

Does job resource loss reduce burnout and job exit for professionally trained social workers in child welfare?

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ABSTRACT

This study contributes to the literature on burnout and turnover in child welfare by examining the applicability of conservation of resources theory (COR). This theory argues that a loss of resources leads to the stress underlying burnout. This article examines the loss of two resources in particular: (a) the loss of a member of the entering cohort of workers and (b) change in the coethnic population of the community in which the social worker practices. In this sample of 1001 specially trained social workers, 44.3% reported high levels of emotional exhaustion or burnout. Stress was positively associated with burnout. Likewise, job satisfaction was protective against burnout. Furthermore, coethnic resources were associated with higher personal accomplishment scores for Asian–American, Hispanic, and Caucasian workers. Cohort member loss was not associated with burnout when controlling for personal resources and organizational factors, but cohort member loss did triple the odds of others in the cohort leaving. However, burnout was not associated with job exit in this sample. Although this study did not find evidence that cohort loss or coethnic loss was associated with burnout, it raises questions for further research about the social network implications of turnover.

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1. Introduction

The conventional paradigm of social work is that stress causes burnout and burnout in turn increases turnover (Mor Barak, Levin, Nissly, & Lane, 2006; Mor Barak, Nissly, & Levin, 2001; Soderfeldt, Soderfeldt, & Wang, 1995; Zlotnik, DePanfilis, Daining, & Lane, 2005). However, recent research has questioned the relevance of this paradigm (Ellett, 2009; Jacquet, Clark, Morazes, & Withers, 2008). In child welfare, the Government Accountability Office [GAO] (2003) cited turnover as a barrier to successful outcomes in meeting permanency goals. This article reviews the theoretical foundations of burnout and uses the tools of organizational demography to test a claim found in conservation of resources theory (COR) that loss of resources lead to burnout. The relationship of burnout to turnover is also estimated using data from a sample of professionally trained social workers in child welfare.

1.1. Organizational theory, stress, and burnout

1.1.1. Person–environment fit vs. job-demand theory

Originating in the 1970s, burnout evolved as a concept used to describe a long term, emotional response to interpersonal stressors

related to work in the human services (Maslach, Schaufeli, & Leiter, 2001). After a series of interviews with human service workers, Maslach, a social psychologist, began to see burnout as a coping mechanism for workplace stress. She developed the Maslach Burnout Inventory (MBI) and collected more than 11,000 responses from social workers, nurses, teachers, police officers and others human service professionals. Maslach and Jackson (1981) identified three components of burnout: *emotional exhaustion* (EE), a sense of *personal accomplishment* or self-efficacy (PA), and *depersonalization* or cynicism (DP). Many studies used only the EE subscale as the proxy measure for “burnout” (Mor Barak et al., 2001; Zlotnik et al., 2005).

As research progressed to look more closely at the determinants of burnout, evolving theory likened burnout to a disease response to stress. For example, the Person–Environment (PE) fit model conceptualized stress on the job as a function of one of two mismatches: (a) between the job requirements and worker’s abilities (Demands Ability Fit or DA Fit); or (b) between supplies in the environment and worker values (Supply Values Fit or SV Fit) (Edwards, 1996). The second major line of research, the Job–Demand–Control theory (JDC) (van der Doef & Maes, 1999), argued that stress is a result of having a job with high demands and low control: precisely the situation of front-line, child-protection workers who struggle day-to-day with families and the courts. To summarize, in the PE model, a worker may resolve burnout by upgrading abilities or adopting the values of the workforce. In the JDC theory, workers would have to gain more control or leave. The literature also discusses *job resources*, the

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supports at work that help employees succeed, as another determinant or protective factor in burnout (Maslach et al., 2001; Hobfoll, 1989). After a review of the empirical research, we will examine resources in more detail.

1.1.2. Previous findings: magnitude of burnout in child welfare

Soderfeldt et al. (1995) produced the first summary of the literature on burnout among social workers. In the 18 articles reviewed, the authors concluded that social workers were burned out and the profession had to prevent it. However, only 10 of these reviewed studies reported burnout scores and the studies varied in sample size, workplace setting, and design. In other words, the literature at that time had not yet systematically investigated burnout. This key study underscored the need for science to accurately document phenomena to justify policy decisions. Oddly, studies that investigated burnout in social work often reported only sample means and standard deviations but not proportions. As a result, there are few precise, generalizable estimates of the prevalence of burnout in social work. Existing studies found that it affected the majority of sampled workers. A recent review (Lloyd, King, & Chenoweth, 2002) identified two estimates of prevalence: (a) moderate-to-severe burnout occurred in only 47% of respondents in Northern Ireland (Gibson, 1989) and (b) 71% of a sample of child welfare workers in metropolitan New York City (Martin & Schinke, 1998). A recent study in Georgia found that an estimated 97% of child welfare workers from a convenience sample experienced burnout (Williams et al., 2011). Furthermore, 83.3% of Palestinian social workers scored moderate to high for EE but 53.3% also scored high on PA (Abdallah, 2009). Similarly, an Ontario, Canada study found that 43.5% of front-line child welfare workers experienced EE, but many also had high levels of job satisfaction (Harvey et al., 2003; Stalker, Mandell, Frensch, Harvey, & Wright, 2007), a pattern also found in Anderson (2000). Although these were convenience samples, they illustrated the puzzle in the literature: social workers were burned out, but loved their jobs.

1.1.3. Determinants of burnout in child welfare

As noted earlier, the literature theorized burnout as a long-term function of job stress. Recent empirical work in child welfare drew from both the JDC and PE models. In the JDC model, stress occurred when jobs had high demands, but the control the worker had over those demands had been low. Research that followed the JDC model included job demand measures, such as work overload, and control measures, such as role conflict, supervisor support, fellow worker support, support of friends and relatives and job autonomy (Boyas & Wind, 2010; Jacquet et al., 2008; Kim, 2011; Lewandowski, 2003). This JDC model emphasized conflict among the worker, the work, and the organization.

Literature that drew on the PE model assumed that the burnout caused by job stress was a function of how the worker's ability and values fit the job and organization. Recent articles have investigated the determinants of burnout including the education or training of the worker, personal trauma (Hill, 2007), susceptibility to emotional contagion (Siebert, Siebert, & Taylor-McLaughlin, 2007), compassion fatigue and compassion satisfaction (Conrad & Kellar, 2006), and organizational factors (Boyas & Wind, 2010). Studying the role of values, Ying (2008) found that social work students drew on faith, religion or other spiritual practices to "self-detach" from work in order to prevent EE.

1.2. Relationship of burnout to turnover in child welfare

The child welfare literature assumed that burnout causes high turnover. Turnover has been detrimental to child welfare because having consistent case management from the same worker allows a therapeutic relationship to develop and improve permanency outcomes for children in families (Mor Barak et al., 2006; National

Council on Crime & Delinquency, 2006; Stalker et al., 2007; Zlotnik et al., 2005). Federal guidelines have been requiring child welfare agencies to place children with their biological families or an adopted family within 12 to 18 months of removal. High turnover made this goal difficult to achieve (GAO, 2003). However, the empirical research contained several limitations that we detail in the next two sections.

1.2.1. Turnover definition and magnitude

The literature defined *turnover rates* as the number of persons who left the job voluntarily in a given year (not due to illness, family move or other uncontrollable reason) divided by the number of relevant positions (Zlotnik et al., 2005). However, many studies did not ask if the reason for leaving was voluntary or preventable. How big was the turnover problem in child welfare? Zlotnik et al. (2005) included turnover rates from two studies: 32% in Arkansas and 20% in Oklahoma. In 2003, California child welfare worker agencies averaged 14% turnover (Fulcher & Smith, 2011) and in 2008 ranged from 7% to 18.4% (Clark, Smith, & Mathias, 2009). Although 10% turnover may appear manageable, small agencies with limited capacity for training could have a difficult time. Furthermore, an agency with 30% turnover could lose their entire workforce every 3 years. This could mean the loss of institutional memory, increased recruitment and training costs, and disrupted case planning. That being said, researchers have not sufficiently or systematically documented the magnitude of turnover. Claims about turnover in child welfare have been based on a few studies in three states.

1.2.2. Burnout and other factors associated with turnover

Researchers in child welfare have documented the relationship of burnout and other factors associated with child welfare workers leaving their jobs. The literature sometimes measured job exit using intention to leave as a proxy for leaving (e.g. Ellett, 2009; Kim & Stoner, 2008). There were two recent summaries of the literature relevant to this study. Mor Barak et al. (2001) conducted a meta-analysis of the antecedents of turnover in child welfare, human services, and social work. They found that the five variables with the largest standardized effect sizes associated with actual turnover in social work were role overload, stress, negative affectivity, emotional exhaustion, and burnout. Furthermore, job problems, stress, EE, role overload, and burnout were the five largest standardized effect sizes associated with intention to leave. Mor Barak specifically cited interaction effects as needing further research. The second recent review article (Zlotnik et al., 2005), on the other hand, focused exclusively on retention and turnover in child welfare workers and presented ways to improve retention in three broad areas: personal characteristics, organizational factors and improved training through the Title IV-E training program. The authors highlighted active recruitment of bilingual workers as a strategy of retaining workers. Zlotnik et al. also identified three quantitative studies that used the subscales from the MBI as independent variables. These studies used dependent variables operationalized as (a) job exit (Dickinson & Perry, 2002), (b) intention to leave (Drake & Yadama, 1996), and (c) retention (Cahalane & Sites, 2004). The EE subscale had an association with increased probability of leaving in Dickinson & Perry and intention to leave in Drake & Yadama. The DP subscale was negatively associated with retention in Cahalane & Sites.

1.2.3. Conservation of resources and organizational demography

While previous studies of burnout and turnover in child welfare have examined the influence of personal, organizational, and environmental variables, to date, the use of Conservation of Resources (COR) theory has not been explicitly addressed in the child welfare literature. In the COR tradition, job exit was a positive response, and absenteeism or job exit was a health-seeking response when depleted resources cause the stress that leads to burnout. These resources could be physical objects, social conditions, personal characteristics or energies (Neveu, 2007). Examples of *physical objects* included a home,

car, or other tangible assets that could prevent stress. *Conditions*, on the other hand, were intangible resources such as being in a marriage, having seniority or tenure on the job. The most important, *personal characteristics* included both innate and learned skills and personality traits. Finally, *energies* were situations, such as a position in a social network that facilitated acquisition of more resources (Hobfoll, 1989).

Arguably, a generalized job resources perspective was not completely absent in child welfare research. In particular, building on the PE model, researchers assumed that improved training on the job or through pre-service training equipped workers with resources that would reduce job stress, burnout, and turnover and ultimately improve client outcomes. For example, Anderson (2000) administered a post-test ($n = 151$) after a stress management workshop to see if coping strategies could reduce burnout. They found that those with engaged coping strategies had reduced, but not eliminated EE. While the Anderson study assessed personal resources, Strolin-Goltzman (2010) manipulated not only the personal resources, but also energies in an organization by using a Design Teams intervention to directly address and solve organizational issues. They found that the intervention reduced EE and intent to leave. The difference was that these studies observed the effects of a resource intervention and other previously cited work treats resources as static. This study used child welfare worker retention data to look for the association between resource loss, burnout, and turnover. If resource loss caused stress, which in turn caused burnout and then turnover, observing a loss could help identify one piece of this theoretical model. Changes in these social energies have been analyzed using tools from organizational demography, a subfield interested in the effect of entering a workplace with a cohort as well as the composition of coworkers (Stainback, Tomaskovic-Devey, & Skaggs, 2010; Sørensen, 2000; Wagner, Pfeffer, & O'Reilly, 1984). This literature considers the coethnic composition of the workforce to be important. We define coethnic as members of the same race or ethnic group. Neither conservation of resources theory nor organizational demography has been applied to the child welfare literature on burnout and turnover. One would need data to document when a worker joined an organization with a graduating cohort and if one or more cohort members had left by the time the exit survey had been administered. Such data could answer the following questions: Does the loss of a cohort member (a resource loss) lead to burnout and turnover? Likewise, does the loss of coethnic resources lead to burnout and turnover?

2. Conceptual model and research hypotheses

This conceptual model study tests demographic moderating variables and their interaction effects on turnover for specially trained child welfare workers. See Fig. 1 for a conceptual model that shows three domains that influence burnout: personal resources, workplace stress and workplace satisfaction and support. In turn, burnout has a direct effect on turnover.

Research question one: is resource loss associated with burnout?

H 1. Child welfare workers who had a cohort member leave or move to another county had a lower sense of personal accomplishment, higher emotional exhaustion, and higher depersonalization [Cohort Loss].

H 2. Child welfare workers who experienced an increase/decrease in their coethnic population in the county had a lower/higher sense of personal accomplishment, lower/higher emotional exhaustion, and lower/higher depersonalization [Coethnic Loss].

Research question two: is resource loss associated with job exit?

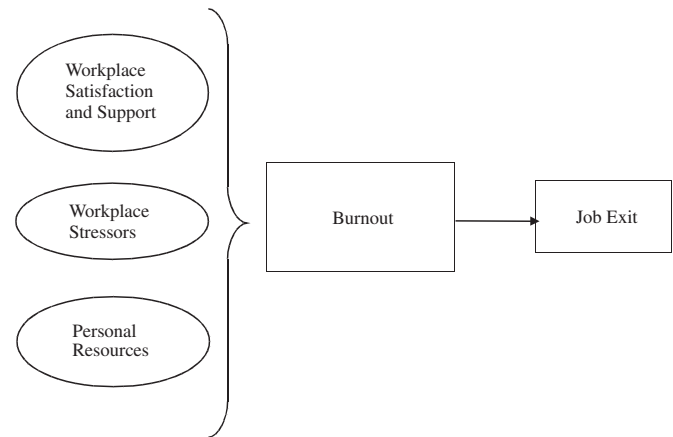


Fig. 1. Initial conceptual model of job resources, burnout, and job exit.

H 3. Child welfare workers who had a cohort member leave or move to another county child welfare agency had higher odds of leaving themselves.

H 4. Child welfare workers who experienced a decrease in their coethnic population in the county of employment had higher odds of leaving.

3. Methods

3.1. Sample and survey procedures

This study was a secondary data analysis of a voluntary, repeated cross-sectional study of MSW graduates of the public child welfare Title IV-E stipend training program administered by California Social Work Education Center (CalSWEC). Since inception, the mission of CalSWEC has been to reprofessionalize child welfare, increase diversity of the workforce in a state with a highly diverse population, and improve pre-service and in-service training. In 1989, California schools of social work, county social services agencies, the State Department of Social Services, and the local chapter of the National Association of Social Workers (NASW) organized CalSWEC. Using federal Title IV-E Foster Care training funds from the US Department of Health and Human Services' Administration of Children and Families (HHS/ACF), the schools of social work proactively recruited students with a commitment to working in a public agency that served multilingual and disadvantaged families and children.

In exchange for a commitment to work 2 years after graduation, students in an MSW program could competitively apply for a stipend to pay for a part of costs of graduate education. In order to track completion of the work obligation and to determine whether the graduate stayed or left public child welfare, CalSWEC collected these data each year using a survey mailed about two and a half to three years following graduation. The first class graduated in 1993. The dataset used in this analysis has 1001 total observations and contains surveys collected from 1996 to September 2006. Surveys had an overall response rate of 51%. A demographic comparison of the non-responders to responders shows no significant differences, except for race or ethnicity. More African-Americans and fewer multiracial persons and whites responded than expected [χ^2 ($df = 5$) = 39.76, $p < 0.001$]. Furthermore, more of the non-responders were leavers than expected [χ^2 ($df = 1$) = 350.0, $p < 0.001$]. Additional information about this data set was published in Jacquet et al. (2008).

3.2. Measures

3.2.1. Dependent variables: Maslach burnout inventory (MBI)

The dependent variables for the first research question were the subscales of the Maslach burnout inventory (MBI). We used the MBI

as a dependent variable rather than a stress scale because the MBI had been established as a stable measure for a long-term stress response (e.g. Anderson, 2000; Kim, 2011; Neveu, 2007). The study used the 22-question version of the MBI scale. Respondents answered how often or how strong they feel about various aspects of work, such as client relations, feelings at the end of the day and sense of accomplishment. Although the MBI used an interval scale from zero to six, it has been treated in practice as continuous (Maslach et al., 2001; Maslach & Jackson, 1981). A high raw score indicated burnout for EE (EE: Low 1–16; Moderate 17–26; High 27–54) and DP (DP: Low 1–6; Moderate: 7–12; High 13–30). Because low PA was associated with higher burnout, PA (PA: Low: 39–48; Moderate 38–32; High: 1–31) was reverse scored. Fourteen respondents did not complete the MBI scale, leaving an unimputed n of 987.

3.2.2. Dependent variable: turnover as job exit

The dependent variable for the second research question was turnover, which was operationalized as reported job exit from public child welfare position after the Title IV-E graduate completed two or three (in the case of part-time students) years of public child welfare service. The dependent variable was a dummy variable showing whether the graduate stayed or left the payback agency (1 = yes, 0 = no).

3.2.3. Independent variables: COR energies and supports for workers

The key variable of interest was whether a cohort member left or moved (1 = yes, 0 = no). Loss of a cohort member represented a loss of resource energies. We interacted cohort member loss with fellow-worker support because we assumed that the loss of a cohort member could only be considered a loss for respondents who felt supported by fellow workers.

The second variable of interest was the change in the coethnic makeup of the county in which the respondent worked from the year of hire to the year the survey was completed (RAND, 2010). For example, if a respondent in Los Angeles was Asian, and in year one, 25% of the population of Los Angeles was Asian, but in year three only 24% of the population consisted of Asians, the change would be negative one percent. The independent variables related to energy and support included a battery of 13 questions related to support systems that asked about supervisor support, fellow worker support and friends/relative support. See Jacquet et al. (2008) for a more detailed description of these questions.

3.2.4. Independent variables: workplace satisfaction

In order to control for perceived organizational level influences, respondents also completed a 28-item workplace satisfaction scale (Jacquet et al., 2008). Each item was a statement such as “My salary” or “A flexible schedule” to which the respondent responded to a five point Likert-type scale ranging from “very dissatisfied” (1) to “very satisfied” (5). These items included satisfaction with the following aspects of work: “relationships with clients”, “growth and development”, “caseload/paperwork”, “office structure” and “salary & benefits.”

3.2.5. Independent variables: stressor variables

Because, by definition, burnout is a long term response to stress, we included a 15-item stress questionnaire as independent variables (Jacquet et al., 2008). These items included, for example, “handling crisis call” or “appearing in court”. The answers range from 1) Not at all stressful, 2) a little stressful, 3) moderately stressful, to 4) very stressful and 5) not applicable. The items were categorized as work stress, visiting stress and client stress. Another stressor variable included was perception of caseload, a multinomial variable (0 = Low to 2 = High).

3.2.6. Independent variables: conditions

In the Conservation of resources (COR) theoretical framework, conditions were intangible assets. The first variable in this category

was whether the respondent had been a concurrent county employee while obtaining his or her master’s degree (1 = yes, 0 = no). This indicated prior experience in child welfare before school. We measured general life experience as being over 40 years of age or not, because Maslach and Jackson (1981) noted that those under 30 or 40 were more likely to experience burnout. Both age thresholds were tested against the log odds of staying and those over 40 showed a significant difference in log odds than those under 40. This covariate was collapsed into two categories: “above 40” (1 = >40, 0 otherwise). We coded “Having a religion” and “being partnered” as binary variables. CalSWEC collected information on relationship status that included those who were married, but also those cohabitating or in a domestic partnership, as well as those who were single, divorced, or separated.

3.2.7. Independent variable: personal characteristics

Personal characteristics in the context of COR theory are innate or learned traits such as education level, on-the-job training and language ability. However, everyone in the sample had the same educational level and same on-the-job training. In order to capture variation, the geographic training region of the state and university attended were included as dummy variables, because California’s public child welfare worker population differs depending on the region. The training regions were Northern, Bay Area, Central, Los Angeles and Southern. The Northern region was rural and was composed of small counties. The Bay Area had the highest percentage of MSWs. The Southern region included border counties of San Diego and Imperial Counties and the Mojave Desert. The Central region contained high poverty counties because it was in the San Joaquin Valley, an agricultural region with a large migrant population. Los Angeles had nearly 40% of all the foster children in the state, but it was in and of itself as diverse as the rest of the state (Johnson, 2010). The social worker’s language ability was also included as a dummy variable (1 = Bilingual, 0 = Otherwise).

3.2.8. Independent variable: demographic variables

Control variables included the year of survey completion, gender, and race. For race, dummy variables were created for white, African-American, Asian, Native-American and Hispanic (1 = Yes, 0 = No). Male was also a dummy variable (1 = Male, 0 = Female).

3.3. Data analysis

Prior to multivariate analysis, we conducted a confirmatory factor analysis on the MBI scale to test consistency with Drake and Yadama (1996) and other studies. Missing values were imputed using Multivariate Imputation by Chained Equations (MICE) in R 2.10 (Oudshoorn, 2007; Team, 2008) to yield a sample size of $n = 1001$. Research question one was analyzed using ordinary least squares regression (lm in R.2.10). Research question two was analyzed using logistic regression (glm in R.2.10). The assumption that continuous covariates were linear in log odds was tested. Only first-order multiplicative interaction terms were included. For example, Cohort Member Loss times Fellow Worker Support. The Akaike Information Criterion (AIC) and likelihood ratio test provided a way to determine if the interaction terms and fixed effects added information to the models, as well as a way for selecting the best-fitting model.

4. Results

4.1. Descriptive statistics. Are they burned out? How many stayed and how many left

Consistent with past research, 44.3% of these social workers experienced high EE. In contrast, only 19% reported high levels of DP and 24% reported low PA (see Fig. 2). Leavers scored on average about

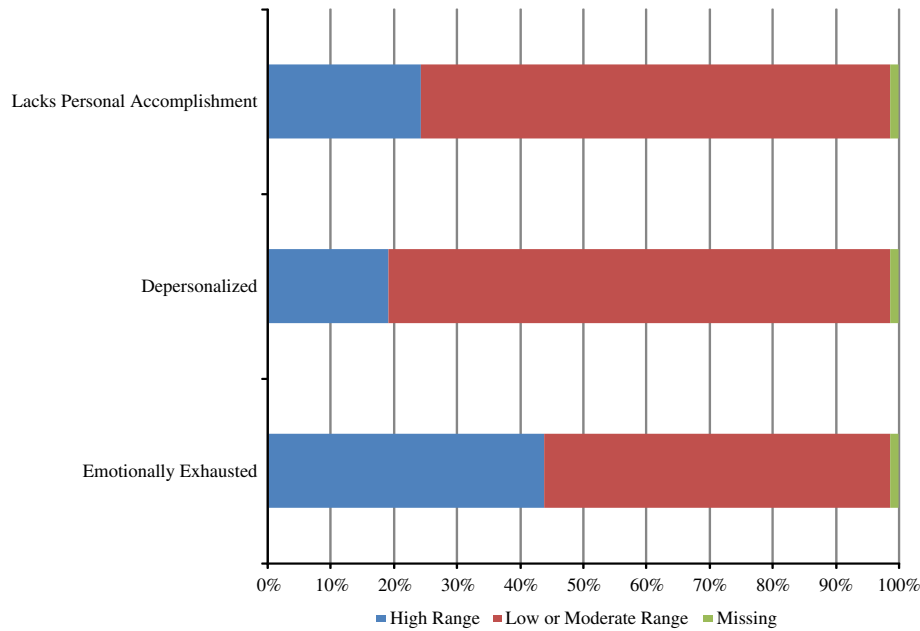


Fig. 2. Are social workers in our sample burned out?

two points higher on the DP scale and 1.23 lower on the personal-accomplishment scale than stayers (see Fig. 2). See Table 1 for a full set of descriptive statistics.

The variation between stayers and leavers on each MBI subscale was significantly different (EE: $t=5.03$, $p<0.01$; PA: $t=-2.26$, $p=0.02$; DP $t=4.45$, $p<0.01$). Similarly, those younger than 40, had a higher average EE score. There were no statistically significant differences by race for emotional exhaustion, $F(1, 6)=1.227$, $p=0.290$. Both DP group means, $F(1, 6)=3.662$, $p<0.001$, and personal-accomplishment group means, $F(1, 6)=4.258$, $p<0.001$, differed significantly by race. Asian Americans had the highest group mean for DP while African Americans had the lowest. For PA, whites

and Native Americans had the highest group means, and Asian Americans the lowest (see Fig. 3).

4.2. Bivariate statistics and assumption checking

See Table 2 for the Pearson's correlations of select variables. Since the data on burnout was clustered in years, county agencies and schools, it was necessary to determine which cluster effects need control. In order to test the assumption of non-constant variance, we created side-by-side box plots for each burnout subscale by year, school, and region. Next, we verified that the ratio of the highest standard deviation to the lowest was less than two. In addition, the residuals versus fitted values showed no

Table 1
Unimputed descriptive statistics of sample.

		PA	DP	EE		PA	DP	EE
African American 13.8%	Mean	35.19	6.84	24.61	Leaver 18.24%	34.75	9.69	29.05
	n	137	137	137		180	180	180
	SD	7.10	5.23	11.66		6.54	5.81	11.49
American Indian 1.82%	Mean	36.94	8.22	27.17	Stayer 81.76%	35.98	7.73	24.50
	n	18	18	18		807	807	807
	SD	4.05	5.98	11.60		6.65	5.25	10.83
Asian American 9.32%	Mean	33.99	9.33	27.38	40 or under 65.55%	34.99	8.76	25.96
	n	92	92	92		647	647	647
	SD	6.74	5.66	11.63		6.43	5.44	10.88
White 38.50%	Mean	36.84	8.69	25.35	Over 40 32.32%	37.29	6.75	23.83
	n	380	380	380		319	319	319
	SD	6.30	5.43	10.20		6.86	5.09	11.39
Hispanic or Latino 25.63%	Mean	34.79	7.45	24.36	Currently single 37.08%	35.42	8.26	25.91
	n	253	253	253		366	366	366
	SD	6.92	5.25	11.46		6.58	5.48	11.70
Other or Mixed 10.13%	Mean	36.08	8.14	26.53	Married or partnered 48.02%	35.99	8.10	25.26
	n	100	100	100		474	474	474
	SD	6.27	5.18	11.67		6.54	5.35	10.45
Missing Race 0.71%	Mean	38.52	5.86	24.71	No religion 14.39%	34.92	9.23	27.44
	n	7	7	7		142	142	142
	SD	5.12	4.26	14.85		6.71	5.76	10.06
Female 83.38%	Mean	35.56	7.94	25.66	Has a religion 64.34%	35.89	7.99	25.19
	n	823	823	823		635	635	635
	SD	6.76	5.38	11.09		6.55	5.36	11.18
Male 16.62%	Mean	37	9	23.68	Total 100%	35.76	8.09	25.33
	n	164	164	164		987	987	987
	SD	5.98	5.46	10.97		6.65	5.40	11.09

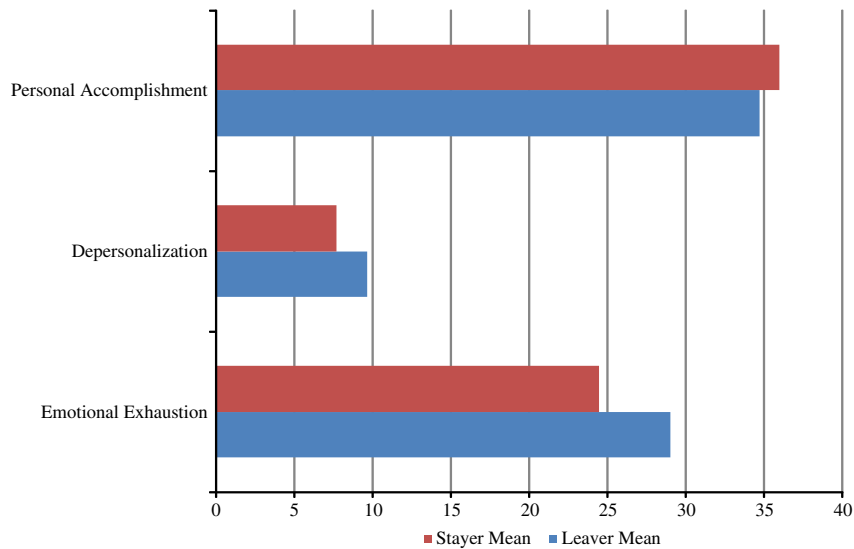


Fig. 3. The difference in mean burnout subscale scores between Stayers (n = 807; 82%) vs. Leavers (n = 180; 18%).

evidence of non-constant variance of residuals. To test the normal distribution of residuals, we drew a q-norm plot and ran a Shapiro–Wilk test. Assumptions of ANOVA were not grossly violated in each case. We conducted an ANOVA of each MBI subscale on school of social work (n = 14), year and RTA region (n = 5) of the first payback county. There were no significant differences in the means of burnout subscales except the mean EE score by school yielded $F(1, 14) = 1.85, p = 0.0321$. The assumption of constant variance was comfortably met with a standard deviation ratio from the highest school to the lowest at 1.6. For the school variance, in order to ensure minimum cell size, we dropped one MSW program with only two graduates. An ANOVA of RTA region by EE was statistically significant, $F(1, 4) = 24.32, p = 0.046$. This lends some evidence to control for region and school clustering using fixed effects. The Shapiro–Wilk test failed, possibly due to the presence of outliers.

A plot of the three MBI subscales on the log odds of leaving showed that the assumption of linearity was met and provided evidence that

there was no need for a robust estimator. Results from a confirmatory factor analysis of the MBI conducted in SPSS 15.0 were consistent with the published MBI factor structure.

4.3. Model selection statistics

See Table 3 for the model-selection statistics. The best fitting model using the AIC for the OLS regression on PA included interaction terms for the variables of interest but not fixed-effect controls (AIC = 6358 vs. 6293). The OLS regression on DP had non-constant variance that could not be corrected by transforming variables. Although heteroskedasticity did not compromise estimates, it may have underestimated the standard errors, leading us to reject a null hypothesis that was true. Robust estimators were not used for OLS because the variables of interest were not statistically significant.

Table 2
Pearson's correlation table of select covariates (* = $p < 0.05$).

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Percent coethnics in county	1.00																
2. Percent change in coethnics in county	-0.17*	1.00															
3. Personal accomplishment	0.11*	-0.07*	1.00														
4. Depersonalization	0.02	0.01	-0.34*	1.00													
5. Emotional exhaustion	-0.05	0.04	-0.29*	0.54*	1.00												
6. Cohort member left or moved	-0.06	0.03	-0.03	0.06*	0.02	1.00											
7. Job exit	-0.02	0.00	-0.07*	0.14*	0.15*	0.13*	1.00										
8. Client relationships	-0.01	-0.01	0.46*	-0.40*	-0.28*	-0.07*	-0.14*	1.00									
9. Growth and development	0.04	0.00	0.35*	-0.31*	-0.33*	-0.05	-0.09*	0.53*	1.00								
10. Office culture	0.03	-0.01	0.24*	-0.21*	-0.33*	-0.02	-0.12*	0.35*	0.50*	1.00							
11. Salary and benefits	-0.02	-0.03	0.06	-0.07*	-0.07*	-0.06*	-0.02	0.21*	0.35*	0.29*	1.00						
12. Caseload and paperwork	0.05	-0.05	0.16*	-0.21*	-0.42*	-0.10*	-0.04	0.17*	0.25*	0.33*	0.16*	1.00					
13. Client stress	0.01	-0.03	-0.18*	0.14*	0.28*	0.00	0.08*	-0.11*	-0.11*	-0.10*	0.00	-0.08*	1.00				
14. Visit Stress	0.01	0.00	-0.22*	0.17*	0.20*	0.02	0.03	-0.13*	-0.08*	-0.05	-0.02	-0.08*	0.41*	1.00			
15. Work stress	0.09*	0.00	-0.30*	0.33*	0.44*	0.01	0.09*	-0.21*	-0.20*	-0.20*	-0.02	-0.23*	0.38*	0.41*	1.00		
16. Supervisor support	0.05	-0.02	0.07*	-0.11*	-0.22*	0.01	-0.09*	0.09*	0.28*	0.46*	0.11*	0.16*	0.04	0.05	0.00	1.00	
17. Fellow worker support	0.06	0.00	0.05	0.05	-0.01	0.00	0.02	0.07*	0.23*	0.15*	0.09*	0.02	0.05	0.08*	0.07*	0.14*	1.00
18. Friends relative support	0.01	0.01	0.05	0.01	0.04	0.00	-0.02	0.04	0.08*	0.11*	0.06	0.02	0.06	0.09*	0.04	0.00	0.19*

Table 3
Model selection using akaike information criterion.

	PA	EE	DP	Leaver
Interaction terms and fixed effects	6357.65 ^a	7243.64	5993.00	956.09
Interaction terms	6292.96 ^b	7215.48	5940.74	929.24
Restricted model	6296.52	7205.20 ^b	5929.23 ^b	919.42 ^b
Restricted model and fixed effects	6358.36	7235.00 ^a	5980.99 ^a	943.95 ^a

^a Selected model using likelihood ratio test.
^b The model with the lowest AIC.

Even though fixed effect estimates incurred an AIC penalty for the models with EE and job exit as the dependent variable, they were included in order to control for any unobserved differences in the school, county, or cohort year clusters. Furthermore, a likelihood ratio test, comparing the restricted OLS model on EE to one with fixed effects controls, had a $\chi^2 = 84.20$ with 57 df, $p < 0.01$ so we rejected the null hypothesis that the difference between the models was equal to zero and concluded that the fixed effect controls added information.

For the logit model with leaver as a dependent variable, the likelihood ratio test comparing the restricted model to the one with fixed effects had a $\chi^2 = 89.46$ with 57 df, $p < 0.01$. In both cases, the null hypothesis that the betas on the fixed effects all equal zero was rejected and we concluded that there were unobserved differences at the school, county and year level that needed to be addressed in the model.

Table 4
Determinants of burnout estimated by ordinary least squares regression.

Independent variables	PA estimate	Std. error	EE estimate	Std. error	DP estimate	Std. error
Intercept	25.05	2.73*	24.94	5.24*	12.13	1.75*
Cohort member left or moved	-0.21	2.15	-0.28	0.65	0.34	0.30
Client relationships	3.07	0.29*	-1.39	0.48*	-2.14	0.25*
Growth and development	1.02	0.34*	-1.93	0.55*	-0.89	0.28*
Office culture	0.48	0.33	-0.86	0.54	0.24	0.27
Salary and benefits	-0.35	0.19	0.55	0.32	0.20	0.16
Caseload and paperwork	0.20	0.22	-2.68	0.36*	-0.43	0.19*
Client stress	-0.29	0.33	2.19	0.53*	0.06	0.28
Visit stress	-0.64	0.30*	-0.09	0.51	0.25	0.25
Work stress	-1.78	0.33*	4.53	0.53*	1.70	0.27*
Supervisor support	-0.12	0.26	-1.81	0.42*	-0.51	0.22*
Perception of caseload (0 = low to 2 = high)	0.45	0.41	1.98	0.66*	0.09	0.34
Concurrent county employee	-0.28	0.39	-1.29	0.67	-0.65	0.32*
Fellow worker support	0.05	0.44	0.17	0.53	0.63	0.27*
Friends relative support	0.33	0.23	0.39	0.37	-0.15	0.19
Percent coethnics in county	-0.05	0.18	-0.03	0.03	-0.02	0.02
Percent change in coethnics in county	-2.50	2.68	0.04	0.07	-0.01	0.04
Bilingual	1.28	1.94	0.42	0.70	0.01	0.35
Jewish	-0.36	1.95	3.02	1.65	1.20	0.82
Roman Catholic	1.64	1.92	0.12	0.89	-1.10	0.46*
No religion	2.32	2.98	1.79	0.99	0.36	0.50
Other religion	-1.87	0.52*	0.93	0.84	0.57	0.43
American Indian	-0.73	0.42	0.22	2.24	0.84	1.15
Asian American	0.39	0.99	1.54	1.31	2.22	0.68*
White	-0.09	0.55	0.53	1.69	2.40	0.83*
Hispanic/Latino	-1.07	0.60	-0.77	1.35	1.29	0.67
Other/Mixed	-0.29	0.52	-0.63	1.24	1.23	0.64
Over 40	1.30	0.43*	-0.39	0.70	-1.08	0.35*
Partnered	0.66	0.36	-0.69	0.64	-0.28	0.30
Male	1.20	0.49*	-1.84	0.79*	0.81	0.41*
Cohort member left or moved X Fellow co-worker support	0.15	0.61				
Percent coethnics in county X American Indian	2.04	1.12				
Percent coethnics in county X Asian American	-0.08	0.19				
Percent coethnics in county X White	0.09	0.18				
Percent coethnics in county X Hispanic/Latino	0.00	0.18				
Percent coethnics in county X Other/Mixed	-0.67	1.10				
Percent change in coethnics in county X American Indian	-1.23	7.47				
Percent change in coethnics in county X Asian American	1.72	0.55*				
Percent change in coethnics in county X White	1.84	0.52*				
Percent change in coethnics in county X Hispanic/Latino	1.83	0.53*				
Percent change in coethnics in county X Other/Mixed	2.69	3.38				

Note 2: estimates for the regression on Emotional Exhaustion include fixed effects for the year, final payback county and school attended
* $p < 0.05$.

4.4. Research question 1: resource loss on burnout

With regard to H 1, there was no support for the hypothesis that having a cohort member leave could affect burnout. There was partial support for H 2. For every one-point change in the percentage increase of Asian Americans in a county from 1994 to 2006, there was a 1.72 point increase in PA. With white child welfare workers, for every one percent increase in the percentage white, there was a 1.84 increase in the PA score. For Hispanic or Latino workers, for every one percent increase in percentage Hispanic or Latino in the county, there was a 1.83 increase in PA. The effect size was not significant for the Native Americans, African Americans and those who identify as mixed race or another race. See Table 4 for the three OLS regression models used for research question one.

4.5. Research question 2: energy loss on job exit

With regard to H 3, there was support for the conclusion that when a person in a cohort leaves or moves to another agency, the odds of other workers in the cohort leaving increased 2.87 with a 95% confidence interval 1.80 low to 4.56 high, holding other variables constant. There was no support for H 4. In other words, changes in coethnic resources in the broader community did not vary with the odds of leaving county employment. Note further that the fellow worker support variable had a significant effect size on DP only: a one-

point increase in this support scale was associated with a 0.63 increase in the DP score. The two other variables that had a significant association with preventing workers from leaving public child welfare included going to school part-time while working and reporting good relations with clients. Consistent with [Jacquet et al. \(2008\)](#), increasing supervisor support also reduced the odds of leaving. See [Table 5](#) for a full logistic regression model used to answer research question two.

5. Discussion and conclusions

5.1. Discussion

Although [Soderfeldt et al. \(1995\)](#) questions the common wisdom that social workers are burned out, recent work on child welfare populations (e. g. [Anderson, 2000](#) and [Harvey et al., 2003](#)) documents that the majority of their samples are burned out. This study adds to the literature that finds that social workers, even those with a specialized master's degree in child welfare, are still at risk of high levels of burnout, as measured by EE. Consistent with theory and empirical literature, burnout is associated with reported stress. Child welfare workers in this sample also have high levels of PA. Yet most of this sample stayed in the job, and the difference on the burnout scores is small. Accordingly, burnout is not associated with job exit in this sample during the study period of the first year after the two-year payback period.

Some personal resources, in particular life experience, have small effects on reducing EE. Being a county employee while obtaining a master's degree has a small effect on reducing DP. Those who leave are on average more burned out. This is consistent with conservation of resources theory. However, this study could not identify a relationship between resource loss and burnout, but did find an association between changes in PA in some ethnic groups. Furthermore, the effect of cohort member loss appears to be a direct effect and not occurring through burnout. See [Fig. 4](#) for a revised conceptual model.

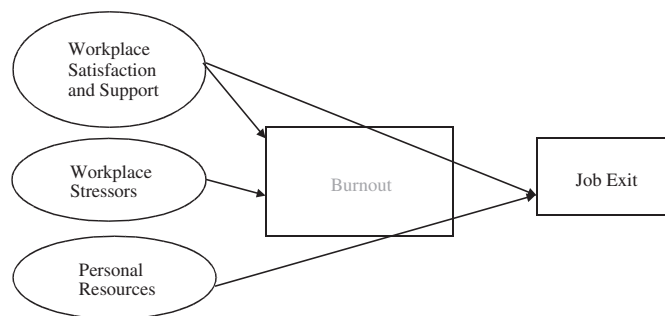


Fig. 4. Revised conceptual model of job resources, burnout and job exit.

5.2. Limitations

There are several limitations of the study that stem from its being a secondary analysis of cross sectional data. Because respondents who left were asked to remember how they felt about the agency that they left, there may be some measurement error. There may be unknown bias in either direction from non-respondents because the 51% who responded were self-selected. However, if the non-response bias is a function of race or ethnicity, this study adjusts for these factors. The study contains data only for one state, so generalization to other states with a Title IV-E program should be done cautiously. Our sample contains only one educational level (MSW Title IV-E graduates); so conclusions should not be drawn about the effect of education level on burnout or job exit. Because 10% of the sample did not identify with a standardized race or ethnicity category, it makes it difficult to draw conclusions about race. Having categories that are not mutually exclusive (i.e. Hispanic) also complicated analysis.

Table 5
Estimated odd ratios of leaving public child welfare.

Leaver	Logit	Std. error	OR	L95% CI	U95% CI	Pr(> z)
Cohort member left or moved	1.05	0.24	2.87	1.80	4.56	0.00*
Personal accomplishment	0.01	0.02	1.01	0.97	1.04	0.77
Depersonalization	0.01	0.02	1.01	0.97	1.06	0.53
Emotional exhaustion	0.02	0.01	1.02	1.00	1.05	0.07
Client relationships	-0.42	0.18	0.65	0.46	0.93	0.02*
Growth and development	0.28	0.20	1.32	0.90	1.94	0.15
Office culture	-0.27	0.18	0.77	0.53	1.10	0.14
Salary and benefits	0.11	0.11	1.12	0.90	1.39	0.32
Caseload and paperwork	0.09	0.13	1.10	0.86	1.41	0.46
Client stress	0.33	0.19	1.39	0.96	2.02	0.08
Visit stress	-0.10	0.18	0.90	0.64	1.28	0.56
Work stress	0.13	0.19	1.14	0.78	1.67	0.49
Supervisor support	-0.27	0.14	0.76	0.58	1.00	0.05
Perception of caseload (0 = low to 2 = High)	-0.25	0.23	0.78	0.50	1.21	0.27
Concurrent county employee	-0.75	0.24	0.47	0.29	0.75	0.00*
Fellow worker support	0.04	0.18	1.04	0.73	1.49	0.81
Friends relative support	-0.16	0.13	0.85	0.67	1.09	0.21
Percent coethnics in county	-0.01	0.01	0.99	0.96	1.01	0.20
Percent change in coethnics in county	-0.01	0.02	0.99	0.95	1.03	0.58
Bilingual	-0.22	0.23	0.80	0.51	1.27	0.35
Jewish	-0.50	0.65	0.61	0.17	2.17	0.44
Roman Catholic	-0.38	0.32	0.68	0.37	1.27	0.22
No Religion	0.23	0.33	1.26	0.65	2.42	0.50
Other Religion	0.15	0.29	1.17	0.66	2.06	0.60
American Indian	1.05	0.68	2.84	0.76	10.68	0.12
Asian American	0.54	0.47	1.72	0.69	4.30	0.25
White	1.06	0.60	2.89	0.89	9.38	0.08
Hispanic/Latino	1.07	0.47	2.93	1.16	7.40	0.02*
Other/Mixed	1.01	0.43	2.74	1.19	6.34	0.02*
Over 40	-0.39	0.25	0.67	0.41	1.11	0.12
Partnered	0.03	0.22	1.03	0.67	1.59	0.89
Male	-0.21	0.29	0.81	0.46	1.42	0.47

Note 3: estimates include fixed effects for the year (1993–2005), final payback county and school attended.

* p<0.05.

5.3. Conclusion

The main finding of the study is that having a cohort with leavers is associated with increased odds of a person leaving. This effect is not through having a sense of fellow worker support, because the interaction term is not significant. Further research will need to see if the effect of cohort loss is a true “push” factor in the sense that workers feel a resource loss or a “pull” factor through social networks in that some are finding job opportunities from those who left.

These data do not provide evidence that the loss of a cohort member adds to burnout. To the extent that a cohort member is a personal resource, the loss of this resource does not appear to be a stressor that leads to burnout. Future studies will need to identify how workers in agencies define their own identities to see if change in the coethnic resources matters for burnout and turnover. This research also suggests that the MBI is not an appropriate instrument for evaluating turnover potential of master's-level social workers in a child welfare agency. Further research should use a longitudinal design to investigate if professional training helps social workers manage stress and burnout over time and in turn prevents turnover. Finally, research needs to focus on the impact of social work turnover and client outcomes.

We close with a few recommendations for policy and practice. Because stress has a clear relationship to burnout, agencies should continue to find ways to mitigate stress in the workplace and provide developmental opportunities. Child welfare workers thrive on positive relationships with clients and dislike paperwork. Agencies need to support the core case management relationship. Likewise, child welfare workers need to find healthy ways of coping with stress. It appears to be the case that workers derive a sense of personal accomplishment from their ethnic communities. Agency directors could find ways of fostering relationships with cultural organizations in communities they serve to support both workers and clients. Finally, seasoned employees handle stress better. Agencies should continue to recruit from within their ranks for educational and advancement opportunities like the Title IV-E program.

With regard to agency strategies for preventing turnover, keep in mind that burnout does not have any significant effect on turnover in the first 3 years of the career. These data have two determinants of turnover previously discussed (a) supporting quality client relationships and (b) providing existing employees with the opportunity to pursue a degree. However, when employees do leave, this appears to create a chain reaction for others to follow. There are two possible strategies for addressing cohort effects in job exit. One strategy is to make sure that new employees build as many social and professional relationships with existing employees as with their cohort. Mentorship by senior workers can be part of this first strategy. The second strategy to address job exit in early career employees is to recognize that some of them will come back. Keeping up relationships with former employees may encourage them to return and allow the agency to recoup the lost costs of recruiting and training employees.

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