. Studies show that media pay more attention to the economy when it is experiencing turbulence (Shah et al. 1999). Moreover, television channels specifically are more likely to offer sensationalist coverage of current events in order to boost their ratings (e.g., Altheide 2002). In the context of the crisis, television stations not only produced more stories about the economy, but also emphasized individuals' sense of vulnerability, by reporting time and again, for instance, on the rise of the number of foreclosures and their impact on families and entire communities.

Turning to the findings regarding newspapers, research based on communication infrastructure theory shows that in communities where local media tell the stories residents and community organizations care about, while prompting these two other community actors to also communicate with each other, community belonging is higher (Kim & Ball-Rokeach 2006b). In our study area, newspapers seem to have been reaching community residents prompting connections among them, thereby strengthening feelings and encouraging behaviors of belonging. Our results point to distinct and contradictory roles for newspapers and television. Additional research therefore is warranted to examine how individuals' connections to different communication resources play off each other and how they impact a person's mental health during economic downturns.

Our analyses indicated direct effects of both belonging and perceived economic threat on stress. Individuals who reported higher levels of perceived threat related to the economic crisis exhibited higher levels of stress. In addition, as we expected, individuals who were more attached to their residential communities experienced lower levels of stress related to the crisis, compared to those with lower belonging scores. Most interestingly, though, the analyses of the interaction of belonging and

threat showed that the protective role of community belonging is limited. When perceived threat during an economic downturn becomes too high, community belonging is not sufficient to protect individuals from stress. This suggests that, at times of crisis, communities with strong social support mechanisms are likely to fare better than others. When crises become too severe, though, such social support mechanisms might become eroded. As a result, the mental health of residents could deteriorate, making it necessary for public health officials (and policymakers) to consider mobilizing mental health support services that individuals can reach out to for additional support (e.g., suicide hotlines, formal support groups).

And although the severity of an economic crisis is likely to determine the extent to which social support mechanisms, such as community belonging, can help residents weather an economic crisis, our study suggests that the duration of a recession may matter as well. Study 1, as reported here, was not a longitudinal study, but we examined the effects of changes in poverty rates and household incomes just before the economic crisis (in 2007) and the immediate aftermath of the recession (in 2009) across 23 counties in the larger New York City metropolitan area. Poverty change had no effect on psychosocial stress (nor on perceived economic threat), but the results of multilevel modeling suggested that community belonging among residents decreased more in communities that experienced larger increases in poverty during this time period. We infer, therefore, that communities impacted most by the crisis are more likely to see their stocks of social support decrease, which, in turn, means that their residents are less protected against stress. It is these communities that local public health agencies and professionals need to be on alert to help the most during a prolonged economic downturn.

Because of the significant role that media can play in shaping urban community residents' sense of vulnerability during an economic crisis, but also their role in bolstering community belonging, it is important to also better understand what de-

termines individuals' dependency on media for making sense of problematic economic environs. Going beyond individual sociodemographic characteristics alone, Study 2 probed into the roles of perceived economic threat, individuals' coping strategies, and financial literacy in media dependency.

In our analyses, coping emerged as a key determinant of media dependency. Local TV dependency was higher among those who were more inclined to engage in proactive coping behaviors, whereas local radio, local Internet, and social networking site (SNS) dependency was higher among those who were more prone to seek social support from others to manage stress associated with the economic recession. The relationship between coping strategies and media dependency in the context of the financial crisis could be attributed to differences across various media forms regarding how they produce and distribute information to their audiences. Individuals, for example, can be more involved in the production and dissemination of information as users of radio, the Internet, and SNS. Interactive features of these media allow users to share their experiences with and seek advice from others, such as a radio talk show host or an expert via Twitter, which, in turn, could help them manage a stressor. A recent study by Burke & Kraut (2013) regarding SNS specifically showed that they functioned as critical communication channels for those who lost jobs, as the support received by friends in their online network helped them to better cope with stress. Moreover, information shared by others via SNS helped them find new jobs. Hence, we argue that during an economic crisis it is possible that individuals who are more likely to seek out support as a way of coping with the effects of the crisis, will also be more likely to depend on more interactive media (radio, Internet, SNS).

Beyond coping, Study 2 shed light on the function of a key factor in media dependency during an economic recession that has been understudied: financial literacy. Local newspaper, local TV, as well as local radio were preferred most by individuals with higher levels of financial literacy, but SNS were preferred

by less financially literate individuals. As indicated in extant research, individuals are more likely to encounter misinformation on SNS (compared to traditional, mainstream media) and this could affect them negatively at times of crisis. This has been documented in public health research and work in the context of other types of crisis (e.g., Watson, Wadhwa, Baruh & Scifo 2016). Our findings suggest that exposure to information of poor quality on SNS is likely to put individuals who are less financially literate at increased risk during economic recessions.

Finally, from an application perspective, findings from Study 2 can be used by public health professionals, social services agencies, and government authorities at all levels (local through federal) to develop better communication campaigns and interventions to reach audiences with different characteristics and distinct needs at times of economic upheaval. For example, especially with respect to less financially literate populations, who are more likely to suffer negative effects produced by a financial crisis (e.g., Bucher-Koenen & Ziegelmeyer 2011), our data show that SNS could be effective channels through which to get critical, helpful, and accurate information to them (provided they have Internet access, of course). At the same time, educating SNS users on how to distinguish between accurate information and misinformation will also be important, given the earlier discussion about the presence of rumors and misinformation online.

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