

Antecedents to Retention and Turnover among Child Welfare, Social Work, and Other Human Service Employees: What Can We Learn from Past Research? A Review and Metanalysis

Michàl E. Mor Barak
University of Southern California

Jan A. Nissly
University of Southern California

Amy Levin
University of Southern California

This study involves a metanalysis of 25 articles concerning the relationship between demographic variables, personal perceptions, and organizational conditions and either turnover or intention to leave. It finds that burnout, job dissatisfaction, availability of employment alternatives, low organizational and professional commitment, stress, and lack of social support are the strongest predictors of turnover or intention to leave. Since the major predictors of leaving are not personal or related to the balance between work and family but are organizational or job-based, there might be a great deal that both managers and policy makers can do to prevent turnover.

Social Service Review (December 2001).
© 2001 by The University of Chicago. All rights reserved.
0037/7961/2001/7504-0005\$02.00

Retention of employees in child welfare, social service, and other human service agencies is a serious concern. The high turnover rate of professional workers poses a major challenge to child welfare agencies (Drake and Yadama 1996) and to the social work field in general (Knapp, Harissis, and Missiakoulis 1981; Jayaratne and Chess 1983, 1984; Drolen and Atherton 1993; Koeske and Kirk 1995). Reports of turnover rates range from 30 to 60 percent in a typical year. According to Srinika Jayaratne and Wayne Chess (1984), 39 percent of social workers in family services and 43 percent in community mental health are likely to leave their jobs within the next year. Raphael Ben-Dror (1994) finds yearly voluntary turnover rates to be 50 percent among community mental health workers, and Sabine Geurts, Wilmar Schaufeli, and Jan De Jonge (1998) report turnover rates exceeding 60 percent each year for human service workers.

High employee turnover has grave implications for the quality, consistency, and stability of services provided to the people who use child welfare and social work services. Turnover can have detrimental effects on clients and remaining staff members who struggle to give and receive quality services when positions are vacated and then filled by inexperienced personnel (Powell and York 1992). High turnover rates can reinforce clients' mistrust of the system and can discourage workers from remaining in or even entering the field (Todd and Deery-Schmitt 1996; Geurts et al. 1998). Yet, there are few empirical studies examining causes and antecedents of turnover. Moreover, no attempt has been made to pull these empirical studies together in order to identify major trends that emerge. An understanding of the causes and antecedents of turnover is a first step for taking action to reduce turnover rates. To effectively retain workers, employers must know what factors motivate their employees to stay in the field and what factors cause them to leave. Employers need to understand whether these factors are associated with worker characteristics or with the nature of the work process, over which they may have some control (Blankertz and Robinson 1997; Jinnett and Alexander 1999).

In this article, we review the literature related to intention to quit and turnover among child welfare, social work, and other human service employees. Using metaanalysis statistical methods, we analyze and synthesize the empirical evidence on causes and antecedents to turnover in order to identify reasons for employee turnover, major groupings of such reasons, and their relative importance in determining employee actions.

Theory and Literature Review

The Significance of Employee Turnover

High turnover has been recognized as a major problem in public welfare agencies for several decades because it impedes effective and efficient delivery of services (Powell and York 1992). In a 1960 study of “Staff Losses in Child Welfare and Family Service Agencies,” agency directors report that staff turnover handicaps their efforts to provide effective social services for clients for two reasons: it is costly and unproductively time-consuming, and it is responsible for the weary cycle of recruitment-employment-orientation-production-resignation that is detrimental to the reputation of social work as a profession (Tollen 1960). Employee turnover in human service organizations may also disrupt the continuity and quality of care to those needing services (Braddock and Mitchell 1992).

The direct costs of employee turnover are typically grouped into three main categories: separation costs (exit interviews, administration, functions related to terminations, separation pay, and unemployment tax), replacement costs (communicating job vacancies, preemployment administrative functions, interviews, and exams), and training costs (formal classroom training and on-the-job instruction) (Braddock and Mitchell 1992; Blankertz and Robinson 1997). The indirect costs associated with employee turnover are more complicated to assess and include the loss of efficiency of employees before they actually leave the organization, the impact on their coworkers’ productivity, and the loss of productivity while a new employee achieves full mastery of the job.

The impact of turnover on client care can be devastating because direct care staff play an important role in determining the quality of care. This is particularly true in child welfare agencies where children really come to count on the workers with whom they regularly interact. Turnover can cause a deterioration of rapport and trust, leading to increased client dissatisfaction with agency services (Powell and York 1992). Turnover related problems can be especially difficult in agencies where the productive capacity is concentrated in human capital—in the skills, abilities, and knowledge of employees (Balfour and Neff 1993). Human capital lies within a person. Hence, it is not easily transferable; it can be gained only by investing in a person over a long period of time. Turnover thus can reduce organizational effectiveness and employee productivity. This can have a negative impact on the well-being of the children, families, and communities under agency care (Balfour and Neff 1993).

Theoretical Underpinnings

The body of theory on which the turnover literature is based is primarily rooted in the disciplines of psychology, sociology, and economics. Psychological explanations for turnover posit that individual perceptions and attitudes about work conditions lead to behavioral outcomes. Contributing psychological theories include stress theories (Deery-Schmitt and Todd 1995; Wright and Cropanzano 1998), personality and dispositional theories such as Locus of Control (Spector and Michaels 1986), learning theory (Miller 1996), and organizational turnover theory (Hom et al. 1992). Sociological theories posit that work-related factors are more predictive of turnover than are individual factors (Miller 1996). Key sociological theories that are used to explain turnover include social comparison theory (Geurts et al. 1998), social exchange theory (Miller 1996), and social ecological theory (Moos 1979).

Economic theoretical explanations of turnover are based on the premise that employees respond with rational actions to various economic and organizational conditions. The turnover literature draws on human capital, utility maximization, and dual labor market models of economic processes (Miller 1996). Although each of the three domains—psychology, sociology, and economics—has strong proponents in the turnover literature, it is widely recognized that theoretical aspects from all three are necessary to explain the process of turnover fully. However, no single unifying model has been developed to explain turnover among human service workers. Moreover, the research related to burnout and intention to turnover in the mental health field is generally atheoretical and pays little attention to the underlying psychological or sociological processes (Geurts et al. 1998). The few authors who offer conceptual models to explain portions of the process of turnover or turnover intention among mental health and human service workers focus on social psychological models to suggest that turnover behavior is a multistage process that includes behavioral, attitudinal, and decisional components (Price and Muller 1981; Parasuraman 1989; Lum et al. 1998).

Deanna Deery-Schmitt and Christine Todd (1995) use concepts from stress and organizational turnover theories to explain turnover among family child care providers. They suggest that four broad stress-related components affect turnover: (1) potential sources of stress (including working conditions, client factors, and life events), (2) moderators of stress (coping resources and coping strategies), (3) outcomes of a cognitive appraisal process, and (4) thoughts and actions taken based on those outcomes. Brett Drake and Gautam Yadama (1996) focus on burnout as a major cause for turnover among child protective services workers. They use literature on three components of burnout (Maslach and Jackson 1986) to posit that workers who have higher emotional ex-

haustion and depersonalization are more likely to leave their jobs and that personal accomplishment acts as a buffer that decreases turnover.

A social psychological-based model offered by Asumen Kiyak, Kevan Namazi, and Eva Kahana (1997) asserts that personal background, worker attitudes, and job characteristics are related to job satisfaction, job commitment, and turnover. The first three variables are hypothesized to affect job satisfaction directly, which in turn affects turnover through its effect on intention to leave. Similarly, Erin Munn, Clifton Barber, and Janet Fritz (1996) suggest that a combination of individual factors, work environment attributes, and social support predicts professional well-being and turnover among child life specialists. Using job satisfaction, burnout, and turnover intentions as outcome measures, they posit that social support has both direct and moderating effects, while individual and work-related factors have direct effects.

Finally, Geurts and colleagues (Geurts et al. 1998; Geurts, Schaufeli, and Rutte 1999) provide a conceptual understanding of turnover based on the theories of social comparison, social exchange, and equity as well as on their research with mental health professionals. They hypothesize that perceived inequity in the employment relationship generates feelings of resentment. These feelings result in poor organizational commitment, higher rates of absenteeism, and increased turnover intentions. These outcome variables are interconnected such that the reduction in organizational commitment contributes further to absenteeism and turnover intentions.

Antecedents to Turnover—Empirical Findings

Three major categories of turnover antecedents emerge from empirical studies of human service workers: (1) demographic factors, both personal and work-related; (2) professional perceptions, including organizational commitment and job satisfaction; and (3) organizational conditions, such as fairness with respect to compensation and organizational culture vis-à-vis diversity. The study results are often inconsistent with each other, perhaps reflecting the complexity of defining and measuring the multifaceted predictor and outcome constructs as well as differences among the varying work contexts. Until very recently, studies almost exclusively examined turnover from a fixed point in time and used a dichotomous (turnover or no turnover) dependent variable. This has begun to change over the past few years, reflecting the sometimes lengthy process involved in the decision to leave one's job (Schaefer and Moos 1996; Somers 1996).

Many studies use intention to leave instead of, or in addition to, actual turnover as the outcome variable. The reason is twofold. First, there is evidence that before actually leaving the job, workers typically make a conscious decision to do so. These two events are usually separated in

time (Dunkin et al. 1994; Coward et al. 1995). Intention to quit is the single strongest predictor of turnover (Alexander et al. 1998; Hendrix et al. 1999), and it is therefore legitimate to use it as an outcome variable in turnover studies. Second, it is more practical to ask employees of their intention to quit in a cross-sectional study than actually to track them down via a longitudinal study to see if they have left or to conduct a retrospective study and risk hindsight biases. The current analysis includes studies that use intention to leave, actual turnover, or both.

Demographic Factors

Demographic factors are among the most common and most conclusive predictors in the turnover literature. A number of studies find age, education, job level, gender, and tenure with the organization to be significant predictors of turnover (Blankertz and Robinson 1997; Jinnett and Alexander 1999). It is generally accepted that younger and better educated (as well as less trained) employees are more likely to leave than are their counterparts (Kiyak et al. 1997; Manlove and Guzell 1997). Workers who are different from others in their work units—whether they are of different race or ethnicity, sex, or age—also are more likely to leave their jobs than are their colleagues (Koeske and Kirk 1995; Milliken and Martins 1996). There is some evidence that turnover is less likely among ethnic minorities, those with higher incomes, and those with better social support at home (Tai, Bame, and Robinson 1998).

Gender and marital status generally do not appear to be related to turnover (Ben-Dror 1994; Koeske and Kirk 1995; Jinnett and Alexander 1999), though having children at home is a fairly strong correlate of turnover, especially for women (McKee, Markham, and Scott 1992; Ben-Dror 1994). Gail McKee, Steven Markham, and K. Dow Scott (1992) find marital status to be indirectly related to intention to leave in that employees who are married are more satisfied with their jobs and feel more support and less stress than their unmarried colleagues.

There is considerable evidence of an inverse relationship between tenure and turnover. Turnover rates are significantly higher among employees with a shorter length of service than among those who are employed longer (Bloom, Alexander, and Nuchols 1992; Gray and Phillips 1994; Somers 1996). This may be because longer tenured employees have more investment in the company and are less likely to leave. However, findings of such a relationship may also result from selection bias in cross-sectional studies or from incomplete modeling of turnover.

The higher the job level one has within the organization, the lower is one's likelihood of quitting (Tai et al. 1998). Level of education is related to turnover only for employees holding midlevel jobs (Todd and Deery-Schmitt 1996). This means that those who have highly specialized

skills, as well as those with limited education, tend to remain on the job for longer periods of time than those who have a moderate degree of educational attainment.

Professional Perceptions

Burnout, a chronic, pervasive problem in the mental health and social service fields (Geurts et al. 1998), is a major contributor to poor morale and subsequent turnover. At the same time, there is evidence that psychological and emotional support from family and friends outside of the work environment can serve as buffers against the harmful effects of job stress and can generally reduce turnover (Abelson 1987; Tai 1996).

Professional commitment to the consumers who are served by the organization has a negative relationship to turnover (Blankertz and Robinson 1997). Individuals who experience a conflict between their professional values and those of the organization are more likely to quit, while those who find a good fit between their needs and values and the organizational culture tend to stay longer (Vandenberghe 1999).

Job satisfaction is a rather consistent predictor of turnover behavior. Employees who are satisfied with their jobs are less likely to quit (Siefert, Jayaratne, and Chess 1991; Oktay 1992; Tett and Meyer 1993; Hellman 1997; Manlove and Guzell 1997; Lum et al. 1998). There is some debate, however, about whether job satisfaction is a valid predictor of turnover (Koeske and Kirk 1995), and about whether the relationship is direct or indirect via job satisfaction's impact on organizational commitment. Several authors find that job satisfaction leads to turnover through its effects on organizational commitment and intention to leave (Price and Muller 1986; Rhodes and Steers 1990; Taunton et al. 1997; Krausz, Koslowsky, and Eiser 1998; Arnold and Davey 1999).

Organizational commitment is also examined in several studies as a predictor of intention to quit and turnover. According to Richard Mowday, Richard Steers, and Lyman Porter (1979), an employee who is committed to the organization has values and beliefs that match those of the organization, a willingness to exert effort for the organization, and a desire to stay with the organization. Employees with lower levels of commitment are less satisfied with their jobs and more likely to plan to leave the organization (Irvine and Evans 1992; Manlove and Guzell 1997; Hendrix et al. 1999).

Organizational Conditions

Child welfare, social work, and other human service employees tend to experience conditions associated with higher levels of job stress than do workers in many other settings (Jayaratne and Chess 1984; Geurts et al. 1998). Several studies find that workers experiencing high levels of job stress are more likely to leave their positions (McKee et al. 1992;

Todd and Deery-Schmitt 1996). Stress-related characteristics that have been associated with job turnover include role overload and lack of clarity in job descriptions (Jayaratne and Chess 1984; Jolma 1990; Siefert et al. 1991; Schaefer and Moos 1996; Blankertz and Robinson 1997).

Accumulating evidence suggests that support from coworkers and supervisors is instrumental in worker retention (Jayaratne and Chess 1984; Siefert et al. 1991; Koeske and Kirk 1995; Schaefer and Moos 1996; Blankertz and Robinson 1997; Alexander et al. 1998; Jinnett and Alexander 1999). Studies find that workers who remain in public child welfare report significantly higher levels of support from work peers in terms of listening to work-related problems and helping workers to get their jobs done. Workers who remain also believe that their supervisors are willing to listen to work-related problems and can be relied on when things get tough at work. Satisfaction with other employees also is important, perhaps because much of the effectiveness of child welfare, social work, and other human service employees depends on cooperative, team-based interaction (Vinokur-Kaplan 1995; Tai et al. 1998).

Finally, perceptions of positive procedural and distributive justice policies in an organization are negatively related to turnover intentions (Lum et al. 1998; Hendrix et al. 1999). For example, employees who perceive an organization's pay procedures as just and fair are less likely to leave (Jones 1998).

Methodology

Selection of Studies for Review

Building on this body of literature, we use metanalytic techniques to examine the overall picture that emerges from empirical research on antecedents of intention to leave and turnover among child welfare, social work, and other human service employees. To do so, we used PsycInfo, a comprehensive computer data base that includes scholarly publications in psychology and related fields, to attempt to identify all studies published in academic journals between 1980 and 2000 that relate to turnover and retention among child welfare, social work, and other human service employees. The category "child welfare employees" includes social workers and others who work in child welfare, "social work employees" includes all social workers except those in child welfare, and "other human service employees" includes all other workers. Key words used in the search include "employee turnover," "worker turnover," "employee retention," and "worker retention." Studies that are not printed in English were excluded, as were dissertations, because of the length of time necessary for retrieval. We also made a deliberate effort to solicit unpublished manuscripts. There were two reasons for this. First, we wanted to find out if there is a significant research effort

underway that will add to the already published articles, and, second, we wanted to find out if there are any manuscripts that were not published (so-called drawer articles) because the findings were not significant but that could shed some light on the turnover phenomenon. In order to locate appropriate unpublished papers, 38 of the 44 authors of the articles that were included after our initial search ($n = 24$) were contacted via e-mail. They were asked to provide us with information about additional unpublished manuscripts that they or their colleagues produced during the period under study. Eighteen authors replied. Only two sent us additional manuscripts, but we were unable to use them because the study populations were not within our scope. We also reviewed all the references cited in the articles that were selected for the metaanalysis. One new article that met our inclusion criteria was identified.

In total, 55 articles were reviewed for this study, but only 25 are included in the metaanalysis. The writings that we included are (1) empirical articles that examine antecedents to turnover or intention to leave; (2) works with study populations that include child welfare workers, social workers, or other employees in human services agencies (mental health, children's service, and similar agencies); and (3) studies that report either correlations or multiple regression results. The authors of included studies, a summary of the results, and information about the samples are found in table 1. In order to be as comprehensive as possible, we include all the predictor variables examined in each of the 25 studies. None of the studies addresses economic, organizational, or other broad scope predictors of intention to leave or turnover.

Measures

Outcome variables: Intention to leave and turnover.—The two outcomes that are examined in this study are usually measured in a dichotomous fashion (yes or no). The definitions vary across studies. Intention to leave is generally defined as seriously considering leaving one's current job; some studies ask whether participants are currently thinking of quitting, and others ask whether they had thought of quitting during a designated time period in the past (e.g., during the past 3 months) or if they are planning to quit within a specified time period. Actual turnover is generally operationalized as leaving one's job, though a few studies define turnover as leaving the profession altogether.

Antecedents.—No single system for classifying the predictors of turnover has been adopted in human service turnover research. As a result, we developed a system suggesting three main categories: demographics, professional perceptions, and organizational conditions. Several subcategories are included under each. For purposes of conducting the

Balfour and Nelf (1993); child protective services caseworkers (logistic regression analysis; correlation coefficients given)	Identified employee and organizational attributes contributing to the probability of voluntary turnover among child protective service caseworkers. Variables indicating the employees' stake in the organization, commitment to the profession, and level of education were determinants of those who chose to remain or leave during times of high turnover.	171	Age Working overtime Tenure Education Experience Internship Training	-.07 -.20** -.10 .11 -.07 -.22** -.10
Drake and Yadama (1996); child protective service workers (structural equation modeling analysis; SMC = .08; explained 8% variance in turnover; standardized effects given)	Examined the three components of burnout in relation to job exit among child protective services workers over a 15-month period. Emotional exhaustion was found to be directly related to job exit.	177	PA EE DP PA through EE EE through DP Total effect of EE Total effect of PA	.15 .24* .13 -.14* .05 .29 .00
<i>Other social workers</i>				
Jayarane and Chess (1983); social work administrators (multiple regression analysis; $R^2 = .26$; regression coefficients given)	Found that negative elements of the job such as promotional opportunities and financial rewards emerge as significant predictors of turnover.	164	Challenge Physical comfort Financial rewards Promotions Role ambiguity Role conflict Workload	.11 .05 .26** .24** .04 .06 .07
Jayarane and Chess (1984); community mental health workers (standardized regression analysis; $R^2 = .25$; regression coefficients given)	Please see above (first entry) for this essay's main findings.	144	Age Year MSW received Role ambiguity Workload Value conflict Physical comfort Challenge Financial reward Promotion Role conflict	.04 -.11 .08 -.14 .16 -.07 -.04 -.22* -.18 .17

Table 1 (Continued)

ARTICLE INFORMATION	MAIN FINDINGS	N	INDEPENDENT VARIABLES	CORRELATION WITH DEPENDENT VARIABLES			
				Intention to Leave	Turnover		
Jayaram and Chess (1984); family service workers (standardized regression analysis; $R^2 = .36$; regression coefficients given)	(please see above)	84	Age	.10			
			Year MSW received	-.26			
			Role ambiguity	-.37*			
			Workload	.06			
			Value conflict	.11			
			Physical comfort	.16			
			Challenge	.10			
			Financial reward	-.06			
			Promotion	-.22			
			Role conflict	.02			
<i>Other human service workers</i>							
Weiner (1980); public service organization employees (regression analysis; correlation coefficients given)	Found that dissatisfaction with pay affects turnover rate.	186	Pay satisfaction Satisfaction with pay amount Satisfaction with pay practice Satisfaction with pay comparison Perceived salary received Perceived salary one should receive Equitable pay Relative equitable salary Satisfaction with job classification Satisfaction with increase administration Satisfaction with amount of increase Satisfaction with performance appraisal Accuracy of performance assessment Absenteeism Attitude toward unionization	.19 .18 .14 .16 .18 -.01 -.05 -.12 .07 .05 .05 .06 -.11 .00 -.23			

Michaels and Spector (1982): community mental health center employees (path analysis; correlation coefficients given)	Found that age, perceived task characteristics, and perceived consideration by the supervisor all affected job satisfaction and organizational commitment, which in turn predicted intentions of quitting and subsequent turnover.	112	Intent to turnover Employment alternatives Organizational commitment Job satisfaction Leadership consideration Motivation potential Expectancy Age Salary Tenure Level04 .60* .68* .35* .29* .32* .27* -.04 .10 -.03 .39***	.41* .12 .16* .20* .08 .20* .05 .00 .00 .07 -.04
Wright and Thomas (1982): school psychologists (correlation coefficients given)	Found that the propensity to leave the job was more highly correlated for those psychologists high in need for clarity than for those lower in need.	171	Job-related tension Need for clarity	-.13 .39***	-.06 -.15
Spector and Michaels (1986): mental health facility employees (correlation coefficients given)	Employees with an external locus of control and those with an external locus of control likely to intend to quit their jobs.	174	Locus of control Job satisfaction	.20* .60*	-.06 -.15
Phillips, Howes, and Whitebook (1991): child care workers (regression analysis; regression coefficients given)	Staff wages were the most important predictor of turnover. Respondents were relatively dissatisfied with their salaries, benefits, and social status.	1,307	Intention to quit Wages Benefits Working conditions21*** N.S. N.S.	.16* .21*** N.S. N.S.
Stremmel (1991): child care workers (regression analysis; $R^2 = .53$; correlation coefficients given)	Commitment, satisfaction with pay and promotion, and perceived availability of job alternatives contributed significantly to explained variance in intention to leave.	223	Job satisfaction Organizational commitment Pay/promotions Working conditions Supervisor relations Coworker relations Work itself	-.70*** -.44*** -.38*** -.40*** -.34*** -.45*** .34***	-.42*** -.42*** -.42*** -.42*** -.42*** -.42*** -.42***
Lee and Ashforth (1993b): public welfare agency supervisors/managers (structural equations analysis; correlation coefficients given)	Found that emotional exhaustion directly affected turnover intention.	169	Perceived job alternatives Work autonomy Social support Role stress	-.27*** -.45*** .48*** .49***	-.45*** -.45*** .48*** .49***
			DP PA	.25*** -.13	.25*** -.13

Table 1 (Continued)

ARTICLE INFORMATION	MAIN FINDINGS	N	INDEPENDENT VARIABLES	CORRELATION WITH DEPENDENT VARIABLES	
				Intention to Leave	Turnover
Lee and Ashforth (1993a): human services supervisors/managers (structural equations analysis; correlation coefficients given)	Found that exhaustion was related to depersonalization, professional commitment, and turnover intentions.	148	Age	-.19*	
			Time spent with others	.03	
			Social support	-.15	
			Direct control	-.16*	
			Indirect control	-.20*	
			Role stress	.31***	
			Job satisfaction	-.38***	
			Life satisfaction	-.16*	
			Helplessness	.19*	
			Emotional exhaustion	.31***	
			Depersonalization	.18*	
			Personal accomplishment	-.06	
			Professional commitment	-.44***	
			Income	-.20*	
Education	-.25*				
Marital status	N.S.				
Having children	.40**				
Team cohesiveness	.22*				
Ben-Dror (1994): residential mental health workers (correlation analysis; correlation coefficients given)	Workers' stages of development were found to have significant relationships with the choices workers would make in their selection of turnover factors. The most significant factor in a decision to leave was low pay.	104	Education		
			Income		

<p>Koeske and Kirk (1995); intensive case managers (regression analysis; correlation coefficients given)</p>	<p>Found that adjustment, stress due to life events, or most other measured attributes did not successfully predict either the workers' intentions to quit the job or actual turnover.</p>	<p>42</p>	<p>Gender Age Degree Discipline Ethnic group Family of origin SES Salary Years as human services worker Years working with the seriously mentally ill Years as mental health provider Years of case management Intensive case management training Intention to quit job Amount of social support Negative life events Psychological well-being Rehabilitation job satisfaction subscales: My present job Work activities Work role Coworkers Work environment Supervisor Administrative practices Policies and rules Maslach Burnout Inventory subscales: EE DP PA</p>	<p>.11 -.22 .18 -.02 -.03 .13 -.10 -.12 .13 .21 .11 -.06 .49*** .10 .21 -.18 -.45*** -.45*** -.27*** -.26*** -.12*** -.15*** -.17*** -.24*** .39*** -.15*** -.21***</p>	<p>.01 -.05 .14 .01 .00 .31** -.24* -.16 -.04 .01 -.02 .17 .18 .13 -.14 -.05</p>
<p>Blankertz and Robinson (1996); direct care psychosocial rehab workers (correlation analysis; correlation coefficients given)</p>	<p>Those individuals with a better chance of finding another job were the most likely to report an interest in leaving. Reasons that would encourage workers to leave include stress, low salaries, and low chances for job advancement. There was a high correlation between job satisfaction, burnout scores, and intention to leave.</p>	<p>848</p>	<p>Organizational commitment Organizational climate</p>	<p>5,008</p>	<p>-.25*** -.16*</p>
<p>Bloom (1996); child care center staff (correlation coefficients given)</p>	<p>Significant differences were found between accredited and nonaccredited child care centers with regard to levels of staff turnover.</p>				

Table 1 (Continued)

ARTICLE INFORMATION	MAIN FINDINGS	N	INDEPENDENT VARIABLES	CORRELATION WITH DEPENDENT VARIABLES	
				Intention to Leave	Turnover
Munn, Barber, and Fritz (1996): child life professionals (regression analysis; correlation coefficients given)	Tested a conceptual model depicting predictors of professional well-being, looking specifically at intentions to leave a job. Lack of supervisor support was the best predictor of intention to leave a job.	156	Emotional exhaustion	.55*****	
			Job satisfaction	-.48*****	
			Supervisor support	-.39*****	
			Total support	-.29***	
			Role ambiguity	.32*****	
			Role conflict	.31*****	
			Number of patients served	-.14	
			Paid hours per week	-.02	
			Unpaid hours per week	-.01	
			Number of months in child life work	.05	
			Number of internship hours	-.10	
			Helpfulness of past work experience	-.12	
			Age	-.11	
			Maslach Burnout Inventory		
			subscale:		
			EE	.63*****	.30*
			DP	.50*****	.12
PA	-.09	.05			
Role overload	.43***	.34*			
Job problems	.52*****	.17			
Job opinion questionnaire	-.63*****	-.22			
Stress factor	.69*****	.27*			
Job likes (job enjoyment)	-.04	.09			
Satisfaction factor	-.08	.09			
Presence of own child in day-care setting	.08	.19			
Education	.27*	.23			
Training	.04	-.23			
Thinking of quitting34**			

Todd and Deery-Schmit (1996): child care workers (logistic regression analysis; correlation coefficients given)

Job stress, education, and training directly affected turnover. Providers most likely to leave the profession were more educated and less trained, and they reported higher levels of stress.

57

Maslach Burnout Inventory

subscale:

EE

DP

PA

Role overload

Job problems

Job opinion questionnaire

Stress factor

Job likes (job enjoyment)

Satisfaction factor

Presence of own child in day-care setting

Education

Training

Thinking of quitting

Blankertz and Robinson (1997); community mental health administrators (logistic regression analysis; correlation coefficients given)	This study found that seven variables predicted intended turnover: younger age, higher emotional exhaustion, a feeling of lower job fulfillment, the lack of a perception of a career path, having a master's degree, having held a previous job in PSR, and working with clients who have both a mental illness and AIDS.	845	Age	-.11***	
			Years worked in psychosocial rehabilitation	-.21***	
			Work with clients who:		
			Have substance abuse	N.S.	
			Have mental retardation	N.S.	
			Are homeless	N.S.	
			Maslach Burnout Inventory subscales:		
			EE	.39***	
			DP	-.15***	
			PA	-.21***	
			Personal beliefs:		
			Services provided in normal environment	-.08*	
			Deeply committed to consumers	-.11**	
			Use of services as long as needed	-.11**	
			Social, not medical, model of care	-.07*	
Manlove and Gruzell (1997); child care center staff (logistic regression analysis; correlation coefficients given)	The perceived choice of other jobs and job tenure both had an impact on intention to leave as well as on actual turnover.	169	Age	-.07*	-.27***
			Years in child care	-.17*	-.24***
			Job satisfaction	N.S.	N.S.
			Commitment to program	-.24***	-.08
			Pay	N.S.	N.S.
			Maslach Burnout Inventory subscales:		
			EE	.27***	.03
			DP	N.S.	N.S.
			PA	N.S.	N.S.
			Choice of other jobs	.20***	.25***
			Intention to leave46***
			Negative communication (re: management)	.43	
Geurts, Schaufeli, and De Jonge (1998); mental health care professionals (structural equations analysis; correlation coefficients given)	A perception of inequality in the employee relationship was found to result in intention to leave. Thoughts about leaving the organization were also triggered by negative discussions concerning management.	208	Perceived inequity in employment relations	.45	.34***
			DP	.44	.00
			EE	.27	.25*
Wright and Cropanzano (1998); social welfare workers (regression analysis; correlation coefficients given)	Emotional exhaustion was associated with turnover, even when controlling for the effects of positive and negative affectivity.	52	Positive affectivity		-.05
			Negative affectivity		-.37***
			Job satisfaction		
			Job performance		

Table 1 (Continued)

ARTICLE INFORMATION	MAIN FINDINGS	N	INDEPENDENT VARIABLES	CORRELATION WITH DEPENDENT VARIABLES	
				Intention to Leave	Turnover
Geurts, Schaufeli, and Rutte (1999): mental health professionals (regression analysis; correlation coefficients given)	The relationship between perceived inequity and turnover intention was found to be fully mediated by poor organizational commitment.	90	Perceived inequity	.24*	
			Feelings of resentment	.29*	
Jinnett and Alexander (1999): long-term mental health care workers (hierarchical linear modeling analysis; correlation coefficients given)	This study tested the effects of two types of organizational features on quitting intention. Group job satisfaction was found to affect intention to quit, independent of individuals' dispositions toward their jobs. Also, as unit size increased, so did staff members' intention to quit.	1,670	Poor organizational commitment	.56***	
			Absenteeism	.09	
			Job satisfaction	-.64*	
			Physician	-.02	
			Psychologist	.03	
			Social worker	-.08*	
			Nurse/nurse practitioner	.03	
			LPN/nursing assistant	.00	
			Other occupation	.00	
			Male	.04	
			Professional tenure	-.07*	
			Unit workload	.05	
Unit size	-.28*				
Group job satisfaction	-.29*				

NOTE.—PA = personal accomplishment; EE = emotional exhaustion; DP = depersonalization; SES = socioeconomic status; PSR = psychosocial rehabilitation; N.S. = not significant; SMC = squared multiple correlation (this is a test statistic, similar to " r^2 " or " r^2 "); LPN = licensed practical nurse (known as LVN in some states).

* $p = .05$,
 ** $p = .01$,
 *** $p = .001$.

metanalysis, it was important that the number of categories be expanded so that each would contain homogeneous groups of variables.

Demographics.—This category includes two subcategories: personal characteristics, including variables such as age, gender, locus of control (measured with Rotter's Introversion-Extroversion Scale; Rotter 1966), and life satisfaction (measured on a three-item scale developed by Bachman et al. [1967] to assess one's general affective state in life); and work-related characteristics, including items such as education, income, and job tenure.

Professional perceptions.—This second category includes variables that capture the individual-organizational interface within one of five subcategories: burnout, value conflict, job satisfaction, organizational commitment, and professional commitment. Burnout is consistently measured by the three scales of the Maslach Burnout Inventory (Maslach and Jackson 1986): emotional exhaustion, represented by feeling overextended and exhausted by one's work; depersonalization, indicated by the presence of unfeeling, impersonal responses to one's clients; and personal accomplishment, shown to be lacking when one feels incompetent and fails to achieve. Value conflict refers to an employee's sense of incompatibility between his or her own professional values and the organization's value system. Job satisfaction is measured through instruments such as the Job Satisfaction Survey (Spector 1985) and a three-item job satisfaction scale (Cammann et al. 1983). Organizational commitment, a measure of workers' attachment or dedication to the workplace, is measured through the Organizational Commitment Questionnaire (Mowday et al. 1979) as well as by single-item indicators. Professional commitment, examined in only one study, is measured by a three-item scale (Bartol 1979) that assesses one's satisfaction with the profession and desire to remain a part of it.

Organizational conditions.—Four subcategories comprise the organizational conditions category: stress, social support, fairness-management practices, and physical comfort. We use the term "organizational conditions" to refer to both objective organizational conditions (e.g., income or benefits) and, more commonly, individual or group perceptions of organizational factors (e.g., social support, perceived inequity, or promotion potential). Stress includes variables such as role ambiguity, role conflict, and role stress, frequently measured using subscales of the Role Questionnaire (Rizzo, House, and Lirtzman 1970). Both coworker and manager support are included in the definition of social support. This construct is measured with various instruments, such as the Caplan Social Support Instrument (Caplan et al. 1975), or an original scale assessing practical and emotional support from significant others (Koeske and Kirk 1995). Items most frequently examined within the fairness-management practices subcategory are income, workload, and perceived inequity (Geurts et al. 1998). Physical comfort in the work-

place is measured through the use of original items, such as “the physical surroundings are pleasant.”

The variable “perceived employment alternatives” appears repeatedly as a predictor of both intention to leave and turnover. This variable is considered independently because it did not fit into the three-category structure. In addition to being an outcome variable, intention to leave is frequently included as a predictor of actual turnover and thus is considered independent from the three primary categories of predictor variables.

Coding of Studies

Each included article was coded for (1) study sample (child welfare, social work, or other human service employees), (2) the type of turnover measure (intention to leave or actual turnover), (3) whether the study reported correlation or regression coefficients (standardized or unstandardized), (4) sample size, and (5) publication date. Eighty unique predictor variables were assessed. This presented us with an analytic challenge in light of the relatively large number of variables in proportion to the relatively small number of articles (25). No one predictor variable is common to all of the studies, and few studies contain exactly the same measure of any given predictor. To permit the metanalytic combination of these studies, each predictor variable thus was coded into one of the three main categories and divided into the previously mentioned subcategories.

Quality of Studies Coding and Analysis

Researchers working within the context of metaanalysis explore the potential relationship between study quality and the results of a metaanalysis (Rosenthal 1991), examining the possibility that less rigorously designed studies might come to different conclusions than studies with more rigorous designs. Robert Rosenthal (1991) discusses this issue with respect to two strategies. In the first strategy, studies are coded based on a concrete aspect, such as whether there is random assignment or not (e.g., experimental vs. correlational studies). In the second strategy, articles are coded based on experts' subjective ratings.

Our data do not provide a single criterion, but as we did not want to depend totally on subjective coding, we selected a combination of strategies. We had the coders (three experts familiar with this area of study) agree on multiple criteria for subjectively rating articles. The coders rated each article on seven-point scales on four dimensions: (1) theory or conceptual framework (1 = no theory/conceptual framework, 7 = well defined conceptual framework), (2) sampling procedures (1 = convenience or availability sample, with minimal or no external validity, 7 = random selection from a well-defined population creating a truly

representative sample with strong external validity), (3) quality of the measures (1 = none of the measures have known validity and reliability, 7 = all measures have strong demonstrated validity and reliability), and (4) appropriate statistical methodology (1 = inappropriate application, i.e., the methods are too limited, and regression analysis does not include all relevant predictors, 7 = appropriate methodology).

The results produced an average quality score of 4.86, a variance score of .72, and a standard deviation score of .85. This indicates limited variability between the articles with respect to their quality. We concluded that it would be counterproductive to create a hierarchy of quality for testing within the studies, when one does not seem to exist. Furthermore, experts raise doubts about the utility of conducting such analyses (Hunter and Schmidt 1990). Gene Glass, Barry McGaw, and Mary Lee Smith (1981) draw on data from 11 metaanalyses to conclude that there is no evidence for a linear relationship between a study's quality and its reported effect sizes.

Calculation of Effect Sizes

The effect size estimate used in this metaanalysis is r . When regression beta weights were provided instead of correlation coefficients, effect size estimates were calculated based on the t -test of the significance of the beta, consistent with the procedures described by Rosenthal (1991). The t -test was converted into r using the following formula. Once converted to r , it was possible to combine these effect size estimates with r 's from the other studies.

$$r = \sqrt{\frac{t^2}{t^2 + df}} \quad (1)$$

In order to combine the results from the various studies, it was necessary to calculate one effect size estimate per category of predictor variables for each article. However, traditional techniques for combining effect size estimates are based on the assumption that the various effect sizes being combined are independent of one another. When one study measures multiple variables from one category, the variables are not independent of one another. Consequently, it was necessary to use techniques described by Robert Rosenthal and Donald Rubin (1986), by which nonindependent variables for each study are combined into one composite effect size estimate per category. Once the nonindependent effect size estimates were combined into one composite per study, traditional techniques could be used to combine the independent effect size estimates between the various studies.

For example, three variables are coded into the category of burnout (category 2A in tables). Averaging the effect sizes of these variables in the five studies that measure their relationship to intention to quit

results in too conservative an estimate of effect size. The procedures described by Rosenthal and Rubin (1986) provide a more accurate estimate by taking into consideration the intercorrelations between the nonindependent variables and by constructing a single composite effect size estimate.

To calculate the composite scores of variables within studies, it was necessary to establish an estimate of the average intercorrelation of variables within each category. Table 2 reports both the average intercorrelation of variables within each category (on the diagonal) and the average intercorrelation of variables between each category (off the diagonal). For example, the value on the diagonal of table 2 for burnout (2A horizontal by 2A vertical) indicates that on average, the intercorrelation of the variables within the burnout category is $r = .37$. Off the diagonal, the intercorrelation between categories burnout and job satisfaction (2A horizontal by 2C vertical) reports that $r = -.35$, indicating the average correlation between variables in the burnout category and the variables in the job satisfaction category. Determination of statistical significance of each r is based on a standard r table by which one can determine whether a particular r value significantly departs from zero. To determine significance, the total number of individual participants was used in a fixed-effects test rather than a random-effects test that uses the total number of studies. Given the restrictive number of studies that could be used in computing each statistic, it would have been unreasonable to use a random-effects model, and a fixed-effects test was therefore the only solution.

We are limited by the diversity of predictor variables assessed across the various studies. Intercorrelations both within and between categories can be calculated only when a study collects data on multiple variables and reports their intercorrelations. Many of the studies simply report the correlation between the predictor variables and intentions to quit or turnover without reporting the intercorrelations between predictors. In order to contribute to the estimate of intercorrelations, the study thus must contain both multiple variables within a category and must report the intercorrelations between these variables. In table 2, k represents the number of studies from which data contributes to the estimate. Many of the estimates are based on only a small number of studies.

The two categories of personal demographics and work-related demographics present an interesting situation in which a higher composite score does not necessarily mean higher or more demographics. The composite scores for these two categories were established by combining the absolute value of each of the individual predictors. While the interpretation of the actual value of other categories has meaning (more burnout is associated with more turnover), the interpretation of the personal demographics and work-related demographics categories is in terms of the amount of prediction these variables provide. For example,

Table 2
AVERAGE INTERCORRELATIONS BETWEEN AND WITHIN CATEGORIES

	1A	1B	2A	2B	2C	2D	2E	3A	3B	3C	3D	Employment Alternatives	Intention to Leave
1. Demographics:													
A. Personal	.21 (k=1)	.12 (k=2)	-.24 (k=1)	.21 (k=3)	.28 (k=1)	.26 (k=1)	.26 (k=1)	.24 (k=1)	.02 (k=1)	.08 (k=1)	.27 (k=1)		
B. Work-related		.31 (k=2)	-.24 (k=1)	.11 (k=3)	.14 (k=2)	.11 (k=1)	.11 (k=1)	.21 (k=2)	.21 (k=2)	.04 (k=1)	.09 (k=2)		
2. Professional perceptions:													
A. Burnout			.37 (k=4)	-.35 (k=4)	-.33 (k=1)	.40 (k=3)	-.23 (k=1)	-.34 (k=2)	.41 (k=1)				
B. Value conflict													
C. Job satisfaction					.36 (k=5)	.52 (k=2)	.27 (k=1)	-.61 (k=2)	.58 (k=4)	.30 (k=3)	-.08 (k=2)	-.51 (k=1)	
D. Organizational commitment									.50 (k=1)	.41 (k=3)	-.15 (k=2)	-.60 (k=1)	
E. Professional commitment									-.22 (k=1)	.20 (k=1)			
3. Organizational conditions:													
A. Stress								.55 (k=2)	-.56 (k=2)				.57 (k=1)
B. Social support									.39 (k=1)	.36 (k=1)	-.21 (k=1)		
C. Fairness-management practices										.44 (k=3)	-.17 (k=2)		
D. Physical conditions													-.38 (k=2)
Employment alternatives													.04 (k=1)
Intention to leave													

NOTE. — Values in the diagonal represent the average intercorrelations between variables within a category, and values off the diagonal represent the average intercorrelations between categories. Values in parentheses represent the number of studies contributing data to the estimate.

Table 3

SUMMARY OF EFFECT SIZES FOR CATEGORIES OF PREDICTORS FOR INTENTIONS TO QUIT AND JOB TURNOVER

	INTENTIONS TO QUIT			ACTUAL TURNOVER		
	<i>r</i>	<i>k</i>	<i>n</i>	<i>r</i>	<i>k</i>	<i>n</i>
1. Demographics:						
A. Personal	.16***	10	3,708	.09**	6	836
B. Work-related	.16***	9	1,863	.16***	8	957
2. Professional perceptions:						
A. Burnout	.42***	7	1,755	.19***	4	455
B. Value conflict	.07*	2	1,136	.00	1	168
C. Job satisfaction	-.40***	11	4,014	-.19***	7	2,039
D. Organizational commitment	-.54***	4	594	-.16***	3	5,289
E. Professional commitment	-.44***	1	148	-.13	1	168
3. Organizational conditions:						
A. Stress	.30***	8	1,265	.15**	3	337
B. Social support	-.27***	7	2,512	-.10***	3	5,218
C. Fairness-management practices	-.17***	10	3,251	-.15***	5	1,927
D. Physical comfort	-.17***	4	2,345	.00	1	1,307
Employment alternatives	.20***	3	504	.19**	2	281
Intention to leave				.31***	5	554

* $p = .05$.** $p = .01$.*** $p = .001$.

the composite effect size for the relationship between personal demographics and intention to quit is $r = .17$ (see table 3). These variables account for 3 percent (r^2) of the variance in intention to quit.

Results

Out of the 25 studies, four examine child welfare workers, two examine other social workers, and 20 examine other human service workers (one study examines both child welfare workers and other social workers). Intention to leave is assessed by 18 of the studies, actual turnover is assessed by 12 studies, and five studies assess both. Correlation coefficients are reported by 20 of the studies, and regression coefficients are reported by five. The average sample size is 523 participants ($SD = 32$). Size ranges from 42 to 5,008 individuals.

Table 3 represents the average effect size for each of the categories, and table 4 represents the average effect size for each of the 80 predictor

Table 4

EFFECT SIZES FOR INDIVIDUAL VARIABLES PREDICTING INTENTIONS TO QUIT AND JOB TURNOVER

	INTENTIONS TO QUIT			ACTUAL TURNOVER		
	<i>r</i>	<i>k</i>	<i>n</i>	<i>r</i>	<i>k</i>	<i>n</i>
1. Demographics:						
A. Personal	.16***	10	3,708	.09**	6	836
Age	-.15**	7	1,770	-.10*	4	494
Sex (male)	.11	1	42	.03	2	1,712
Marital status	.00	1	104			
Children	.40***	1	104			
Ethnicity	.03	1	42	.00	1	42
SES	.31*	1	42	.13	1	42
Locus of control	.20**	1	174	-.03	2	342
Time spent with others	.03	1	148			
Life satisfaction	-.16	1	148			
Negative life events	-.21	1	42	.14	1	42
Psychological well-being	-.18	1	42	-.05	1	42
B. Work-related	.16***	9	1,863	.16***	8	957
Year MSW received	.00	1	288			
Competence				-.18**	2	220
Self-esteem				.00	1	168
Tenure	.10	1	112	-.03	3	452
Education	.08	3	203	.16**	3	270
Experience	-.24***	2	1,014	-.15**	2	340
Internship	-.10	1	156	-.22**	1	171
Training	-.15	2	99	-.05	3	270
Absenteeism	.09	1	90	.00	1	186
Income	-.12	3	258	-.12	2	154
Level	-.03	1	112	-.04	1	112
Presence of own child	.08	1	57	.19	1	57
Discipline	-.02	1	42	.01	1	42
2. Profession perception:						
A. Burnout	.42***	7	1,755	.19***	4	455
Personal accomplishment	-.10***	5	1,391	.05	3	403
Emotional exhaustion	.45***	7	1,755	.22***	4	455
Depersonalization	.14***	6	1,599	.08	3	403
B. Value conflict	.07*	2	1,136	.00	1	168
Value conflict	.00	1	288			
Values				.00	1	168
Services in normal environment	-.08*	1	845			
Committed to consumers	-.11**	1	845			
Services as long as needed	-.11**	1	845			
Social model of care	-.07*	1	845			
C. Job satisfaction	-.40***	11	4,014	-.19***	7	2,039
Job satisfaction	-.42***	8	3,334	-.13	6	1,871
Challenge	.003	2	452	.00	1	168
Expectancy	.32***	1	112	.05	1	112
Motivation potential	.29**	1	112	.20*	1	112
Work itself	-.45***	1	223			
Work autonomy	.27***	1	169			
Direct control	-.16	1	148			
Indirect control	-.20*	1	148			
Job problems	.52***	1	57	.17	1	57
Job opinion questionnaire	-.63***	1	57	-.22	1	57
Job likes	-.04	1	57	.09	1	57
Positive affectivity				.00	1	52

Table 4 (Continued)

	INTENTIONS TO QUIT			ACTUAL TURNOVER		
	<i>r</i>	<i>k</i>	<i>n</i>	<i>r</i>	<i>k</i>	<i>n</i>
Negative affectivity				.25	1	52
D. Organizational commitment	-.54***	4	594	-.16***	3	5,289
E. Professional commitment	-.44***	1	148	-.13	1	168
3. Organizational conditions:						
A. Stress	.30***	8	1,265	.15**	3	337
Stress	.69***	1	57	.27*	1	57
Role ambiguity	.13**	3	608	.13	1	168
Role conflict	.11**	3	608	.00	1	168
Fear factors				.00	1	168
Task factors				.00	1	168
Job-related tension	.32***	1	171			
Need for clarity	-.13	1	171			
Role stress	.40***	2	317			
Case factors				.00	1	168
Helplessness	.19*	1	148			
Role overload	.43***	1	57	.34**	1	57
B. Social support	-.27***	7	2,512	-.10***	3	5,218
Coworker support	-.34***	1	223	.00	1	168
Supervisor support	-.36***	2	379	.00	1	168
Social support	-.24***	3	359	-.13	1	42
Team cohesiveness	.22*	1	104			
Organizational climate				-.16***	1	5,008
Group job satisfaction	-.22***	1	1,670			
C. Fairness-management practices	-.17***	10	3,251	-.15***	5	1,927
Income	-.15***	4	844	-.08***	4	1,830
Promotion	-.02	2	452	-.13	1	168
Agency change				.00	1	168
Workload	-.02	3	608	.00	1	168
Working overtime				-.20**	1	171
Satisfaction with job classification				.07	1	186
Satisfaction with administration				.07	1	186
Attitudes toward unionization				-.23**	1	186
Leadership consideration	.35***	1	112	.08	1	112
Benefits				.00	1	1,307
Perceived inequity	.35***	2	298			
Feelings of resentment	.22*	1	90			
D. Physical comfort	-.17***	4	2,345	.00	1	1,307
Employment alternative	.20***	3	504	.19**	2	281
Intention to leave				.31***	5	554

* $p = .05$.
 ** $p = .01$.
 *** $p = .001$.

variables. For each effect size reported, k represents the number of studies contributing to the effect size estimate, and n represents the total number of participants from all studies contributing to the estimate.

All the main categories and subcategories are significant predictors of intentions to quit, and most of them are significant predictors of actual turnover, with the exception of professional commitment, value conflict, and physical comfort (see table 3). Interestingly, burnout, $z = 4.84$, $p < .001$; job satisfaction, $z = 8.50$, $p < .001$; organizational commitment, $z = 10.21$, $p < .001$; professional commitment, $z = 3.00$, $p < .01$; stress, $z = 2.57$, $p < .05$; social support, $z = 7.27$, $p < .001$; and physical comfort, $z = 4.97$, $p < .001$, are all significantly better predictors of intention to quit than of actual turnover. The overall correlation between intention to quit and actual turnover is $r = .31$, $k = 5$, $n = 554$, $p < .001$.

One method of interpreting these results is to pinpoint the individual predictor variables within each category that have the strongest relationship (i.e., that account for the most variance) to intention to quit and turnover (see table 4). For example, while the overall category of personal demographics significantly predicts both intentions to quit, $r = .16$, $k = 10$, $n = 3,708$, $p < .001$, and actual turnover, $r = .09$, $k = 6$, $n = 836$, $p < .01$, the best predictor variables for intention to quit are age, whether the workers had children, socioeconomic status, and locus of control. The single best predictor of turnover in this category is age.

A number of the individual predictors have effect size estimates that are not statistically significant but that are comparable in strength to the effect sizes of other predictors that are significant. This reflects the sample sizes. For example, in the personal demographics category, negative life events, psychological well-being, and life satisfaction have relatively large but not statistically significant relations.

The comparison of the types of samples (child welfare workers, social workers, or other human service workers) must be interpreted conservatively because there are few studies of child welfare workers and social workers. Nonetheless, separate effect size estimates were calculated for each group of workers. Relations are similar across types, but a few differences can be identified. In comparison with human service workers, the relationship with intention to quit is significantly smaller for child welfare workers for the categories of job satisfaction, $z = 3.45$, $p < .001$; stress, $z = 3.01$, $p < .01$; and physical comfort, $z = 2.55$, $p < .05$. However, this is based on only one study that assesses predictors for intentions to quit in child welfare workers.

A comparison indicates larger effect sizes for other human service workers than for social workers in the categories of personal demographics, $z = 2.64$, $p < .01$; work-related demographics, $z = 2.57$, $p <$

.05; job satisfaction, $z = 6.70$, $p < .001$; stress, $z = 5.46$, $p < .001$; management practices, $z = 4.86$, $p < .001$; and physical comfort, $z = 2.53$, $p < .001$. In regard to actual turnover, the only significant difference between child welfare workers and human service workers is in the category of job satisfaction, where the effect size is larger for human service workers, $z = 2.37$, $p < .05$. The effect size for the category of work-related demographics for human service workers also is larger than the effect size for social workers, $z = 2.41$, $p < .05$.

Discussion

Our metaanalysis provides a research-based aggregate portrayal of the main antecedents of intention to leave and turnover among child welfare, social welfare, and human service workers. We originally set out to examine the impact of the three major categories of antecedents that emerged from the literature—demographic factors, professional perceptions, and organizational factors. As anticipated, all three explained turnover to a statistically significant degree, though the demographic factors category has a weak relationship to the outcome variables.

More specific results suggest that the best predictors of intention to quit (based on degree of association) are organizational commitment, professional commitment, burnout, and job satisfaction. The strongest single predictor of actual turnover is intention to leave, followed by employment alternatives, job satisfaction, and burnout. More specifically, employees who lack in organizational and professional commitment, who are unhappy with their jobs, and who experience excessive burnout and stress but not enough social support are likely to contemplate leaving the organization. However, when it comes to actually leaving, the picture is somewhat different. In addition to being unhappy with their jobs, lacking in organizational commitment, and feeling burnout, stress, and lack of social support, employees who have actually left their jobs contemplated quitting their jobs prior to doing it, were unhappy with management practices, and had alternative employment options.

Generally, our findings are consistent with other studies that demonstrate the connection between job dissatisfaction (Price and Mueller 1981; Michaels and Spector 1982; Hom et al. 1992; Fuller et al. 1996; Kiyak et al. 1997), organizational commitment (Michaels and Spector 1982; Stremmel 1991; Tett and Meyer 1993), burnout (Edelwich and Brodsky 1980; Lee and Ashforth 1993*b*, 1993*a*; Drake and Yadama 1996; Blankertz and Robinson 1997), stress (Wright and Thomas 1982; Jayaratne and Chess 1984; McKee et al. 1992), and social support (Landstrom, Biordi, and Gillies 1989; Taunton et al. 1997), and both intention to leave and turnover. Intention to leave is consistently the best predictor of actual turnover (see, e.g., Kiyak et al. 1997). This might suggest that

deciding to leave one's job in the field of human services is not impulsive but is a decision that one has been contemplating for some time prior to taking action (Lee et al. 1999).

Results suggest that in order for employees to remain on the job, they need to feel a sense of satisfaction from the work that they do and a sense of commitment to the organization or the population served by it. When employees are unhappy with their jobs or do not feel a strong sense of belonging to the organization, they begin to contemplate leaving their jobs. Market conditions and perceived available options predict turnover.

Burnout and stress are serious concerns whether workers leave their jobs or not, since those who feel burned out but choose to stay may not be able to do their jobs well in providing the services that their clients need (Glisson and Durick 1988; McKee et al. 1992; Manlove and Guzell 1997). Lack of support, particularly from supervisors, decreases workers' ability to cope with their stressful jobs and increases the likelihood that they will leave their jobs (Landstrom et al. 1989; Taunton et al. 1997).

Previous research in other fields, such as nursing, manufacturing, information technology, and the armed services, indicates that the top predictors for turnover are lack of satisfaction with one's job (Hom et al. 1992; Bretz, Boudreau, and Judge 1994; Fuller et al. 1996; Tai et al. 1998), job stress (McKee et al. 1992), job search behaviors (Vandenberg and Nelson 1999), absenteeism (Mitra, Jenkins, and Gupta 1992), organizational commitment (Tett and Meyer 1993), individual performance (Williams and Livingstone 1994), and intention to leave (Kopelman, Rovenpor, and Millsap 1992). These findings are similar to ours in that job satisfaction, job stress, organizational commitment, and intention to leave remain important variables in predicting turnover. However, burnout stands out as an important predictor of both intention to leave and turnover among child welfare, social work, and other human service professions but not in most other areas (with the exception of nursing). Conversely, workers' performance and absenteeism are important predictors in other fields but not in the human services field. This is an important distinction that has a clear connection to the nature of the work in these emotionally intense fields, where employees often feel a greater responsibility and commitment to their clients than they do toward their work organizations. The conflict between organizational conditions (e.g., high caseloads) and workers' own professional expectations may lead employees to keep up with their very demanding work commitments at the expense of their own emotional health, with high levels of burnout as a result.

Surprisingly, the category of demographic characteristics is not a strong predictor of either intention to leave or turnover. In contrast to some individual studies that highlight personal characteristics as strong predictors of intention to leave and turnover (e.g., McKee et al. 1992;

Kiyak et al. 1997), our metaanalysis generally produced mild or nonstatistically significant correlations for these variables. It is particularly surprising that neither gender nor ethnicity are statistically significant predictors of intention to leave or turnover. A possible explanation is that diversity affects turnover in an indirect, rather than a direct, way. That is, if treated unfairly within the organization, women and members of minority and oppressed groups feel less job satisfaction, less organizational commitment, and more stress and burnout, and these feelings affect their decision to leave the organization. Some of the individual research that finds gender and ethnicity to be statistically significant predictors does not account for variables such as job satisfaction, organizational commitment, stress, and burnout, which perhaps act as mediators between diversity and turnover.

Within the demographics category, age (being young), lack of work experience, and lack of competence stand out as statistically significant predictors for both intention to leave and turnover. Our findings echo those of other studies (see Knapp, Harissis, and Missiakoulis 1982; Balfour and Neff 1993; Kiyak et al. 1997). These variables may be closely related to one another, in that younger workers are usually less experienced and less competent. They may also have more job opportunities since employers in our youth-oriented society may perceive them as having more flexibility, less responsibility, and more years before retirement. Older workers may be less attractive to new employers and less mobile since they have greater investment in their current position (Somers 1996; Manlove and Guzell, 1997; Alexander et al. 1998; Tai et al. 1998).

Our findings do not support the prevailing views that work-family conflicts are central to turnover considerations. With the exception of having children (highly correlated with intention to quit, but based on findings from only one study), none of the other family-related variables are statistically significant predictors of either outcome variable. In fairness, we should note that most of the empirical studies include few work-family related variables as antecedents to turnover and retention, and this limits our ability to draw conclusions.

Strengths and Limitations

The main limitations of this study are the relatively small number of studies included in the metaanalysis and the associated heterogeneity of study populations. In order to accumulate even 25 studies that represent our chosen population and to report the necessary type of findings, we had to search across 20 years of accumulated work in the human services turnover literature. Generalizability of the metaanalytic findings may thus be limited, given the small and diverse sample size and the infrequent use of each predictor variable across studies. Other key sources of po-

tential weakness lie within the studies themselves. No systematic method exists for measuring the various predictor or outcome variables. Often, the variables are operationalized somewhat differently across studies, leading to difficulty in interpreting meta-analytic findings. Different measures are sometimes used to assess similar predictor variables, and many authors employ original or other measures that have not been validated. Also, the potential exists for mono method bias (common method variance), which can occur when respondents are the source of information for both the predictor and the outcome variables. The impact of mono method bias remains controversial, and it is likely influenced by methodological and measurement considerations (Crompton and Wagner 1994; Williams and Anderson 1994). While such bias is not an issue in relation to turnover outcomes, measured objectively, it may have caused some inflation of relationships to intention to leave. Caution should also be taken when considering the organizational conditions results since these are largely based on individual or group perceptions of organizational variables rather than on objective organizational conditions. Despite these limitations, findings from the present study should be viewed as representing the first integrated effort at understanding the predictors of turnover and intention to leave among child welfare, social work, and other human service employees.

Implications for Policy, Practice, and Future Research

Our findings may include both bad and good news for managers and policy makers in the areas of child welfare, social work, and other human services. The bad news is that employees often leave not because of personal and work-family balance reasons but because they are not satisfied with their jobs, feel excessive stress and burnout, and do not feel supported by their supervisors and the organization. This is also the good news. When the decision to leave the job is a personal one, managers and supervisors do not have much practical or ethical latitude to intervene, but when the decision is based on work conditions and organizational culture, it is possible that both managers and policy makers can respond. Knowing that stress, burnout, and lack of job satisfaction are some of the most important contributors to turnover in the human services field, interventions that target these particular issues may be important. Examples of work-site interventions that have been shown to decrease burnout and increase job satisfaction include stress management training, allowing for greater job autonomy, and providing additional instrumental and social support (Bellarosa and Chen 1997; van der Hek and Plomp 1997). Other potentially effective interventions include reducing caseload size, increasing workforce size, and providing for peer support groups.

Another important finding is that the decision to leave one's job often

follows from the intention to leave. Managers and supervisors thus might benefit from periodic monitoring of their employees' feelings of job satisfaction and organizational commitment. Research demonstrates that it is possible to act to reverse burnout and feelings of dissatisfaction among employees who are contemplating leaving (Cooley and Yovanoff 1996; Winefield, Farmer, and Denson 1998).

Because our findings also indicate that less experienced workers and those who feel less competent are more likely to leave, managers might avoid turnover if they invest in training and job-related education that increases work-related knowledge and employee self-efficacy. This might be accomplished through more comprehensive new-employee orientation programs, the development of peer-support groups, or the teaming of new employees and more experienced colleagues.

The body of literature examining retention and turnover of employees in the human services field is lacking in a number of areas, in part stemming from the very limited amount of research that has been conducted. Gaps in existing knowledge include the examination of macro-level variables such as organization size, setting, structure, funding status, and other economic factors; specific job conditions and client characteristics; interactions among various predictor variables; and multiple methods of measurement. Hence, there exists a strong need for replication studies that consider different predictor variables and measure them in multiple ways. Future research needs to examine the strongest turnover predictors simultaneously in order to determine their relationships to one another and to discover their mediating and moderating influences. Existing conceptual models should be integrated in light of these new findings and tested among different groups of human service employees. Additionally, the relationship between intention to leave and actual turnover in the human services field merits further examination, since intention to leave alone accounts for only a portion of actual turnover.

References

- Abelson, Michael A. 1987. "Examination of Avoidable and Unavoidable Turnover." *Journal of Applied Psychology* 72 (3): 382-86.
- Alexander, Jeffrey A., Richard Lichtenstein, Hyun Joo Oh, and Esther Ullman. 1998. "A Causal Model of Voluntary Turnover among Nursing Personnel in Long-Term Psychiatric Settings." *Research in Nursing and Health* 21:415-27.
- Arnold, John, and Kate Mackenzie Davey. 1999. "Graduates' Work Experiences as Predictors of Organizational Commitment, Intention to Leave and Turnover: Which Experiences Really Matter?" *Applied Psychology* 48 (2): 211-38.
- Bachman, Jerald G., Robert L. Kahn, Martha T. Mednick, Terrence N. Davidson, and Lloyd D. Johnston. 1967. *Youth in Transition*. Vol. 1. Ann Arbor, Mich.: Institute for Social Research.
- Balfour, Danny L., and Donna M. Neff. 1993. "Predicting and Managing Turnover in Human Service Agencies: A Case Study of an Organization in Crisis." *Public Personnel Management* 22 (3): 473-86.

- Bartol, Kathryn M. 1979. "Professionalism as a Predictor of Organizational Commitment, Role Stress, and Turnover: A Multidimensional Approach." *Academy of Management Journal* 22:815-21.
- Bellarosa, Cinzia, and Peter Y. Chen. 1997. "The Effectiveness and Practicality of Occupational Stress Management Interventions: A Survey of Subject Matter Opinions." *Journal of Occupational Health Psychology* 2 (3): 247-62.
- Ben-Dror, Raphael. 1994. "Employee Turnover in Community Mental Health Organization: A Developmental Stages Study." *Community Mental Health Journal* 30 (3): 243-57.
- Blankertz, Laura, and Susan Robinson. 1996. "Who Is the Psychosocial Rehabilitation Worker?" *Psychiatric Rehabilitation Journal* 19 (4): 3-13.
- . 1997. "Turnover Intentions of Community Mental Health Workers in Psychosocial Rehabilitation Services." *Community Mental Health Journal* 33 (6): 517-29.
- Bloom, Joan R., Jeffrey A. Alexander, and Beverly Nuchols. 1992. "The Effect of the Social Organization of Work on the Voluntary Turnover Rate of Hospital Nurses in the United States." *Social Science and Medicine* 34:1413-24.
- Bloom, Paula J. 1996. "The Quality of Work Life in NAEYC Accredited and Nonaccredited Early Childhood Programs." *Early Education and Development* 7 (4): 301-17.
- Braddock, David, and Dale Mitchell. 1992. *Residential Services and Developmental Disabilities in the United States*. Edited by Michal J. Begab. Washington, D.C.: American Association on Mental Retardation.
- Bretz, Robert D., John W. Boudreau, and Timothy A. Judge. 1994. "A Job Search Behavior of Employed Managers." *Personnel Psychology* 47:275-301.
- Cammann, Cortlandt, Mark Fichman, G. Douglas Jenkins, Jr., and John R. Klesh. 1983. "Assessing the Attitudes and Perceptions of Organizational Members." Pp. 71-138 in *Assessing Organizational Change: A Guide to Methods, Measures, and Practices*, edited by Stanley E. Seashore, Edward E. Lawler III, Philip H. Mirvis, and Cortlandt Cammann. New York: Wiley.
- Caplan, Robert D., Sidney Cobb, John R. French, R. Van Harrison, and S. R. Pinneau. 1975. *Job Demands and Worker Health: Main Effects and Occupational Differences*. U.S. Department of Health, Education and Welfare, NIOSH Publication no. 75-160. Washington, D.C.: U.S. Government Printing Office.
- Cooley, Elizabeth, and Paul Yovanoff. 1996. "Supporting Professionals-at-Risk: Evaluating Interventions to Reduce Burnout and Improve Retention of Special Educators." *Exceptional Children* 62 (4): 336-55.
- Coward, Raymond T., Tiffany L. Hogan, R. Paul Duncan, Claydell H. Horne, M. A. Hilker, and L. M. Felsen. 1995. "Job Satisfaction of Nurses Employed in Rural and Urban Long-Term Care Facilities." *Research in Nursing and Health* 18:271-84.
- Crampton, Suzanne M., and John A. Wagner III. 1994. "Percept-Percept Inflation in Microorganizational Research: An Investigation of Prevalence and Effect." *Journal of Applied Psychology* 79 (1): 67-76.
- Deery-Schmitt, Deanna M., and Christine M. Todd. 1995. "A Conceptual Model for Studying Turnover among Family Child Care Providers." *Early Childhood Research Quarterly* 10: 121-43.
- Drake, Brett, and Gautam N. Yadama. 1996. "A Structural Equation Model of Burnout and Job Exit among Child Protective Services Workers." *Social Work Research* 20 (3): 179-87.
- Drolen, Carol S., and Charles R. Atherton. 1993. "Turnover in State Hospital Social Workers." *Administration and Policy in Mental Health* 20 (5): 379-82.
- Dunkin, Jeri, Teri Stratton, T. Harris, Nyla Juhl, and Jack Geller. 1994. "A Predictive Model for Retention of Rural Nurses." Manuscript. University of North Dakota Rural Health Research Center, Grand Forks.
- Edelwich, Jerry, and Archie Brodsky. 1980. *Burnout: Stages of Disillusionment in the Helping Professions*. New York: Human Sciences.
- Fuller, J. Bryan, Kim Hester, Pat Dickson, Barbara J. Allison, and Meg Birdseye. 1996. "A Closer Look at Select Cognitive Precursors to Organizational Turnover: What Has Been Missed and Why?" *Psychological Reports* 78:1331-52.
- Geurts, Sabine, Wilmar Schaufeli, and Jan De Jonge. 1998. "Burnout and Intention to Leave among Mental Health-Care Professionals: A Social Psychological Approach." *Journal of Social and Clinical Psychology* 17 (3): 341-62.
- Geurts, Sabine A., Wilmar B. Schaufeli, and Christel G. Rutte. 1999. "Absenteeism, Turn-

- over Intention and Inequity in the Employment Relationship." *Work and Stress* 13 (3): 253-67.
- Glass, Gene V., Barry McGaw, and Mary Lee Smith. 1981. *Meta-analysis in Social Research*. Beverly Hills, Calif.: Sage.
- Glisson, Charles, and Mark Durick. 1988. "Predictors of Job Satisfaction and Organizational Commitment in Human Service Organizations." *Administrative Science Quarterly* 33: 61-81.
- Gray, Alastair M., and Victoria I. Phillips. 1994. "Turnover, Age and Length of Service: A Comparison of Nurses and Other Staff in the National Health Service." *Journal of Advanced Nursing* 19:819-27.
- Hellman, Chan M. 1997. "Job Satisfaction and Intent to Leave." *Journal of Social Psychology* 137 (6): 677-89.
- Hendrix, William H., Tina Robbins, Janis Miller, and Timothy P. Summers. 1999. "Effects of Procedural and Distributive Justice on Factors Predictive of Turnover." *Journal of Social Behavior and Personality* 13 (4): 611-32.
- Hom, Peter W., Fanny Caranikas-Walker, Gregory E. Prussia, and Rodger W. Griffeth. 1992. "A Meta-analytical Structural Equations Analysis of a Model of Employee Turnover." *Journal of Applied Psychology* 77 (6): 890-909.
- Hunter, John E., and Frank L. Schmidt. 1990. *Methods of Meta-analysis: Correcting Error and Bias in Research Findings*. Newbury Park, Calif.: Sage.
- Irvine, Diane, and Martin Evans. 1992. "Job Satisfaction and Turnover among Nurses: A Review and Meta-analysis." *Quality of Nursing Worklife Research Unit Monograph*, no. 10. University of Toronto, Faculty of Nursing, Toronto.
- Jayaratne, Srinika, and Wayne A. Chess. 1983. "Job Satisfaction and Turnover among Social Work Administrators." *Administration in Social Work* 7:11-22.
- . 1984. "Job Satisfaction, Burnout and Turnover: A National Study." *Social Work* 29: 448-53.
- Jayaratne, Srinika, David P. Himle, and Wayne A. Chess. 1991. "Job Satisfaction and Burnout: Is There a Difference?" *Journal of Applied Social Sciences* 15 (2): 245-62.
- Jinnett, Kimberly, and Jeffrey A. Alexander. 1999. "The Influence of Organizational Context on Quitting Intention: An Examination of Treatment Staff in Long-Term Mental Health Care Settings." *Research on Aging* 21 (2): 176-204.
- Jolma, Dena J. 1990. "Relationship between Nursing Work Load and Turnover." *Nursing Economics* 8 (2): 110-14.
- Jones, Foard F. 1998. "Pay Procedures and Voluntary Turnover: Does Procedural Justice Matter?" *Psychological Reports* 83:475-82.
- Kiyak, H. Asumen, Kevan H. Namazi, and Eva F. Kahana. 1997. "Job Commitment and Turnover among Women Working in Facilities Serving Older Persons." *Research on Aging* 19 (2): 223-46.
- Knapp, Martin, Kostas Harissis, and Spyros Missiakoulis. 1981. "Who Leaves Social Work?" *British Journal of Social Work* 11:421-44.
- . 1982. "Investigating Labour Turnover and Wastage Using the Logit Technique." *Journal of Occupational Psychology* 55:129-38.
- Koeske, Gary F., and Stuart A. Kirk. 1995. "The Effect of Characteristics of Human Service Workers on Subsequent Morale and Turnover." *Administration in Social Work* 19 (1): 15-31.
- Kopelman, Richard E., Janet L. Rovenpor, and Roger E. Millsap. 1992. "Rationale and Construct Validity Evidence for the Job Search Behavior Index: Because Intentions (and New Years's Resolutions) Often Come to Naught." *Journal of Vocational Behavior* 40:269-87.
- Krausz, Moshe, Meni Koslowsky, and Asher Eiser. 1998. "Distal and Proximal Influences of Turnover Intentions and Satisfaction: Support for a Withdrawal Progression Theory." *Journal of Vocational Behavior* 52:59-71.
- Landstrom, Gail L., Diana L. Biordi, and Dee Ann Gillies. 1989. "The Emotional and Behavioral Process of Staff Nurse Turnover." *Journal of Nursing Administration* 19 (9): 23-28.
- Lee, Raymond T., and Blake E. Ashforth. 1993a. "A Further Examination of Managerial Burnout: Toward an Integrated Model." *Journal of Organizational Behavior* 14:3-20.
- . 1993b. "A Longitudinal Study of Burnout among Supervisors and Managers: Com-

- parisons between the Leiter and Maslach (1988) and Golembiewski et al. (1986) Models." *Organizational Behavior and Human Decision Processes* 54:369–98.
- Lee, Thomas W., Terence R. Mitchell, Brooks C. Holtom, Linda S. McDaniel, and John W. Hill. 1999. "The Unfolding Model of Voluntary Turnover: A Replication and Extension." *Academy of Management Journal* 42 (4): 450–62.
- Lum, Lillie, John Kervin, Kathleen Clark, Frank Reid, and Wendy Sirola. 1998. "Explaining Nursing Turnover Intent: Job Satisfaction, Pay Satisfaction, or Organizational Commitment?" *Journal of Organizational Behavior* 19:305–20.
- Manlove, Elizabeth E., and Jacqueline R. Guzell. 1997. "Intention to Leave, Anticipated Reasons for Leaving, and 12-Month Turnover of Child Care Center Staff." *Early Childhood Research Quarterly* 12:145–67.
- Maslach, Christina, and Susan E. Jackson. 1986. *Maslach Burnout Inventory: Manual*. 2d ed. Palo Alto, Calif.: Consulting Psychologists.
- McKee, Gail H., Steven E. Markham, and K. Dow Scott. 1992. "Job Stress and Employee Withdrawal from Work." Pp. 153–63 in *Stress and Well-Being at Work: Assessments and Interventions for Occupational Mental Health*, edited by James Campbell Quick, Lawrence R. Murphy, and Joseph J. Hurrell, Jr. Washington, D.C.: American Psychological Association.
- Michaels, Charles E., and Paul E. Spector. 1982. "Causes of Employee Turnover: A Test of the Mobley, Griffeth, Hand, and Meglino Model." *Journal of Applied Psychology* 67 (1): 53–59.
- Miller, Oscar, Jr. 1996. *Employee Turnover in the Public Sector*. New York: Garland.
- Milliken, Frances J., and Luis L. Martins. 1996. "Searching for Common Threads: Understanding the Multiple Effects of Diversity in Organizational Groups." *Academy of Management Review* 21 (2): 402–33.
- Mitra, Atul G., Douglas Jenkins, Jr., and Nina Gupta. 1992. "Meta-analytic Review of the Relationship between Absence and Turnover." *Journal of Applied Psychology* 77 (6): 879–89.
- Moos, Rudolph H. 1979. "Educational Climates." Pp. 79–100 in *Educational Environments and Effects*, edited by Herbert J. Walberg. Berkeley: McCuthan.
- Mowday, Richard T., Richard M. Steers, and Lyman W. Porter. 1979. "The Measurement of Organizational Commitment." *Journal of Vocational Behavior* 14:224–47.
- Munn, Erin K., Clifton E. Barber, and Janet J. Fritz. 1996. "Factors Affecting the Professional Well-Being of Child Life Specialists." *Children's Health Care* 25 (2): 71–91.
- Oktay, Julianne S. 1992. "Burnout in Hospital Social Workers Who Work with AIDS Patients." *Social Work* 37 (5): 432–39.
- Parasuraman, Saroj. 1989. "Nursing Turnover: An Integrated Model." *Research in Nursing and Health* 12 (1): 267–77.
- Phillips, Deborah, Carolee Howes, and Marcy Whitebook. 1991. "Child Care as an Adult Work Environment." *Journal of Social Issues* 47 (2): 49–70.
- Powell, Myra J., and Reginald O. York. 1992. "Turnover in County Public Welfare Agencies." *Journal of Applied Social Sciences* 16 (2): 111–27.
- Price, James L., and Charles W. Muller. 1981. "A Causal Model of Turnover for Nurses." *Academy of Management Journal* 24 (3): 543–65.
- . 1986. *Absenteeism and Turnover of Hospital Employees*. Greenwich, Conn.: JAI.
- Rhodes, Susan R., and Richard M. Steers. 1990. *Managing Employee Absenteeism*. Reading, Mass.: Addison-Wesley.
- Rizzo, John R., Robert J. House, and Sidney I. Lirtzman. 1970. "Role Conflict and Ambiguity in Complex Organizations." *Administrative Science Quarterly* 15:150–63.
- Rosenthal, Robert. 1991. *Meta-analytic Procedures for Social Research*. Thousand Oaks, Calif.: Sage.
- Rosenthal, Robert, and Donald B. Rubin. 1986. "Meta-analytic Procedures for Combining Studies with Multiple Effect Sizes." *Psychological Bulletin* 99:400–406.
- Rotter, Julian B. 1966. "Generalized Expectancies for Internal versus External Control of Reinforcement." *Psychological Monographs* 80 (1): 1–28.
- Schaefer, Jeanne A., and Rudolph H. Moos. 1996. "Effects of Work Stressors and Work Climate on Long-Term Care Staff's Job Morale and Functioning." *Research in Nursing and Health* 19:63–73.
- Siefert, Kristine, Srinika Jayaratne, and Wayne A. Chess. 1991. "Job Satisfaction, Burnout and Turnover in Health Care Social Workers." *Health and Social Work* 16:193–202.

660 Social Service Review

- Somers, Mark J. 1996. "Modeling Employee Withdrawal Behaviour over Time: A Study of Turnover Using Survival Analysis." *Journal of Occupational and Organizational Psychology* 69:315–26.
- Spector, Paul E. 1985. "Measurement of Human Service Staff Satisfaction: Development of the Job Satisfaction Survey." *American Journal of Community Psychology* 13:693–713.
- Spector, Paul E., and Charles E. Michaels. 1986. "Personality and Employee Withdrawal: Effects of Locus of Control on Turnover." *Psychological Reports* 59:63–66.
- Stremmel, Andrew J. 1991. "Predictors of Intention to Leave Child Care Work." *Early Childhood Research Quarterly* 6:285–98.
- Tai, Teresa W. 1996. "The Effect of Staff's Perceptions of Social Support Systems on Turnover Behavior." Ph.D. diss. Texas A&M University.
- Tai, Teresa Wai Chi, Sherry I. Bame, and Chester D. Robinson. 1998. "Review of Nursing Turnover Research, 1977–1996." *Social Science Medicine* 47 (12): 1905–24.
- Taunton, Roma Lee, Diane K. Boyle, Cynthia Q. Woods, Helen E. Hansen, and Marjorie J. Bott. 1997. "Manager Leadership and Retention of Hospital Nurse Staff." *Western Journal of Nursing Research* 19 (2): 205–26.
- Tett, Robert P., and John P. Meyer. 1993. "Job Satisfaction, Organizational Commitment, Turnover Intention, and Turnover: Path Analysis Based on Meta-analytic Findings." *Personnel Psychology* 46:259–93.
- Todd, Christine M., and Deanna M. Deery-Schmitt. 1996. "Factors Affecting Turnover among Family Child Care Providers: A Longitudinal Study." *Early Childhood Research Quarterly* 11:351–76.
- Tollen, William B. 1960. *Study of Staff Losses in Child Welfare and Family Service Agencies*. Children's Bureau Publication no. 383-1960. Washington, D.C.: U.S. Government Printing Office.
- Vandenberg, Robert J., and Jodi B. Nelson. 1999. "Disaggregating the Motives Underlying Turnover Intentions: When Do Intentions Predict Turnover Behavior?" *Human Relations* 52 (10): 1313–36.
- Vandenberghe, Christian. 1999. "Organizational Culture, Person-Culture Fit, and Turnover: A Replication in the Health Care Industry." *Journal of Organizational Behavior* 20: 175–84.
- van der Hek, H., and H. N. Plomp. 1997. "Occupational Stress Management Programmes: A Practical Overview of Published Effect Studies." *Occupational Medicine* 47 (3): 133–41.
- Vinokur-Kaplan, Diane. 1995. "Enhancing the Effectiveness of Interdisciplinary Mental Health Treatment Teams." *Administration and Policy in Mental Health* 22:521–30.
- Weiner, Nan. 1980. "Determinants and Behavioral Consequences of Pay Satisfaction: A Comparison of Two Models." *Personnel Psychology* 33 (4): 741–57.
- Williams, Charles R., and Linda P. Livingstone. 1994. "Another Look at the Relationship between Performance and Voluntary Turnover." *Academy of Management Journal* 37 (2): 269–98.
- Williams, Larry J., and Stella E. Anderson. 1994. "An Alternative Approach to Method Effects by Using Latent-Variable Models: Applications in Organizational Behavior Research." *Journal of Applied Psychology* 79 (3): 323–31.
- Winefield, Helen R., E. Farmer, and Linley Denson. 1998. "Work Stress Management for Women General Practitioners: An Evaluation." *Psychology, Health and Medicine* 3 (2): 163–70.
- Wright, Dan, and James Thomas. 1982. "Role Strain among School Psychologists in the Midwest." *Journal of School Psychology* 20 (2): 96–102.
- Wright, Thomas A., and Russell Cropanzano. 1998. "Emotional Exhaustion as a Predictor of Job Performance and Voluntary Turnover." *Journal of Applied Psychology* 83 (3): 486–93.

Note

This study was funded by a Title IV-E Child Welfare Training grant. The authors wish to thank Paul Carlo, director, and Carole Bender, director of training, USC Center on

Child Welfare, for their consistent support and constructive feedback on an earlier version of this article. The authors also wish to thank Ryan Quist for his valuable statistical consultation.