Temp-to-Permanent Employees: A Longitudinal Study of Stress and Selection Success

Talya N. Bauer and Donald M. Truxillo
Portland State University

Temp-to-permanent employees are temporary workers who have the opportunity to become permanent employees after a specific amount of time (e.g., generally after a 3- to 12-month period of trial work). The authors predicted that temporary worker individual differences, self-monitoring, tolerance for ambiguity, and role adjustment are related to temporary worker physiological stress and to whether temporary employees are offered permanent employment. Longitudinal data collection (pre- and postentry) resulted in data from 136 temp-to-permanent employees. Tolerance for ambiguity and role adjustment were found to be related to temporary worker stress and selection success. Self-monitoring was related to selection success for workers in an extended probationary period. These results suggest the need for further exploration and application of models of stress in understanding factors related to temporary worker success.

The use of temporary workers has risen dramatically in the past decade, with much of the U.S. workforce employed on a contingent basis. This has resulted in more temporary and short-term employment relationships (Davis-Blake & Uzzi, 1993) and new hiring and recruitment procedures such as temp-to-permanent employment arrangements in which temporary workers have the opportunity to become permanent employees (von Hippel, Mangum, Greenberger, Heneman, & Skoglund, 1997). Temporary assignments are often long term. For example, a survey of temporary workers indicated that 75% agreed to work temporarily with the hope that it would lead to permanent employment, that 56% had assignments that lasted almost 3 months, and that 11% remained on assignments for as long as a year (Caudron, 1995).

However, temporary workers in these types of work situations could experience particularly high levels of stress, as they must learn to adjust to a new work situation as well as deal with the ambiguity of their long-term employment status. Although the use of temporary employees has been rising dramatically, the process through which temporary employees become adjusted to new work roles and how this role adjustment affects levels of stress and productivity remain unclear. To be productive, new temp-to-permanent employees must understand the tasks associated with their position and the ways in which the organization functions. This is similar to the challenges faced by new permanent workers as well. What is different, however, is the scrutiny that temp-to-permanent employees face. Rather than a selection process that lasts for several hours or days, these employees are subjected to a protracted process that lasts several months. Although companies continue to use temp-to-permanent hiring practices, research on these workers is nearly nonexistent.

The goals of the present study were to explore how individual differences and the employment situation may relate to the stress levels of these temporary workers and their ultimate success or failure in being hired as permanent employees. The theoretical basis for this study comes from the stress literature. Specifically, it focuses on how individual differences and role adjustment factors can influence important personal and organizational outcomes during role adjustment to potentially stressful periods of employment, such as organizational entry. We also draw on literature regarding temporary employment.
The Stress Cycle and Outcomes of Work Stress

Most stress frameworks conceptualize stress as a process involving environmental factors, or stressors, and physiological and behavioral outcomes, or strains (Jex & Bliese, 1999). McGrath (1976) proposed a model of organizational stress that describes a stress cycle. The four elements of the model are the situation, the perceived situation, response selection, and the behavior engaged in by the individual. In addition, four processes connect these four elements. Appraisal of the situation leads to the perceived situation; the four elements and the processes connecting them form the stress cycle. The four elements of the model are the situation, the perceived situation, response selection, and the behavior engaged in by the individual. In addition, four processes connect these four elements. Appraisal of the situation leads to the perceived situation; the four elements and the processes connecting them form the stress cycle.

We propose that the ambiguous nature of the job and the implicit uncertainty of continued employment both act as primary situational stressors for temp-to-permanent employees. Through the self-appraisal process, the temp-to-permanent employee may perceive the situation in terms of role adjustment variables such as perceived role ambiguity and acceptance. This, in turn, leads to the stress response (strain), which often manifests itself in terms of physical symptoms. Finally, this culminates in workplace behavior such as performance, and in the case with many temp-to-permanent employee situations (including the one studied here), performance and selection success are one and the same (a composite of performance ratings determine who is hired). However, McGrath’s (1976) model is in some ways incomplete, as it does not account for specific individual differences and role adjustment variables that may affect the cycle.

Kahn and Byosiere (1992) proposed a more complete model of stress that explicitly builds on McGrath’s (1976) model and that involves individual-difference/personality and situational/role adjustment variables. This model of organizational stress describes organizational antecedents (e.g., job characteristics), which lead in turn to organizational stressors (e.g., role ambiguity). In addition, Kahn and Byosiere described stress responses (e.g., psychological symptoms and job performance) as well as the characteristics of the person that relate to the antecedent-response relationship. Because of the potentially high levels of stress involved in temp-to-permanent employment settings, this model may provide insights into individual-difference and role adjustment variables that could affect employees’ responses to the temp-to-permanent situation and thus affect their stress levels and job success.

According to Kahn and Byosiere (1992), several characteristics of the organizational system can be related to stress. One such category is the employee’s occupation. These authors noted that occupational differences in stress outcomes can be largely attributed to such factors as status and other sociocontextual factors. The temp-to-permanent situation is one that has the potential to be perceived as being of lowered and ambiguous status by both temporary workers and employers, which may lead to stress outcomes, including stress perceptions and psychological and physical manifestations of stress. In addition, Kahn and Byosiere pointed out that stressors in organizational life, such as role properties, can affect the employees’ perceived stress. In the case of temp-to-permanent employees, the ambiguous, high-stakes nature of the situation adds to experienced stress. Finally, these organizational antecedents and organizational life stressors can lead, in turn, to physiological stress reactions on the part of employees.

However, Kahn and Byosiere (1992) also discussed the role of both individual differences and role adjustment factors in the stress relationships. For example, individual differences seem to play a role in the relationship between job stress and stress outcomes. In the present research, we explored the potential of two individual-difference variables, self-monitoring and tolerance for ambiguity, that seemed relevant to understanding stress and performance levels of temp-to-permanent employees. Because temp-to-permanent employees must, by definition, deal with high levels of ambiguity in their jobs regarding their future with the organization, employees with high tolerance for ambiguity might be better able to cope with this stress. In addition, employees with high self-monitoring should be better prepared to navigate the stressful situation of the initial trial period and to respond more appropriately than those with low self-monitoring. Moreover, Kahn and Byosiere noted that properties of the situation can also affect how employees deal with stress. For example, role ambiguity and social support on the part of the supervisor can affect employee stress. In the present study, we explored the relationship between temporary worker perceived role ambiguity, self-efficacy, and feelings of supervisor acceptance and stress and performance, which in the present organization was directly related to selection success. Next, we explore the relevant research on these individual differences and role adjustment variables.
Individual Differences: Self-Monitoring and Tolerance for Ambiguity

Individual differences, including personality, have been increasingly recognized as an important aspect of selection, stress, and performance (Barrick & Mount, 1991). Because certain individual-difference factors have been recognized as relevant to particular jobs (e.g., Crant, 1995), the search for personality and individual-difference variables that are relevant to particular jobs seems to be a fruitful avenue for research. At the same time, a shortcoming of research on new employee role adjustment has been the lack of empirical focus on the role of individual differences during newcomer role adjustment in relation to other factors (e.g., tactics and feedback seeking, i.e., Bauer, Morrison, & Callister, 1998). Two individual-difference variables, self-monitoring and tolerance for ambiguity, were chosen for the present study because these individual-difference traits seemed especially relevant to the success or failure of temporary workers.

Self-monitoring refers to individuals' sensitivity to social cues and their ability to adapt their behavior to the requirements of the situation or the ability of individuals to read and use cues from the environment to determine their own behavioral response (Snyder, 1974). High self-monitors are especially attuned to role expectations, whereas low self-monitors act independently of their environment (Kilduff & Day, 1994). Although at least two studies have investigated the role of self-monitoring during employee role adjustment (see Bauer et al., 1998, for a review of this literature), they have not specifically focused on direct links between self-monitoring and stress or performance. We believed, however, that self-monitoring should be related to temporary employee success. Individuals who are able to monitor their behavior should have an easier time fitting in and learning their jobs. Accordingly, Caldwell and O'Reilly (1982) found that self-monitoring was related to on-the-job performance and was especially important during an early period of tenure.

Tolerance for ambiguity refers to the way an individual perceives and processes information about ambiguous situations or stimuli when confronted by an array of unfamiliar, complex, or incongruent clues (Furnham & Ribchester, 1995). As individuals face more change and uncertainty on a day-to-day basis, being able to tolerate and deal with ambiguity may be a key determinant of success and may also lead to lower levels of stress. Bauer et al. (1998) suggested that tolerance for ambiguity may predict how patient newcomers will be with the changing nature of work within the organizations they enter. Accordingly, Frone's (1990) meta-analysis showed that tolerance for ambiguity was related to lowered role stress and strain across the studies he analyzed. Thus, temporary employees who are able to "work through" ambiguous situations in terms of their job duties and their tenuous employment situation should perform at higher levels than those who become frustrated or ineffective in their jobs.

Researchers have tended to define "successful" new employee role adjustment in terms of how well adjusted a newcomer perceives he or she is and the levels of stress associated with that role adjustment (Bauer et al., 1998). In the present study, the reported stress level of temporary employees was used to tap those perceptions. However, this perceptual orientation is incomplete in that it ignores the fact that ultimately organizational insiders decide whether a newcomer is successful in terms of performance appraisals, promotion decisions, layoffs, and firing decisions. This is especially true in the temporary employment situation in which employees are hired or fired at will. Because in the present study performance ratings and the hiring decision were one and the same, success in this study was defined as the official hire-and-fire decisions made by the organization for each temp-to-permanent employee and was termed selection success. In addition, we predicted that individual differences would also relate to selection success. Although the causal direction of the predictors and outcomes studied here is unclear, we expected that because personality is fairly stable, it would precede newcomer stress and selection success.

Hypothesis 1a: Temporary worker self-monitoring will be negatively related to stress after controlling for other hypothesized relationships.

Hypothesis 1b: Temporary worker tolerance for ambiguity will be negatively related to stress after controlling for other hypothesized relationships.

Hypothesis 2a: Temporary worker self-monitoring will be positively related to selection success after controlling for other hypothesized relationships.

Hypothesis 2b: Temporary worker tolerance for ambiguity will be positively related to selection success after controlling for other hypothesized relationships.

Relationship Between Temporary Worker Role Adjustment and Performance

We also explored the role of adjustment variables that temporary workers report (including role ambi-
guity, acceptance by coworkers, and self-efficacy) in temporary worker stress and selection success (which was based on temporary worker performance ratings). We based this on past research on role ambiguity, acceptance by coworkers, and self-efficacy (Jackson & Schuler, 1985). Similarly, the strength of people's convictions in their own effectiveness is likely to affect whether they will even try to cope with a given situation and, therefore, achieve higher performance levels. This persistence of effort should lead to enhanced newcomer performance if the newcomer is otherwise adjusted to their job and work situation. McEnrue (1984) found that newcomer job performance was also a joint function of perceived competence.

Research on stress indicates that higher levels of self-efficacy and feelings of acceptance and lower levels of role ambiguity should be related to lowered levels of stress. Ashforth and Saks (1996) found for their sample of newcomers that role ambiguity was negatively related to performance 6 months later. There is meta-analytic support for the link between role ambiguity and performance as well (Jackson & Schuler, 1985). Similarly, the strength of people's convictions in their own effectiveness is likely to affect whether they will even try to cope with a given situation and, therefore, achieve higher performance levels. This persistence of effort should lead to enhanced newcomer performance if the newcomer is otherwise adjusted to their job and work situation. McEnrue (1984) found that newcomer job performance was also a joint function of perceived competence.

Hypothesis 3a: Temporary worker role ambiguity will be positively related to stress after controlling for other hypothesized relationships.

Hypothesis 3b: Temporary worker self-efficacy will be negatively related to stress after controlling for other hypothesized relationships.

Hypothesis 3c: Temporary worker acceptance will be negatively related to stress after controlling for other hypothesized relationships.

Similarly, feeling accepted by one's manager should be associated with a better understanding of social issues, which should help to facilitate task competency (Louis, 1980). In a study of contingent workers, Craig and Tetrick (1999) found that feeling accepted by one's work group was related to the obligations temporary workers felt toward their employing organization. In an interview study of 13 temporary clerical workers, Rogers (1995) found that temporary employees felt isolated and alienated from regular employees. If true, we would expect that acceptance would be a key factor in understanding temporary worker failure versus success. On the basis of these findings, it seems reasonable to expect that role ambiguity, self-efficacy, and perceptions of acceptance by one's manager are important in understanding the success of temporary workers (Jex & Bliese, 1999).

Hypothesis 4a: Temporary worker role ambiguity will be negatively related to selection success after controlling for other hypothesized relationships.

Hypothesis 4b: Temporary worker self-efficacy will be positively related to selection success after controlling for other hypothesized relationships.

Hypothesis 4c: Temporary worker acceptance perceptions will be positively related to selection success after controlling for other hypothesized relationships.

Method

Participants and Procedure

Data were collected throughout a year at a single Fortune 1000 organization that uses from several hundred to several thousand temporary employees each year. All participants were employed as data-entry and clerical workers at one geographical location. They worked for 3 months before being hired permanently, continuing to work as a temporary employee for a maximum of 9 months longer, or being let go. In this setting, when temporary workers are selected (i.e., if they are hired after their probationary period is over), they cease to be temporary employees working for the temporary agency and instead become employees of the Fortune 1000 company. Data were collected from temporary workers prior to entry (Time 1); at the end of 3 months but 1 week before receiving final performance and selection feedback (Time 2); archivally for final performance and selection feedback at Time 3; and again archivally at Time 4 for those who were allowed to work as temporary for another 9 months after the initial 3-month trial period. A total of 450 temporary employees were asked to participate in the longitudinal research project as they began working at a new temp-to-permanent job site. All 450 employees were given a Time 1 survey prior to their first day on the job as they filled out other employment paperwork. Of those, 282 temporary employees returned Time 1 surveys (to Talya N. Bauer) in addressed, postage-paid envelopes. The Time 1 survey addressed a variety of demographic and individual-difference factors predicted to be relevant to their success. A sample of 136 matched surveys was returned at Time 2. Performance data were collected archivally at Time 3 for all 136 employees for an overall response rate of 30%. Finally, performance data were collected for 48 employees at Time 4.

For the sample of 136 temporary workers with matched surveys at Times 1–3, 36 (27%) were eventually let go, 48 (35%) were put in the hiring pool and continued to work as temporaries, and 52 (38%) were offered jobs as permanent regular employees. Records indicated that 3 individuals who were offered permanent jobs did not accept them. Therefore, these individuals were deleted from the sample,
and 133 respondents were used for the main hypothesis testing.

This is a slightly higher hiring rate than this company's temp-to-permanent program average of terminating approximately 40% of temporaries, placing approximately 30% in the hiring pool, and hiring approximately 30% as permanent regular clerical employees. Those individuals placed in the hiring pool historically had a 20%-25% chance of being hired at a later date. Hiring from the pool only occurs if other, more qualified, candidates do not become available, and temporary employees were allowed to work no longer than 1 year unless they were converted to regular employee status. Follow-up data collection from the participating organization revealed that 29% of those individuals placed in the hiring pool (n = 14) were subsequently hired on a regular, permanent basis.

The average age of the respondents was 31 years (SD = 13), and 75% of the participants were women. Participants averaged 13 years of education. Participants reported having an average of 98 months of permanent work experience (SD = 41).

Measures

All individual-difference, role adjustment, and outcome measures used were established scales with known psychometric properties. All measures were pilot tested with temporary workers similar to those used in this study. On the basis of pilot work, the reading level and type of questions appeared appropriate. Table 1 contains the means, standard deviations, alphas, and correlations for all study variables.

Control variables. Control variables were reported by participants on the survey completed prior to starting work at this organization. Age was measured in years (M = 31.10 years, SD = 12.51). Research indicates that older temporary workers tend to be more satisfied and more committed to their jobs (Feldman, Doeringhaus, & Turnley, 1995) and be more successful (Ryan & Schmit, 1996). Therefore, we felt it might be related to stress on the job and success on the job. Therefore, age was seen as an important control variable for analysis. Gender was coded as 0 for women and 1 for men; Ellingson, Grays, and Sackett (1998) found that women performed less well than men in their study of temporary workers so gender differences may exist and should be controlled. Education was measured by asking the number of years of education that each temporary worker had obtained (M = 12.68 years, SD = 1.74); it was seen as a surrogate for potential ability.

Whether a temporary employee perceived other options to working as a temporary should be controlled for, as von Hippel et al. (1997) found that 70% of the temporaries surveyed saw themselves as "temporary temps" seeking full-time work experience and 30% saw themselves as "permanent temps" who enjoyed and chose to do temporary work. Therefore, options were assessed using a three-item scale with a response scale that ranged from 1 = strongly disagree to 7 = strongly agree (M = 3.94, SD = 1.17). A sample item is "Temporary work is something I do now because I lack other options." The alpha for this scale was .82.

Individual differences. Temporary worker individual differences were measured prior to entry (Time 1) using...

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Correlations, Means, Standard Deviations, and Alphas for All Study Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>M</td>
</tr>
<tr>
<td>Age (Time 1)</td>
<td>12.68</td>
</tr>
<tr>
<td>Gender (Time 1)</td>
<td>52.34</td>
</tr>
<tr>
<td>Education (Time 1)</td>
<td>12.68</td>
</tr>
<tr>
<td>Tolerance for ambiguity (Time 1)</td>
<td>4.37</td>
</tr>
<tr>
<td>Role efficacy (Time 1)</td>
<td>5.55</td>
</tr>
<tr>
<td>Physical efficacy (Time 2)</td>
<td>5.07</td>
</tr>
<tr>
<td>Physical success (Time 3)</td>
<td>5.07</td>
</tr>
<tr>
<td>Selection success (Time 4)</td>
<td>5.07</td>
</tr>
</tbody>
</table>

Note. N = 133. Numbers in parentheses along the diagonal are alphas. Gender was coded 0 for women and 1 for men.
two scales. Respondents used a scale that ranged from 1 (strongly disagree) to 7 (strongly agree). Self-monitoring was measured using a 13-item scale (Lennox & Wolfe, 1984), which had an alpha of .81 (M = 5.24, SD = 0.85). A sample item is “Once I know what a situation calls for, it’s easy for me to regulate my actions accordingly.” Items were coded so that higher scores indicated higher self-monitoring. Tolerance for ambiguity was measured using the eight positively worded items from Budner’s (1962) Tolerance for Ambiguity scale and had an alpha of .79 and a mean of 4.37 (SD = .99). A sample item is “What we are used to is always preferable to what is unfamiliar.”

Role adjustment. Role adjustment was measured at Time 2, which was 3 months postentry but prior to the temporary workers learning their future employment status (Time 2). Temporary worker self-efficacy was measured using an eight-item scale developed by Jones (1986). Responses ranged from 1 (strongly disagree) to 7 (strongly agree) with a mean of 5.55 (SD = .85, α = .87). A sample item is “My new job is well within the scope of my abilities.” Rizzo, House, and Lirtzman’s (1970) six-item role ambiguity measure assessed role ambiguity. Responses ranged from 1 (very false) to 7 (very true). A higher score means more role ambiguity was felt (M = 5.07, SD = 1.74, α = .93). Perceived temporary worker acceptance by the manager was measured using five items from Fey’s (1955) Acceptability to Others scale. A sample item is “My manager seems to respect my opinions about things.” Participants indicated the extent to which each item was descriptive from 1 (almost always) to 7 (very rarely). Items were coded so that the higher the score on perceived acceptance, the more accepted a respondent felt (M = 4.14, SD = .70, α = .80).

Outcomes. Physical symptoms of stress were measured using the 19-item scale by Caplan, Cobb, French, Harrison, and Pinnau (1975). This scale consists of questions regarding physical symptoms of stress. For example, respondents were asked how often, from 1 (never) to 5 (very often), they had experienced a variety of symptoms such as having trouble sleeping. The alpha for this scale was .95 (M = 1.70, SD = 0.68). Finally, success was measured using the company’s overall hiring and performance appraisal information for each temporary employee, which ranged from 1 to 3 (M = 2.13, SD = 0.79). Selection success ratings were generated by the employing organization using a composite of supervisor evaluations and objective job performance data. Our variable was based on a composite that had been formed on the basis of two types of data: objective performance and subjective supervisory ratings of performance. Those who received a rating of 1 were “let go” and their services were no longer used by the organization (n = 36). Those who received a 2 were put into the company’s hiring pool and continued to work as temporaries for another 9 months before being hired or let go (n = 48). Those who received a performance rating of 3 were hired on as permanent regular employees (n = 52). A 3 was considered the most successful rating.

Finally, follow-up archival data collection (Time 4, 1 year after Time 1) allowed for the examination of the selection success of the 48 individuals who received a rating of 2 and were placed in the hiring pool at Time 3 (i.e., continued to work for the organization as temporaries).

Results

Although the response rate for this study is comparable with similar types of studies, it is important to determine if differences exist between those who initially participated in the study (n = 279) and those who did not (n = 168), as well as between those who filled out all surveys (n = 136) and those who did not (n = 146). Therefore, before conducting hypothesis tests, we conducted response–nonresponse analyses. Data were available on all of the original sample for age, gender, years of education, and performance from company records. 7 tests revealed one difference: Those who never participated in the present study had less education (M = 11.46 years) than those who did participate (M = 12.48 years), t(271) = 4.95, p < .01. Otherwise, no differences were detected between those who responded at Time 1 but not Time 2 and those who responded both times.

At the correlational level (see Table 1), Hypotheses 1a, 1b, and 2a were not supported, as self-monitoring was not correlated with physical symptoms of stress or selection success nor was tolerance for ambiguity related to physical symptoms of stress. Hypothesis 2b was supported, as tolerance for ambiguity was correlated with selection success at Time 3. Hypotheses 3a, 3b, and 3c as well as 4a, 4b, and 4c were all supported at the correlation level as the role adjustment variables were also related to physical symptoms of stress and selection success. The control variables were related to variables of interest. For example, perceived options was related to role ambiguity and lower tolerance for ambiguity. Age was negatively related to self-monitoring and physical symptoms of stress but positively related to role ambiguity, self-efficacy, and selection success. Similarly, gender was related to these same variables such that women had lower role ambiguity, lower self-efficacy, and lower success ratings compared with men. Education was negatively related to acceptance and physical symptoms of stress but positively related to role ambiguity and selection success.

Table 2 contains the results of the three regressions that were conducted to examine the relationship between the control, individual-difference, and role adjustment variables and the dependent measures of temporary worker physical symptoms of stress and selection success. When physical symptoms of stress was simultaneously regressed on the control, individual-difference, and role adjustment variables, the overall model was significant, F(9, 123) = 8.11, p < .01. Thus, Hypothesis 1a was not supported as self-monitoring was not related to physical symptoms of...
**Table 2**

**Regression Results for Variables Predicting Stress at Time 2 and Selection at Times 3 and 4**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Predicting physical stress (Time 2) $\beta$</th>
<th>Predicting selection success (Time 3) $\beta$</th>
<th>Predicting selection success (Time 4) $\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Time 1)</td>
<td>-.11</td>
<td>.04</td>
<td></td>
</tr>
<tr>
<td>Gender (Time 1)</td>
<td>.10</td>
<td>-.13</td>
<td></td>
</tr>
<tr>
<td>Years of education (Time 1)</td>
<td>-.03</td>
<td>.31**</td>
<td></td>
</tr>
<tr>
<td>Options (Time 1)</td>
<td>.04</td>
<td>.06</td>
<td></td>
</tr>
<tr>
<td>Self-monitoring (Time 1)</td>
<td>-.03</td>
<td>.01</td>
<td>.45*</td>
</tr>
<tr>
<td>Tolerance for ambiguity (Time 1)</td>
<td>-.35**</td>
<td>.16*</td>
<td>.44*</td>
</tr>
<tr>
<td>Acceptance (Time 2)</td>
<td>-.10</td>
<td>.46**</td>
<td>.63**</td>
</tr>
<tr>
<td>Role ambiguity (Time 2)</td>
<td>.52**</td>
<td>-.23**</td>
<td>-.24†</td>
</tr>
<tr>
<td>Self-efficacy (Time 2)</td>
<td>-.02</td>
<td>.13*</td>
<td>.61**</td>
</tr>
<tr>
<td>Overall adjusted $R^2$</td>
<td>.33</td>
<td>.54</td>
<td>.20</td>
</tr>
<tr>
<td>Overall $F$</td>
<td>8.11**</td>
<td>18.39**</td>
<td>3.29*</td>
</tr>
<tr>
<td>$N$</td>
<td>133</td>
<td>133</td>
<td>48</td>
</tr>
</tbody>
</table>

*Note.* Time 2 and Time 3, $N = 133$; Time 4, $N = 48$. Regression coefficients are standardized. Age, gender, years of education, and options are control variables. Time 4 selection success was regressed on the independent variables without control variable to preserve power. Gender was coded 0 for women and 1 for men. Time 1 denotes data collection prior to entry. Time 2 denotes data collection 3 months postentry. Time 3 denotes data collection from company records after 3 months on the job after hiring status decisions had been made. Time 4 denotes data collection from company records approximately 1 year following the first data collection for employees who were placed in the hiring pool at Time 2.

$t_{p} < .10$, $*_{p} < .05$, $**_{p} < .01$.

stress. However, Hypothesis 1b was supported, as tolerance for ambiguity was significantly related to physical symptoms of stress ($\beta = -.35$, $p < .01$).

Similarly, when temporary worker selection success at Time 3 was simultaneously regressed on the control, individual-difference, and role adjustment variables, the overall model was significant, $F(9, 123) = 18.39$, $p < .01$. Hypothesis 2a and 2b predicted relationships between the individual-difference constructs and performance. Hypothesis 2a was not supported as self-monitoring was not related to success. However, results did support Hypothesis 2b, as tolerance for ambiguity was significantly related to success ($\beta = .16$, $p < .05$).

Hypotheses 3a–3c predicted that role adjustment measures would be significantly related to temporary worker physical symptoms of stress. Accordingly, Hypotheses 4a–4c predicted that role adjustment variables would be related to temporary worker selection success. Results show that role ambiguity ($\beta = .52$, $p < .01$) was significantly related to physical symptoms of stress (Hypothesis 3a) but that self-efficacy (Hypothesis 3b) and acceptance (Hypothesis 3c) were not. Results showed that role ambiguity ($\beta = -.23$, $p < .05$), self-efficacy ($\beta = .13$, $p < .05$), and acceptance ($\beta = .46$, $p < .01$) were all related to selection success, thus supporting Hypotheses 4a, 4b, and 4c.

As a further test of the selection success hypotheses, we ran additional analyses with the 48 employees who were neither hired nor let go at Time 2. These employees could be “in limbo” for up to a year before learning their final employment status with the employing organization. Data collected from these individuals at Times 1 and 2 were used to predict their selection success. Even with the limited power owing to the small sample size, follow-up analyses showed support for all the selection success hypotheses (2a, 2b, 4a, 4b, and 4c) when analyzing the individual-difference and role adjustment variables at Time 4, $F(5, 42) = 3.29$, $p < .05$. It should be noted that the control variables were not included in these equations to save degrees of freedom and to increase statistical power.

**Discussion**

The purpose of this study was to explore the application of a stress model to the role of individual differences and role adjustment variables in relation to physical symptoms of stress and selection success in a temp-to-permanent employment setting. One individual-difference variable, tolerance for ambiguity, made a contribution to predicting temp-to-permanent employee physical symptoms of stress and selection success. Also, self-monitoring was significantly related to selection success for temporary workers who had the most protracted selection process but not for
important for the success of these employees because of the increased scrutiny given to them during this extended probationary period.

Role adjustment measures were also important in understanding temporary worker physical symptoms of stress and selection success. Specifically, role ambiguity was related to physical symptoms of stress after controlling for demographics and individual differences. It may be that although self-efficacy and acceptance were related to physical symptoms of stress at Time 2 at the correlational level, their relationship was subsumed by the stronger relationship between role ambiguity and physical symptoms of stress. Role ambiguity, self-efficacy, and acceptance by the manager all contributed unique explanatory power to selection success. Individual differences and all three role adjustment variables were related to selection success for the 48 temp-to-permanent employees who were given an extended probationary period, suggesting the importance of these variables for workers in this highly ambiguous and protracted hiring situation. Finally, of the control variables examined within the regression equations (age, gender, education, and perceived options to temporary employment), only education was related to selection success. Similarly, Ellingson et al. (1998) found that temporary worker performance was related to education level of temporary workers but, as in our study, unrelated to perceived options and age. Ellingson et al. also found that women performed less well than men. This gender finding was not replicated in the present study in the final equations, although there was some support at the correlational level.

The findings from this study regarding success are consistent with past work on new employee role adjustment. In addition, temporary employees who did stay in the hiring pool showed even stronger relationships across individual differences and role adjustment to subsequent selection success, as indicated by the betas in the final regression equation. That is, the final performance rating served as a variation on the “up-or-out” type of promotion system. Although those who were given moderate ratings were allowed to stay on as temporaries, their chances of being hired after this point were relatively low. The more self-efficacy and acceptance a temporary employee reported and the lower role ambiguity, the more likely he or she was to succeed and to be selected for permanent employment. This suggests that the individual differences and role adjustment forces related to early physical symptoms of stress and selection success may become even stronger with time. It may be that the “stressful” nature of the protracted selection process and final hiring decision makes the stress cycle even stronger the longer it goes on.

Important implications for practice and research follow from these results. First, results clearly indicate that for temporary employees who are being considered for permanent employment, individual differences and role adjustment variables do matter. Those who were able to tolerate ambiguity were those who were the most successful at attaining full-time employment. Because self-monitoring was unrelated for any of the outcomes except Time 4 selection success, this individual-difference factor may be less critical to temporary employee success than other potential factors. Future research is needed to further test this relationship. Accordingly, employers who utilize a temporary workforce may wish to consider the possibility of using tolerance for ambiguity as a potential selection factor. Individual differences have been shown to be related to performance in a variety of contexts (e.g., Barrick & Mount, 1991), and this specific characteristic mattered here as well. Finally, these results suggest that models of stress, such as Kahn and Byosiere’s (1992), may be particularly useful in understanding temporary worker success. Accordingly, organizations may be able to take steps to reduce temporary employee physical symptoms of stress. For example, organizations may be able to take steps to reduce temporary employee physical symptoms of stress and improved job performance.

Another potentially fruitful area for future research is in understanding the psychological contracts that temporary workers hold (Rousseau, 1990). While growing research attention is focused on temporary employment and temporary workers, psychological contract work is beginning to emerge on temporary workers (e.g., Craig & Tetrick, 1999; McLean Parks, Kidder, & Gallagher, 1998; Van Dyne & Ang, 1998). Findings there may inform future studies of temporary workers. For example, in their study of organizational citizenship behaviors of contingent workers in Singapore, Van Dyne and Ang (1998) found differences among traditional and contingent workers, such that for contingent workers there was a stronger relationship between commitment and psychological contracts and organizational citizenship compared with their regular employee counterparts. Con-
versely, initial U.S.-based research by Craig and Tetrick (1999) indicates that large differences between permanent and contingent workers' psychological contracts may not exist. It is clear that additional work in this area is needed to more fully understand how met or broken psychological contracts might influence temporary worker stress levels, coping, and performance. Similarly, future research that further examines differences between temp-to-permanent and permanent employees is needed. The few studies that have compared temporary workers with permanent workers so far have found few differences on job attitudes or cooperativeness (Pearce, 1993; Porter, 1995).

Potential limitations of this study should be noted. First is the potential for common method bias. Except for the final outcome of selection success, all other data were self-report data that can inflate results. However, the control variables and individual-difference variables were separated in time from the role adjustment variables, and these were separated in time from the final selection decisions. Selection success was not self-report, and the strongest support for hypotheses was found for selection success. If possible, future studies should gather data from multiple sources (including ratings of stress; e.g., Hurrell, Nelson, & Simmons, 1998). The causal direction of the predictors and outcomes studied here is unclear. Early indications of performance may influence employee role adjustment and stress, and vice versa. Future research should more fully address the issue of the causality between performance and physical symptoms of stress. Also, this study dealt with how the temporary employees reported feeling about their role adjustment on the job, but it did not address what they were doing on the job. Past research has considered peers and managers under the heading of "coworkers." We were especially interested in studying the feelings of acceptance that employees felt from their managers because their managers would be the ones to determine their final performance ratings, which largely influenced who had selection success or failure. This is a potential limitation, as the performance ratings and acceptance may have been interrelated, thereby making causality impossible to determine. Future research should address this further. Although temporary employee behavior was not the focus of the present study, future research should follow up on work such as that by Bennett, Herold, and Ashford (1990), who found that for regular employees tolerance for ambiguity predicted feedback-seeking behaviors. In addition, other individual-difference factors (e.g., the Big Five) may influence temporary employee role adjustment as well (see Barrick & Mount, 1991). And finally, the sample size, while comparable with other studies of this nature, did diminish over time. This is a potential limitation.

This study is one of the first to explore the role adjustment of temporary workers in a temp-to-permanent setting. Models of stress seemed useful in explaining temp-to-permanent employee success. Organizations that use temporary employees need to understand how the structure of the employment arrangement with temporaries may influence the sense of role ambiguity, self-efficacy, acceptance, physical symptoms of stress, and ultimately the success and performance of temporary workers.

References


Davis-Blake, A., & Uzzi, B. (1993). Determinants of em-


Received July 26, 1999
Revision received November 30, 1999
Accepted March 1, 2000