Organizational downsizing and affected workers’ health.

Ståle Østhus, Department of Sociology and Human Geography, University of Oslo

Abstract

The effect of organizational decline and growth on the mental and physical health status of affected workers was examined with panel data representative for the entire population in Norway. In contrast to some evidence, but very much in line with theoretical expectations, no significant effect was found for remaining workers after organizational decline (i.e. downsizing survivors) on any health outcome. A significant effect was however found for displaced workers (i.e. downsizing victims), who on average is expected to experience a considerable increase in psychological distress compared to workers in stable organizations (RR = 2.5). No effect was found on physical (self-rated) health, but downsizing significantly increases the job search behavior of remaining workers. Downsizing also significantly increases the probability of voluntary turnover (i.e. exit to better jobs) as well as the extent of involuntary turnover.

Introduction

Organizational downsizing, restructuring and mass layoffs have become common responses to changes in organizations’ operating environment. The individual consequences of such changes for displaced and remaining workers have been the focus of much scholarly work (Kletzer 1998; Mishra & Spreitzer 1998), but it seems fair to say that the jury is still out when it comes to the specific matter of health-related consequences of downsizing. There is
considerable evidence of a negative association between both perceived job insecurity and health (Sverke et al 2002) and unemployment and health (Paul & Moser 2009). The accumulated evidence, as well as popular opinion, seem to favor the conclusion that there are negative health effects of downsizing as well (e.g. Quinlan et al 2001). However, the existing evidence is limited in a number of ways: Many studies use imperfect proxies of health, e.g. sickness absence, as outcome measures, data are often from a limited number of organizations or industries, and there is a general shortage of studies that samples both displaced and remaining workers. A closer look at the evidence quickly reveals that it is in fact inconclusive, with some studies reporting strong negative health effects (e.g. Vahtera et al 1997; Rege et al 2009), while others have found inconsistent or weak and insignificant effects (e.g. Theorell et al 2003; Martikainen et al 2008; Browning et al 2006).

Amongst the very few studies that have compared health effects for displaced and remaining workers, some have even reached the somewhat counterintuitive conclusion that workers who are not laid off (i.e. the downsizing “survivors”) are in fact the real “victims” of downsizing, and worse off than laid off workers with respect to their health status (e.g. Devine et al 2003; Burke 2003; Kivimäki et al 2003). The extent to which this holds in general is not fully explored, but I believe many will find this difficult to believe, given that all remaining workers have at least one benefit over most workers who are laid off, namely their jobs. It is well established that laid off workers often enters unemployment, or end up in lower paid jobs (e.g. Jacobsen et al 1993; Huttunen et al 2006), and that unemployment leads to poor health, especially psychological distress such as depression (Paul & Moser 2009). It seems clear, therefore, that the existing evidence raises several new questions, and that the association between downsizing and health remain very much open to debate.

In this study, I try to shed light over some of these questions, using longitudinal survey data that are coupled with data from administrative registers, and representative for the total
population in Norway 1997-2004. Among other things, the data have made it possible to examine the effects of organizational decline and growth on remaining workers’ level of psychological distress and self-rated health, and to make comparisons between remaining workers after downsizing and displaced workers and persons who experience other forms of job loss. The longitudinal nature of the data also makes it possible to reduce the importance of unobservable individual characteristics that are likely to determine selection into downsizing survival and displacement, as well as other job transitions.

**Downsizing, health and job motivation**

Previous research have found a negative association between downsizing and the health status of remaining workers (e.g. Vahtera et al 1997), often explained as the result of more stressful working conditions in the post-downsizing organization, e.g. due to increased job demands and perceived job insecurity. There is considerable evidence that perceived job insecurity has a detrimental effect on health, especially mental health (Sverke et al 2002), and a strong case have been made that job demands, especially in combination with low decision latitude, leads to poor mental health (Karasek 1979). There is also little reason to doubt the numerous reports that downsizing is a stressful experience for many remaining workers (e.g. Noer 1993; Kets de Vries & Balazs 1997). Nevertheless, there are good reasons why we should not necessarily accept that downsizing in general have a detrimental effect on remaining workers' health. Leaving methodological issues such as problems of distinguishing causal effects from selection effects and the lack of general population studies in previous research aside for now, there is ample evidence that the association between downsizing and stress is less than straightforward. For example, a series of US studies in the late eighties found clear evidence that layoff survival is the kind of event that can be experienced very differently and may even be associated with positive psychological states like relief (Brockner 1988). A broader synthesis of the literature on survivor responses to downsizing also found that
survivors can have a wide variety of responses to the stress of organizational downsizing. These responses may be constructive or destructive, depending on the extent to which employees view significant harm from the downsizing (Mishra & Spreitzer 1998). The point is not that downsizing survivors never experience downsizing as stressful, and therefore will never become ill from it. I am merely saying that at present there is not enough convincing evidence that the ratio of fatigued and insecure workers to healthy workers in downsized organizations on average is such that we can conclude that downsizing and layoff survivors are generally worse off than workers who actually lose their jobs in the process.

There seem to be an, often implicit, understanding that downsizing is all about involuntary turnover, and that neither workers who stay with their employer nor workers who turn over do so by their own will. For example, displaced (or dislocated) workers are commonly understood as individuals with established work histories, involuntarily separated from their jobs by layoffs or plant closures (rather than because of individual job performance) and with little chance of being recalled to jobs with their old employer (Kletzer 1998). The term thus usually refers to a form of job loss which results not from workers quitting or being fired, but from strategic decisions that are largely beyond the control of the individual worker. Voluntary turnover on the other hand, is traditionally seen as the result of low job satisfaction and organizational commitment, and access to better job alternatives (March & Simon 1958). One could argue however, that the focus on involuntary job separations understates the importance of voluntary turnover in relation to downsizing. A sharp distinction between voluntary turnover (e.g. resignation) and involuntary turnover (e.g. layoffs) may be unwarranted (Campion 1991), and from the workers point of view, voluntariness is probably better conceived as a continuum ranging from completely voluntary (e.g. employee takes a better job) through mutual agreement (e.g. employee accepts severance package offer) to completely involuntary (e.g. employee is laid off as a result of plant closure). From the employers point of view workers’ decisions to leave may be more or less unavoidable and employers may also try to prevent the loss of valued workers through
controllable factors (e.g. offering pay increases or promotions). In many cases the decision to leave will be a function of both organizational and individual factors, and the degree of voluntariness and avoidability involved is likely to be strongly dependent on individual and organizational resources.

Specific downsizing strategies vary across organizations, e.g. with some organizations relying mainly on natural attrition while others use layoffs. Often layoffs are by seniority, but at the same time, employers will generally try to retain more motivated and productive workers, e.g. by offering promotions etc. (Thornhill & Saunders 1997). When workers who are not selected for layoffs decides to stay with their employer, this is likely to be based not only on an assessment of benefits (e.g. pension, seniority) and costs (e.g. job insecurity), but also community attachments (e.g. family, friends), and perceived job alternatives (Mitchell et al 2001). For example, downsized organizations will tend to have a much more senior (in terms of both age and length of service) workforce than organizations facing rapid growth (Pfeffer 1983). High seniority workers will also tend to have accumulated a lot of firm-specific human capital, which lowers the probability of voluntary job change because workers will suffer from a wage loss if they change firm. It is entirely possible, therefore, that many survivors of downsizing do in fact benefit from downsizing, as they are often in comparatively secure positions. It is also possible that many workers who do not benefit from downsizing will turn over voluntarily. The point is not that downsizing survivors never experience downsizing as stressful, and therefore will never become ill from it. I am merely saying that at present there is not enough convincing evidence that the ratio of fatigued and insecure workers to healthy workers in downsized organizations on average is such that we can conclude that downsizing and layoff survivors are generally worse off than workers who actually lose their jobs in the process.

Job loss, unemployment and health
There is however considerable evidence that job loss and unemployment is associated with poor health. In particular, a large number of cross-sectional and longitudinal studies have consistently found a negative association between unemployment and mental health (Paul & Moser 2009). Health-related selection can explain some of this association, because people of poor health are more likely to leave employment while those of good health are more likely to enter employment (e.g. Korpi 2001; Mastekaasa 1996). However, there is convincing evidence that unemployment is not only correlated with poor mental health, but actually causes distress. For example, longitudinal studies have found that job loss is associated with an increase in distress symptoms, whereas finding a new job is associated with a significant reduction of distress (Paul & Moser 2009). The bulk of research on the health effects of unemployment focuses on mental health, but poor mental health might in turn translate into physiological morbidity (cf. Kaplan 1991). Direct evidence of an effect of unemployment on physical health is scarce, but studies have found an association between unemployment and mortality (e.g. Moser et al 1984; Iversen et al 1987). Job loss is also found to adversely affect physical health in studies of health changes following plant closures (e.g. Kasl et al 1975). Such studies are generally considered to have some advantages over other designs in that selection into unemployment then is unlikely to be health-related.

The empirical evidence that job loss and unemployment causes poor health are strengthened by important theoretical contributions. Some have emphasized poverty as a cause of unemployment distress, arguing that financial deprivation severely frustrates the human desire for agency and self-directedness (Fryer & Payne 1986). It is of course true that unemployment generally leads to a loss of income. Studies have also found workers to suffer from permanently reduced income as a result of job displacement (Ruhm 1991). However, in countries with extensive unemployment insurance programs, such as Norway, the financial hardship associated with unemployment is likely to be less severe. Even so, there is strong evidence that job loss associated with mass layoffs causes dramatic income reductions in USA (e.g. Jacobsen et al 1993), and a similar, albeit weaker,
effect is also found in Norway (e.g. Huttunen et al 2006). Income loss may be an effect of unemployment per se, but devaluation of laid off workers' accumulated firm-specific human capital, and possible "signalling effects" of being laid off (Gibbons & Katz 1991), are also likely to contribute to more longterm effects, with laid off workers having to accept lower paid jobs.

According to the "latent deprivation model" (Jahoda 1982), unemployment deprives people not only of the manifest functions of employment (e.g. making a living), but leads to a lack of five latent functions of employment (time structure, social contact, collective purpose, status, and activity), which corresponds to important psychological needs. Because it is thought that only employment can sufficiently provide these latent functions in modern societies, unemployment leads to a state of deprivation, resulting in distress. The latent deprivation model has been criticized of romanticising work, and it stands in sharp contrast to arguments such as that of Marx, that most work in modern society is alienating and destructive of the self. Another theoretical model, the "vitamin model" (Warr 1987) identifies nine environmental features or "vitamins" that are assumed beneficial for mental health (opportunity for control, opportunity for skill use, externally generated goals, variety, environmental clarity, availability of money, physical security, opportunity for interpersonal contact, and valued social position). Analogous to the latent deprivation model, negative effects of unemployment is explained as the result of the impoverished environment of the unemployed. In contrast to the latent deprivation model, however, the vitamin model can account for positive effects of leaving oppressive work and negative effects of becoming employed in dissatisfying work, and opens up the possibility that an oppressive environment may contain less "vitamins" than the unemployed environment. As such, the model can defend empirical findings that downsizing survivors are worse off than laid off workers, if working in a downsized environment on average is more oppressive than not working at all.

There are also more sociologically informed approaches to the analysis of unemployment. For example, job loss may be viewed as a
rite of passage, a "status passage", that entails an individual's movement into a different part of a social structure, or a loss or gain of privilege, influence, or power, and a changed identity and sense of self, as well as changed behavior (Ezzy 1993). Specifically, job loss is associated with the failure to successfully maintain or continue in a role in the same way as other status passages such as divorce, becoming sick, or the death of a partner. Depending on the centrality of the roles and identities involved, status passages may involve major changes in subjective self identifications, alterations of emotional attachments to significant others and transformations in objective social relationships. The detrimental effect of unemployment on mental health can then be explained in terms of sociological identity theory, where people are seen as setting up life-plans or strategies of interaction in order to maintain and legitimize a positive self-image. If there is a major disruption to an individual's life this threatens the whole enterprise of identity legitimation until a "next best" answer can be worked out to satisfy the requirements of the variety of desired performances. In contrast to the psychologically oriented latent deprivation and vitamin models then, psychological distress is seen as a result of failure to find meaning - an existential vacuum, rather than a failure to satisfy basic psychological needs. For example, the regularity of going to work and interacting with a specified set of others may be an integral part of maintaining the view of one self as "worker". If, after loss of employment, the individual cannot find a satisfying alternative identity, this would be expected to result in depression and lowered mental health. On the other hand, if employment role plays only a peripheral or minor part in enabling an individual to maintain a sense of meaningful life, and if job loss is desired and expected, the effects on self-evaluations are likely to be less negative.

Data and measures

both administered and provided by Statistics Norway\(^1\). The NPSLC sample consists of persons 16 years or older in 1997, with a new set of 16 years old persons added to the sample each year in order to maintain representativeness with the general population. Respondents were interviewed annually during the period 1997-2002, and sample attrition was modest. The response rate was highest in 1997 (79.2%) and lowest in 2001 and 2002 (69.7% and 70.1% respectively). In the EU-SILC surveys, another sampling strategy and questionnaire was used, but all willing NPSLC respondents are included in the cross-sectional samples of 2003 and 2004. This provides (unbalanced) panel data on persons 18 years or older for the entire period 1997-2004 for a limited set of measures, e.g. self-rated health, and on persons 16 years or older for a more extensive set of measures, including psychological distress and job search behavior, for the period 1997-2002. The survey data are coupled with data from administrative registers on the exact number of employees in the organization the respondent are employed in (if applicable). Data from administrative registers also provided information on respondents’ registered unemployment histories. Combining the survey data with data from administrative registers is possible because of the Norwegian unique person and establishment identification system and survey questions about the name and geographic location of respondents’ employing organization.

The measure of organizational decline and growth are based on the annual percentage growth in respondents’ employing organization if the respondent reported to have the same job in two consecutive data waves (and there is valid data on the organizations’ employment levels both years). Following previous Finnish and Swedish studies, I distinguish between a net reduction in personnel of more than 8% (decline), a net increase of more than 8% (growth), and less than 8% net change in size (stability). The decline category was further subdivided into moderate (8-18%) and major (>18%) decline. Because measures of down- and upsizing are highly unreliable in small organizations, respondents employed in small organizations (<10 employees in t-1) are not included in the analyses. Also, all

\(^1\) All analyses and interpretation of the results are the sole responsibility of the author.
organizations with an absolute change in size of less than five persons are characterized as stable organizations, regardless of the level of percentage growth. Organizational decline and growth are only measured if respondents are working for the same organization in both years t and t-1, thus providing a proxy measure for downsizing survival (i.e. remaining workers after organizational decline). The measure provides a basis for comparisons between remaining workers after organizational decline and remaining workers after organizational growth and stayers in organizations with little or no changes in personnel.

If the respondent in any of the interview years 1998-2004 reported not to work at the same place as he or she did the last time he or she was interviewed, a set of follow-up questions are used to identify displaced workers, and workers that left or lost their job for other reasons. Displaced workers are persons who reported that they were laid off or that the organization closed down or reduced their activity. Workers who exit to better jobs are persons that reported that they left their previous job because they got or wanted a more interesting and challenging job, better pay, better working hours, shorter travel from home to work, or a job with a better working environment. The data also provides information on respondents' registered unemployment status (i.e. whether the respondent received unemployment benefits or not during the survey year), which enabled me to compare the impact of organizational decline/growth with the impact of unemployment on the outcomes.

A variety of health outcomes, and a measure of job motivation (i.e. job search behavior), are investigated. Psychological distress is measured with the five-item short version of the Hopkins Symptoms Check List (SCL-5), a validated measure of psychological distress (Strand et al 2003). In the data used here, the scale has Cronbachs alpha = 0,882 in the pooled sample, and unidimensionality of the scale was confirmed by factor (principal component) analysis (Eigenvalue = 3,41, explained variance = 68,2%). All five items were also selected in a nonparametric (Mokken) scaling procedure (Loevinger’s H = 0,671). I use a cut off point of 2,0 (on a scale
ranging from 1 to 4) to construct the binary dependent variable for the regression analysis. This is the recommended cut off point when the scale is to be used as a valid predictor of mental disorder/pathological distress. The interpretation of this measure is that 50-60% of the cases identified is likely to be diagnosed with depression or similar illnesses if they were in fact clinically interviewed by a trained psychologist (cf. Strand et al 2003). The psychological distress measure was available for the period 1997-2002.

Global health status is measured with a single question, ranging from 1 (very poor) to 5 (very good). This, and similar, measures of self-rated health is consistently found to predict mortality (Idler & Benyamini 1997), and known to principally reflects physical health problems (e.g. limitations in physical functioning and chronic and acute conditions) and to a lesser extent mental health problems (Ware et al 1981). I use a binary measure in the analyses, distinguishing between persons with poor or very poor self-rated health on one side and respondents with average to very good self-rated health on the other. This question was available for the entire period 1997-2004. Also included in the data is a measure of change in health status, based on a sequence of questions in the surveys. The first question asks the respondent to evaluate his/her health status compared to last year, and follow-up questions asks whether the change in health status (if applicable) is likely to be transitory, and if it will lead to difficulties in keeping ones job or get a new job. I constructed a binary measure where persons that reported a deterioration of health that are likely to be lasting and may impair their ability to keep their job or get a new one are distinguished from others. This measure was available for the period 1998-2002.

I also estimate the impact of organizational decline/growth and job loss/unemployment on respondents job search behavior. Both employed and unemployed respondents are asked if they have tried to get another job during the last month\(^2\). Because the question was

\(^2\) There is a slight, but possibly important, difference in the way the question about job searching is phrased to employed and unemployed respondents: Employed respondents are asked if they "have tried to get another
asked both to employed and unemployed persons, comparisons between all the organizational decline/growth and job loss groups are possible. The measure is available for the period 1997-2002.

I control for a set of observed characteristics in the regression analyses. Measures of gender, age and level of education are taken from administrative registers. The measure of educational level is based on a Norwegian standard for classification of educations (NUS) with range 0-8. To minimize the amount of missing data in this measure, I use the individual mean for the period 1997-2004 to represent each persons educational level. I also control for geographic region, using a set of dummy variables to distinguish between regions based on an established classifications of Norwegian counties, and family status, using a time-varying dummy variable to indicate whether the respondent is married or cohabiting in each data wave. All regression models also control for period effects, using a set of dummy variables to indicate the interview year.

**Methods**

The data are analyzed with nonlinear panel data regression models that exploit the fact that respondents are observed repeatedly over time. With \( Y_{it} \) being the outcome of interest (i.e. health or job motivation), the structural model can be written as

\[
Y_{it} = \alpha_i + D_{it} \delta + X_{it} \beta + \varepsilon_{it}
\]  

(1)

where \( D_{it} \) is a set of indicator variables for having experienced organizational decline/growth or job loss, \( X_{it} \) are the control variables, \( \alpha_i \) are random individual-specific effects and \( \varepsilon_{it} \) is an idiosyncratic error. The effect of \( D_{it} \) on \( Y_{it} \) (captured by \( \delta \)) is estimated with a random-effects (RE) model, where \( \alpha_i \) is treated as an unobserved random variable with a normal distribution. Unobserved individual-specific effects are then eliminated from the equation by integrating over this distribution. Because the binary dependent

job during the last month”. Unemployed respondents (i.e. respondents that reported not to have a job at the time of the interview) are asked if they “have tried to get a job without any luck during the last month”.

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variables in this study have a disproportionate small number of ones relative to zeros, I use the RE complementary log-log model to estimate the effects of organizational decline/growth and job loss on the dependent variables. Under the assumption that $X_{it}$ and a normal distributed $\alpha_i$ captures all selection into $D_{it}$, and hence that all that remains in $e_{it}$ is pure noise, then $\delta$ successfully identifies the causal effect of organizational decline/growth and job loss on health and job motivation. Results are interpreted in terms of rate ratios (RR), i.e. factor change in the prevalence rate, which are directly given from the exponentiated model coefficients. Rate ratios are the complementary log-log analogue to odds ratios from logistic regression. Cluster-robust standard errors (i.e. standard errors that take into account that respondents are observed repeatedly over time) are obtained by bootstrapping (cf. Cameron & Trivedi 2005).

A potential problem with (1) is that $D_{it}$ may not be precisely measured in the data at hand. This is likely to be more of a problem with respect to the estimated effect of organizational decline and growth than it is for the effect of different types of job loss (which can be assumed to be quite precisely measured in these data). The literature makes a distinction between organizational downsizing and organizational decline, where downsizing is an intentional, proactive management strategy, whereas decline is an environmental or organizational phenomenon that occurs involuntarily and results in erosion of an organization’s resource base (Freeman & Cameron 1993). Even though most will agree that a reduction in personnel is a minimum requirement for something to be correctly classified as downsizing, and it is standard to measure it as workforce reductions, a registered reduction in personnel is nevertheless only an imperfect proxy for downsizing.

I address this question briefly by estimating a model of the effect of organizational decline and growth on different types of

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3 The small number of ones relative to zeros also prevented estimation by conditional fixed effects regression.

4 Because of the asymmetrical nature of the complementary log-log distribution, confidence intervals around rate ratios tend to be unreliable and are therefore not reported here.
job loss. For this I use a discrete-time competing risks model, and estimate it as a multinomial logit model on the same, suitably reorganized, data that are used in the above mentioned models (Allison 1992). The dependent variable differentiate between no exit, exit due to job displacement, exit to a better job, health-related exit, and other exit in time t, and treats the type of job exit as a function of organizational decline and growth in t-1, observed worker characteristics at baseline (i.e. in 1997), and (discrete) time. Because the parameters of multinomial models are generally not directly interpretable, the results are reported as predicted logistic hazard rates. These are computed as

\[
\text{Pr}(h_i = m \mid D_{i,t-1}, X_i, C_t) = \frac{\exp(D_{i,t-1} \delta_{mib} + X_i \beta_{mib} + C_i \alpha_{mib})}{\sum_{j=1}^{J} \exp(D_{i,t-1} \delta_{jib} + X_i \beta_{jib} + C_i \alpha_{jib})}
\]

for \(m = 1\) to \(J\), where \(b\) is the base category (e.g. "no exit"), \(m\) is the outcome category of interest (e.g. "job displacement"), \(D_{i,t-1}\) is the set of indicator variables for organizational decline and growth (lagged one period), \(X_i\) are baseline worker characteristics, and \(C_t\) are time dummies. The predicted competing risks hazard rates can then be computed for persons that have experienced organizational decline or growth, with all other variables set to their mean. The general idea is that for organizational decline to be a valid measure of downsizing, it should predict job displacement better than organizational growth and stability (i.e. the hazard rate of job displacement should be higher for persons that have experienced organizational decline than the corresponding hazard rate for persons that have not experienced organizational decline).

**Results**

There is no significant effect of surviving organizational decline or growth on any of the health outcomes in any of the models. Job displacement does however significantly increase the probability of psychological distress (RR=2.5), but there is no significant effect of job displacement on the probability of having poor health or of having a disabiling illness or injury. As mentioned above, these
latter two health outcomes are known to principally reflect physical health problems. Other forms of involuntary job loss (presumably including health-related exit) also increases the probability of psychological distress (RR=2.0), as well as the probability of having poor health (RR=3.6) and of having a disabling illness or injury (RR=2.4). There is no significant effect of voluntary turnover (respondents reporting that they quit their former job because they were offered or wanted a better job) on any of the health outcomes. It should be noted that the effect of job displacement on psychological distress is not very precisely estimated (95% CI=1.2-5.1), compared to, for example, the effect of moderate decline (RR=1.21, with 95% CI=0.74-1.96). The effect of job displacement is however still highly significant whereas the effect of moderate decline is not.

If we instead of distinguishing between voluntary and involuntary turnover (model 1) distinguish between job exits that involved a period of unemployment or not (model 2), we find a strong effect of unemployment. Persons who leave their job and experience a period of unemployment have significantly increased their probability of psychological distress (RR=3.2), poor self-rated health (RR=3.6), and disabling illness or disability (RR=3.9), compared to workers who keep their job (i.e. remaining workers in stable organizations). There is also a significant effect of job exit that did not involve a period of registered unemployment on poor self-rated health (RR=2.4). As before (i.e. in model 1), there is no significant differences between remaining workers in downsized organizations and remaining workers in expanding or stable organizations. In other words: the main difference in these data when it comes to health outcomes does not appear to be between workers in downsized organizations and workers in stable or growing organizations, but between workers who leave their jobs and workers who stay with their employer. It seems plausible that the fact that job exit increases the risk of unemployment accounts for a substantial part of this difference.

The coefficients on the control variables lends further credence to the argument that the health outcomes are in fact
distinct (and that the models are correctly specified). In line with previous studies, women have higher prevalence of psychological distress, and poor self-rated health than men. The coefficient is also positive, but not significant, in the model of disabling illness. Age is positively related to poor self-rated health and disabling illness, but there is no significant effect on psychological distress. This is also as expected, because the SCL-5 scale has proven to be fairly robust to age differences (Strand et al 2003). In line with the literature on social status and health (e.g. Marmot 2004), there is a negative effect of educational level on all health outcomes. Having a life partner (i.e. being married or cohabiting) decreases the probability of distress. One explanation for this is that for most people, one's spouse is the most important source of social support (e.g. Gore 1978). There is however no significant effect of being married or cohabiting on self-rated health or disabling illness.

In the models of job search behavior, the results show that all forms of job exits significantly increases the probability of searching for a new job. It is clear however, that job displacement increases the probability of searching for a new job (RR=7,0) far more than other forms of involuntary turnover (RR=2,1), or voluntary turnover (RR=1,5) does. Job exits that involves a period of unemployment (a category that may or may not include persons that are unemployed at the time of the interview) also increases the probability of searching for a new job (RR=6,2) more than job exits that did not involve a period of unemployment (RR=1,6)\(^5\). This may not be very surprising, but we see that in these models there are also significant effects of major organizational decline (RR=2,2) and growth (RR=1,5). Even though the difference is not large, workers who have survived major organizational decline have significantly higher probability of searching for a new job than workers in

\(^5\) Wald tests of the difference between the coefficients on job displacement and voluntary turnover and of the difference between job displacement and other involuntary turnover yields 53,3 and 39,0 respectively, both highly significant. The Wald test of the difference between the coefficient on job exit that involved a period of unemployment and the coefficient on job exit that did not involve a period of unemployment yielded 77,7, also a highly significant result.
expanding organizations (a Wald test of the difference yields 5.32 with a p-value of 0.021). There is no effect of moderate organizational decline (8-18% personnel reduction) on job search behavior. The results on the control variables show that neither gender, educational level, nor marital status are important predictors of job search behavior, but there is a weak tendency that older workers have a lower probability of searching for a new job than younger workers.

It will be remembered that a possible argument against the plausibility of these results is that organizational downsizing and growth is not very precisely measured in the data at hand. If so, we would expect that organizational decline predicts job displacement no better than organizational stability or expansion. This question is explored in a competing risks model where the hazard of job exit due to displacement, voluntary turnover (i.e. exit to a better job), or other reasons, rather than staying with ones employer is a function of organizational decline and growth (entered as a set of time-varying dummy variables) and control variables (table 3). The results show that organizational decline predicts job displacement significantly better than organizational stability or expansion, but this is only true for major organizational decline. The estimated hazard of being displaced is more than seven times higher after major organizational decline (Estimated Hazard=0.022), than after a period of organizational stability (Estimated Hazard=0.003). It should be noted, however, that the estimated hazard of voluntary turnover is also much higher after major organizational decline (Estimated Hazard=0.070), than after a period of organizational stability (Estimated Hazard=0.012). The results therefore indicate that organizational downsizing induces voluntary turnover nearly as often as job displacement. There is no strong evidence that moderate decline (8-18% personnel reduction) increases the hazard of job displacement more than stable or expanding organizations. The estimated hazard of job displacement is slightly larger after moderate decline (Estimated hazard=0.006) than after growth (0.004) or stability (0.003), but the difference is not significant. Also, only major decline and organizational growth significantly increases the overall turnover hazard (i.e. reducing the hazard of staying
with ones employer). Organizational growth increases the hazard of both voluntary and involuntary job exit, but there is no significant effect on involuntary job exit due to layoffs or business closure (i.e. job displacement). Taken together, the results suggests that major organizational decline is a valid measure of organizational downsizing, whereas the status of moderate organizational decline is less certain.

Conclusion

The results show that workers who are not laid off in downsized organizations, i.e. the downsizing survivors, on average are not worse off than workers who have not experienced downsizing with respect to their mental or physical health status. Workers who are laid off, i.e. displaced workers, on the other hand, have an increased probability of psychological distress. There is no strong effects of downsizing on physical health problems in these data, but job exit that involves a period of unemployment are associated with physical health problems as well as poor mental health. Because job displacement is known to increase the probability of entering unemployment, it seems plausible that job displacement may be associated with physical health problems in other data (where more displaced workers are sampled).

The results also show that there is considerable voluntary turnover among workers in downsized organizations, and that downsizing survivors tends to intensify their job search behavior. One interpretation of this is of course that workers affected by downsizing, like other people, are responding actively to changes in their surroundings rather than being passive recipients of environmental impulses. At the same time, however, it is clear that downsizing often places new and additional constraints on peoples lives. Such constraints are likely to be especially adverse for laid off workers, for whom we know often enters unemployment and/or end up in lower paid jobs. There is considerable evidence that downsizing survivors often experience their work situation as stressful. However, the results reported here seems well in line
with previous research on the health effects of job loss and unemployment in suggesting that laid off workers, rather than downsizing survivors, are indeed the true victims of downsizing.

References


