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# Measuring the Costs of Employee Turnover in Illinois Public Park and Recreation Agencies: An Exploratory Study

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**EXECUTIVE SUMMARY:** Employee turnover is an unavoidable part of most public park and recreation agencies. Agencies must become increasingly concerned with understanding the repercussions of an employee leaving an agency as they attempt to strategically assess current and future economic and human resource plans. This exploratory study considers the issue of turnover within a cost analytical framework and proposes a model for park and recreation agencies to accurately quantify their employee turnover costs. Specifically, the study incorporates Cascio's (2000) costing model of turnover to explore the costs associated with the departing employee and the placement of a new employee. Building upon Cascio's (2000) model we include variables to examine the potential drop in performance and overtime payment required as a result of turnover. Using the proposed model, an exploratory study was conducted within the public park and recreation profession. Turnover data was collected from park and recreation professionals within the state of Illinois. Findings suggest that the separation costs are about two to three times larger than replacement costs making it increasingly important for managers to control unused vacation and sick pay, losses in production and overtime paid to existing staff. Significant differences in pre-employment testing and training costs were found between recreation staff and operations/support staff. The findings and application of the costing model are discussed with suggestions made for further development of turnover cost models that can be applied in public park and recreation settings.

**KEYWORDS:** Employee Turnover, Human Resource Development, Public Park and Recreation, Turnover Costs.

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## Introduction

Employee turnover is an inevitable part of most park and recreation agencies' operations. Although workforce stability is a powerful competitive strategy currently valued by organizations, it is almost impossible and unrealistic for agencies to maintain zero turnover (Hall, 2002). With the labor force becoming increasingly mobile, fewer employees are staying with one organization throughout their careers (Hall, 2002). Furthermore, as higher rates of retirement for senior managers in public park and recreation agencies are projected through 2009 (Schwartz & Pawelko, 2000), the prevalence and impact of voluntary turnover is likely to be magnified. Thus, park and recreation agencies are being forced to adapt to these changes and systematically examine the issue of turnover. The need to better understand turnover and its impact on organizations is increasingly recognized as an issue of great importance for public park and recreation researchers and administrators (Bartlett & McKinney, 2004).

Researchers have devoted a great deal of time to the study of employee turnover, with much of this work focusing on determining its causes (Rosse & Noel, 1996). In particular, research has examined antecedent variables such as personal characteristics, satisfaction with overall job and job facets, aspects of the job including scope, work group cohesion, chances for promotion, and attractive job alternatives (Hinkin & Tracey, 2000; Lee, et al., 1999; Nogradi, Yardley & Kanters, 1993; Thibault, 1996). Overall, this research has provided the field of personnel psychology with a clearer understanding of the causes for employee turnover.

Although a wealth of research is available on the psychological and organizational determinants of turnover, far less is known on the cost of turnover within the public park and recreation agency setting. During times of diminished funding for many public service agencies and with increased attention directed towards the short and long-term financial position of all agencies, the impact of turnover assumes great importance (Abassi & Hollman, 2000). Consequently, models that examine and predict the costs of turnover are increasingly valued.

## Purpose of Study

The purpose of this study was twofold: (1) to review the literature on turnover costing models and propose a model to quantify the financial costs of employee turnover in public park and recreation agencies, and; (2) to test the suitability of a well-known costing model in a public parks and recreation setting.

In addition, this study sought to provide researchers and managers with a comprehensive model for costing turnover appropriate for the public park and recreation

agency context. Using this model, agencies should be able recognize the categories presently included in costing turnover and begin to record the actual cost of turnover experienced in their agencies. Further, with the presentation of this model administration may also be able recognize additional cost beyond those presented in the model.

### ***Models of Costing Employee Turnover***

It has been suggested that while a certain amount of turnover is necessary and desirable, as employees develop new skills and advance to higher levels of responsibility within or outside of their current agency, an excessive employee turnover rate is usually viewed as troublesome and potentially expensive (Dalton, et al., 1999; Waters, 2003). Yet many managers in the public sector ignore, underestimate, or fail to accurately quantify the component costs of employee turnover (Dalton et al., 1999). Part of the explanation for this failure to calculate and track the costs of turnover may result from the limited number of models and frameworks to guide managers in accurately costing employee turnover.

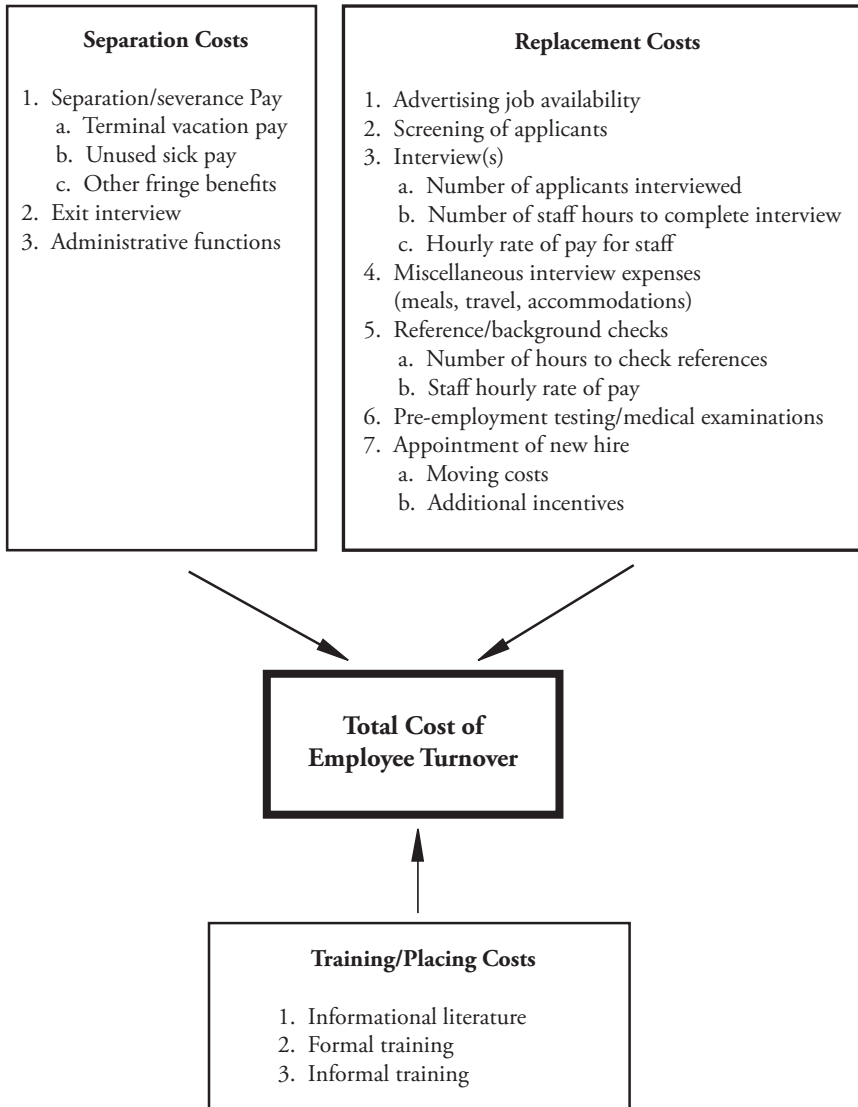
Basic methods for estimating the costs of turnover focus on calculating the cost to replace an employee in terms of the percentage of annual salary added together with the costs of benefits. Using such an approach, it is commonly reported that the cost of turnover is roughly equal to 25 percent of the annual salary along with the benefits invested (such as unused vacation or sick pay) of the departing employee (Ettorre, 1997). Specifically, researchers have estimated that replacement costs alone are over \$10,000 for about half of all jobs, and over \$30,000 for 20 percent of all jobs (Bernstein, 1998; Mitchell, Holtom, & Lee, 2001). However, using this approach to calculate the cost of turnover produces nothing more than rough estimates or a best guess (Ettorre, 1997).

Responding to the limitations and criticism of “best guess” approaches to costing turnover, Cascio (2000) proposed an alternative model for calculating turnover costs. In particular, the model applies a mathematical approach to analyzing the complicated consequences of turnover in terms of financial costs associated with both the departing and incoming employee. This model allows for detailed assessment and provides a method for quantifying the impacts of turnover on an organization by categorizing turnover costs. This categorized approach to turnover enables managers to view the consequences at a broader level and allows for the development of appropriate strategies to target specific cost categories in response. (The cost categories of turnover that are represented in Cascio’s model are identified in Figure 1). A brief description of the Cascio (2000) model is provided. The categories and their composite sub-costs are reviewed to highlight limitations leading to our proposed modification costing model of employee turnover in public park and recreation.

### ***Separation Costs***

Separation costs consist of three elements: separation pay, exit interview costs, and administrative costs. The sum of these three elements is the total cost related to the separation of an employee from the organization (Cascio, 2000). Each of these elements will now be reviewed.

**Figure 1: Cascio's (2000) Costing Model of Employee Turnover**



Separation pay, commonly referred to as severance pay, is a lump-sum payment by an employer to an employee who has permanently separated from the agency (Shafritz, 1980). The amount of separation pay is largely dependent on the agency's employee benefit plan. Cascio (2000) suggested that separation pay include the cost associated with any unused sick pay, vacation pay, or any other pay that is based on the employee's years of service and/or earnings.

The exit interview, also called the separation interview, is a tool to monitor employee termination that seeks information on why the employee is leaving and what

he or she liked or disliked about his or her job (Shafritz, 1980). Typically, exit interviews are conducted by staff from the agency's human resources department. In calculating the costs associated with the exit interview, some researchers (Hinkin & Tracey, 2000) have suggested the exit interview is a combination of two categories: costs, based on time, associated with the interviewee and costs, based on time, associated with the interviewer(s). The costs associated with the interviewee are based on the number of hours the departing employee spends at the exit interview (Cascio, 2000). The number of hours are then multiplied by the interviewee's hourly pay rate to determine the cost. The costs associated with the interviewer(s) are obtained using the same approach. Specifically, the costs associated with the interviewer(s) include the time spent preparing the interview, performing the interview, and filing/evaluating the interview results (Cascio, 2000; Hinkin & Tracey, 2000). Advocates of exit interviews often encourage more than one interviewer to be present which adds to costs as does the time to review notes or transcribe the interview.

In addition to the exit interview, there are costs associated with the administrative function. These functions are often performed by administrative or human resource staff and include tasks such as removal of the employee from the payroll, termination of benefits, updates to personnel file, and the return of company equipment (Cascio, 1989; 2000). Therefore, the costs associated with the administrative functions are based on the amount of time spent on these tasks by park and recreation agency staff.

In summary, separation costs have been divided into three sub-categories. These include: separation pay, exit interview costs, and administrative costs associated with the exit. Cascio (2000) suggested these elements represent the direct costs an agency accrues from the departing employee. The separation pay, exit interview costs, and administrative costs appear to have relevancy within the public park and recreation setting. Specifically, most public park and recreation agencies are required to settle any issues relating to unused vacation pay, sick pay, and any retirement benefits, perform exit interviews with departing employees, and devote administrative time to oversee the return of checked-out equipment (i.e., municipal vehicles, facility keys/records, company radios/cell phones/pagers, etc.). Thus, these three elements of Cascio's (2000) model could provide park and recreation agencies with greater insight into the direct costs associated with the departing employee. However, these costs do not fully capture the expense associated with employee turnover. In particular, an agency encounters costs in the recruitment of a replacement employee (Richardson, 1999).

### ***Replacement Costs***

Replacement costs represent those expenses incurred by an organization to replace a departed employee. To replace the departed employee, Cascio (2000) described seven elements. The sum of these elements represents the costs of replacing the departed worker (Cascio, 2000; Cascio & Ramos, 1986). These elements include: advertising job availability, screening of applicants, entrance interviews, interview expenses, reference/background checks, pre-employment testing/assessment procedures, and appointment procedures for a new hire (Cascio, 1989; 2000).

In general, the costs of communicating job availability will vary based on the type of job and the targeted labor market. Depending on the methods used in recruitment, these costs may range from the cost of a classified advertisement in a local newspaper to postings in regional, state, and national employment sources (Cascio & Aguinis, 2005). To obtain these costs, Cascio (2000) recommended reviewing existing accounting and financial records within the agency as most agencies maintain a history of itemized expenses.

Screening of applicants is a pre-employment administrative function regularly performed during the initial stages of employee selection. To compute the costs associated with screening applicants, Cascio (2000) identified a mathematical formula. Specifically, in determining the cost associated with screening candidates, Cascio (2000) suggested agencies document the time required by the human resources department to screen applications/resumes and multiply this value by the personnel's pay rate(s).

Entrance interviews are often used by agencies to describe jobs, to communicate employee responsibilities and benefits, and to make some general assessment of candidates (Gatewood & Field, 2000). To determine the costs associated with the interview, three variables are needed: number of candidates interviewed, number of hours staff are in the interview process, and their hourly rate of pay (Richardson, 1999). Similar to the formulas used to determine the costs associated with the pre-employment administrative functions, the three variables are inserted into a mathematical equation to identify the entrance interview costs. Specifically, "the number of candidates interviewed" x "the number of staff involved in the interview process" x "the hourly rate of the staff".

In addition to the staffing costs associated with the interview, agencies often incur other interview costs. Cascio (2000) identified costs such as meals, travel, and lodging as additional interview expenses. These costs can often vary, depending on the number of candidates, their geographical location, and the length of the interviews. Similar to advertising expenses, these costs can be located within the agency's accounting records.

Next, Cascio (2000) identified costs associated with reference/background checks of the candidates. Often, these procedures can be expensive as a report in the *Wall Street Journal* found that background investigations cost an average of \$500 per candidate (Jacobs, 1985). Waxer (2004) reported an increased number of employers demanding background checks although Cascio (2000) noted that few routinely document the time required to perform these activities. To calculate these costs, Cascio (2000) suggested the costs associated with checking references can be found by multiplying time required to check references by the hourly rate of pay for the individual completing the reference checks.

In addition to entrance interviews, some organizations adopt a pre-employment test to assess candidates. In particular, tests assessing the candidates' aptitude, personality, achievement, drug use, and/or honest testing are often used by agencies (Cascio & Aguinis, 2005; Noe, et al., 2006). Cascio (2000) recommended considering the costs of materials and supplies for the test and the cost of scoring the test. For example, Wessel (1989) found that drug testing costs to be between \$17 and

\$25, while interpreting the results of the test by a specialist can be an additional \$50 to \$75 per employee.

The seventh element of replacement costs, according to Cascio (2000), are costs to appoint the new hire. Cascio (2000) divided these costs into two areas: moving costs and additional incentives. Moving costs are often provided by the agency to compensate the candidate for his/her relocation expenses. In public parks and recreation employment, moving costs often represent the cost of moving the candidate's personal effects from the old to the new location. In addition to moving costs, agencies often provide additional incentives to the candidate. Examples of additional incentives include: mortgage differentials, lease-breaking expenses, company purchase of the old house, payment for real estate closing costs, and hook-up fees for utilities (Cascio, 2000). These incentives are used by the agency to further motivate the candidate to accept the job offer.

In summary, Cascio (2000) delineated replacement costs into seven elements. Taken together, these elements represent the costs an agency accrues when finding a replacement employee. Furthermore, certain elements are prone to high variance due to the nature of the job. For example, Hinkin and Tracey (2000) indicated advertising expense are oftentimes more costly for high-skill jobs or management positions and for agencies where the local pool of eligible employees lack the necessary skills and background to fill agency positions. Other elements such as the costs associated with appointing a new hire, are often non-existent in entry-level positions, but are common practice when replacing managers and directors. In contrast, interviews and reference checks are common practices in most agencies and the costs associated with these procedures can be determined.

### ***Training Costs***

The third category, according to Cascio (2000) is training costs. Cascio (2000) stated, "in virtually all instances, replacement personnel must be oriented and trained to a standard level of competence before assuming their regular duties" (p. 35). In general terms, organizations and researchers have often overlooked the substantial expenditures and investment made in training (Swanson, 2001; Swanson & Holton, 2001). The training costs for the newly hired employee can occur in three areas: information literature, formal training, and informal training.

To accurately capture the costs of employee turnover, the agency must consider the cost of any informational literature distributed to the new employee. Costs associated with informative literature, such as employee handbooks or other orientation manuals, that are issued to the new employee must be determined. To obtain the costs of these materials, Cascio (2000) recommended reviewing existing accounting records.

New employees are also expected to participate in formal training provided by the agency. This training is often performed to socialize the new employee to the agency's culture as well as specific expectations and tasks required for the job. Cascio (2000) identified two cost variables within a formalized training program: costs associated with the trainer(s) and costs associated with the trainee. Costs for these areas are determined by multiplying the length of the training program by the trainer(s) and trainee's pay rate.



Oftentimes, instruction in a formalized training program will be supplemented by informal learning. Watkins and Marsick (1992) described the benefits of informal and incidental learning to both the newly hired employee and the organization. Coaching and mentoring methods of instruction are examples of informal training programs. Specifically, the new employee is assigned to work with a more experienced employee for a period of time or until they reach a standard level of competence (Cascio, 2000). Similar to the formalized training costs, the informal training costs are based on the length of the training and the pay rate of the mentor/coach (i.e., number of hours for informal training  $\times$  hourly pay rate of experienced employee).

The cost of training the new employee is based on the length of training, both formal and informal, and the pay rate of the trainer(s) and trainee. In addition to these costs, Cascio (2000) identified the costs of informational literature provided to the employee such as an employee handbook and orientation manual. Taking a holistic view, Cascio (2000) suggested the sum of these training costs, separation costs, and replacement costs represent the total cost of employee turnover (see Figure 1). However, to more fully capture the costs of employee turnover, researchers have advocated for an assessment of the indirect costs of turnover (Tziner & Birati, 1996).

### ***Indirect Costs***

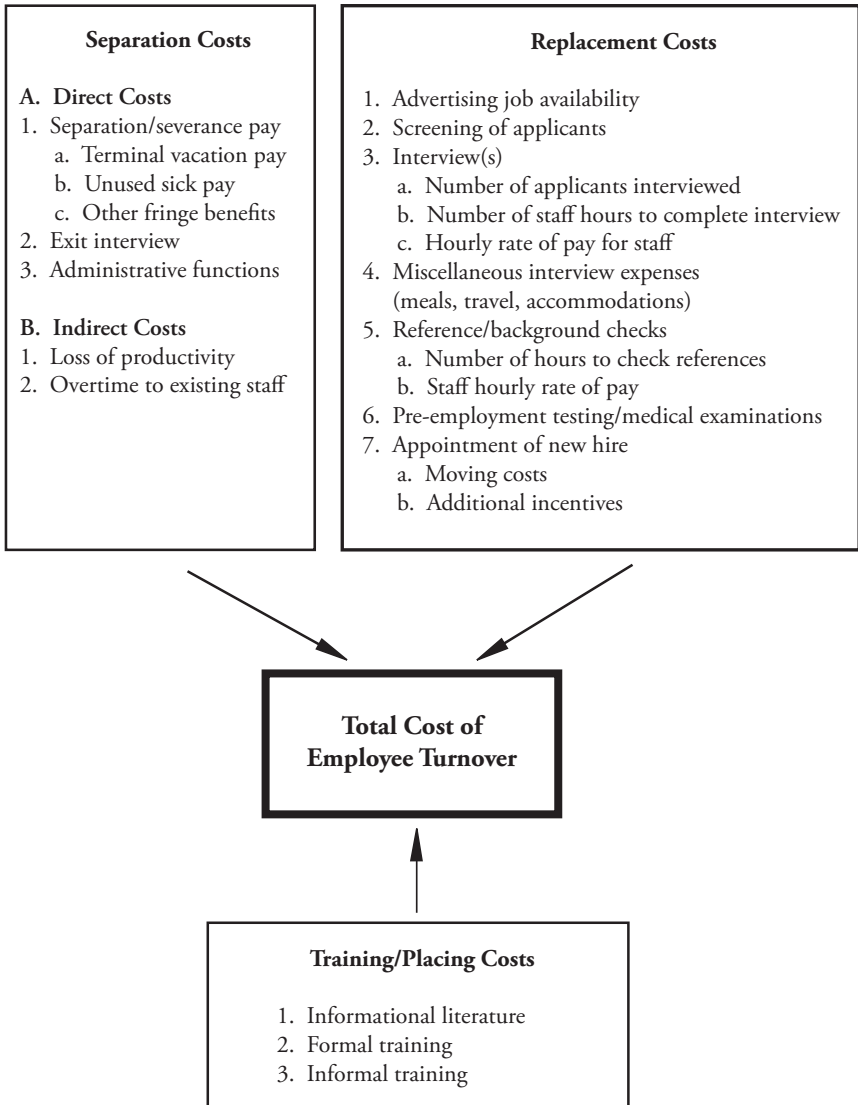
Indirect costs are often created by two or more cost objectives, making it difficult to clearly identify the source. The indirect costs of turnover are often difficult to accurately determine and have been defined in the research as a loss or reduction of productivity as well as overtime work and compensation to the remaining employees (Hinkin & Tracey, 2000; Tziner & Birati, 1996). Despite the difficulty in determining these costs, Hinkin and Tracey (2000) found that most managers they interviewed believed indirect costs of turnover to be high and an important component of turnover. Furthermore, Hinkin and Tracey's findings from research using four hotels in Miami and New York identified loss of productivity to be one of the largest costs of turnover, ranging from \$3,395 to \$7,144 per employee.

Support for quantifying the indirect costs of turnover is also made by Tziner and Birati (1996), who advocated for a costing model that seeks to capture the whole picture, in terms of negative and positive consequences, of turnover. When a worker whose performance was poor leaves an organization voluntarily it provides a chance for the organization to hire a better level of performer who can enhance the productivity (functional turnover). In contrast to functional turnover, dysfunctional turnover occurs when a good worker leaves the organization and as a result, the turnover creates a negative impact on the organization. In proposing a turnover framework, Tziner and Birati (1996) identified direct and indirect costs associated with dysfunctional turnover. The potential loss includes loss of productivity and overtime compensation, or wages paid to temporary workers who need to cover the work of the voluntarily departed employee. Although quantifying the loss of productivity is difficult to do relying often on estimates, Tziner and Birati (1996) advocated for the inclusion in turnover costing models due to the potential magnitude.

**Proposed Cost of Turnover Model for Public Park and Recreation Agencies**

Building upon Cascio’s (2000) costing model, a turnover costing model specifically for public park and recreation agencies is proposed (see Figure 2). In addition to Cascio’s (2000) replacement costs and training costs categories, the model builds upon the separation costs by adding indirect costs into the model. Drawing from the indirect costs identified in the literature (see Hinkin & Tracey, 2000; Tziner & Birati, 1996), this model introduces the costs of “loss of productivity” and “overtime required of existing staff” as two indirect costs associated with turnover in public

**Figure 2: Proposed Costing Model of Employee Turnover in Public Parks and Recreation**



parks and recreation. These indirect costs appear particularly relevant to public parks and recreation for a couple of reasons.

First, accurately capturing the entire scope of turnover costs for public park and recreation agencies is needed as a cost control mechanism. This is based on the concern that while many public park and recreation agencies accept employee turnover as unavoidable, some progressive agencies are attempting to reduce turnover, or at least, the agency cost associated with turnover. In addressing turnover at the agency rather than the individual employee level, the question arising is often, "How much resources should be devoted to managing turnover?" Knowing the cost of turnover would provide a park and recreation agency with a clearer frame-of-reference when determining the amount of resources consumed when turnover occurs. Thus, failing to include the indirect costs of turnover, such as the loss of productivity or overtime paid to existing staff, would not fully capture the costs of turnover for their agency.

Second, employee turnover in public parks and recreation seems to directly contribute to a reduction in service quality. This is supported by Argote et al's (1995) findings, which found work groups experiencing less turnover were more productive than those having higher turnover. More recent research has also found a positive relationship between employee retention and customer satisfaction (Gelade & Ivery, 2003).

A secondary benefit to understanding the costs associated with a loss of productivity and overtime required of existing staff is the impact of turnover on the remaining workforce. For example, until the new employee is hired and trained to the level of the departed employee, the remaining employees have to perform a large portion of work left by the departed worker. This overloaded expectation can diminish the quality of service from employees to the customers and potentially contribute to increased employee stress. Therefore, an understanding of the costs associated with a loss of productivity and the overtime required by existing staff can serve to inform the agency of future turnover management efforts (i.e., increase pace of recruitment, consider hiring temporary employees, reduce work load of affected staff, etc.).

## **Method**

In an effort to test the suitability of the proposed model, this study examined cost of the turnover in public park and recreation agencies. This study was based upon the turnover occurring in all public park and recreation agencies in one state during an entire calendar year. A description of the sample, survey instrument, and data analyses are included in the following section paragraphs.

### ***Sample***

The executive directors of all 229 public park and recreation agencies in the state of Illinois were sent a letter and self-addressed stamped return postcard that identified the purpose of the study. The letter asked if the agency had a full-time exempt or non-exempt employee voluntarily resign during the previous calendar year, if the agency had filled that position, and if the executive director was willing

to participate in the study. Using the Fair Labor Standards Act of 1938, exempt employees were defined as those employees with positions classified as executive, administrative, professional, or outside sales (to whom employers are not required to pay overtime); non-exempt employees include all other full-time line and staff employees paid hourly, and must be paid overtime at one and one-half time the regular pay rate for all hours in excess of forty hours per week (Mathis & Jackson, 2006).

In response to the 229 mailed requests, a total of 182 postcards were returned (79.5% response rate), with 86 of these agencies indicating that they had experienced voluntary turnover of a full-time employee during the previous calendar year. These 86 agency directors were then sent the survey instrument. After one mailed and one faxed reminder, a total of 55 completed and usable surveys were returned (63.4% response rate of agencies experiencing voluntary turnover). Using a table of random numbers, a sample of 25 was drawn from the list of non-respondents. Phone calls were made to the 25 non-respondents in an effort to examine the characteristics of the non-respondents. The results of the phone calls suggested that the response rate was acceptable as a majority of the non-respondents simply did not maintain financial records at a level of detail required for participation in the study.

### ***Survey Instrument***

The survey instrument used in the study was largely based on Cascio's (2000) model of employee turnover. Cascio's (2000) rationale and method for identifying and measuring turnover costs has been regularly accepted and adopted for research of this type (Hinkin & Tracey, 2000; Keller, 2000; Waters, 2003). The final portion of the instrument included Tziner and Birati's (1996) critical points of analyzing turnover costs. Consistent with the proposed model, loss of productivity and overtime compensation to existing staff that was neglected in Cascio's model was included (see Figure 3).

The questionnaire was comprised of open-ended questions dealing with the costs of employee turnover. The questions gathered data on the actual costs associated with the most recent turnover event in each agency based on three categories: separation costs, replacement costs, and training costs. Separation costs associated with departing employees included: separation costs, unused vacation pay, unused sick pay, payment for other fringe benefits, cost of time associated with exit interviews, administrative costs associated with the exit, loss of productivity (estimate), and overtime to existing staff required before a replacement staff was hired. The replacement costs category asked directors to identify costs associated with replacing the employee. This section contained questions to determine: advertising costs, time for management to screen applications/resumes (hours x pay rate), interview expenses, number of candidates interviewed, number of staff involved in interviews, their hourly rate of pay, total cost of staff time for interviews, number of hours to check references/background checks, hourly rate of pay for individual responsible for completing reference/background checks, the cost of pre-employment testing, additional incentive costs, and moving costs. The training costs category asked directors to identify costs associated with placing/training the new employee.

### Figure 3: Public Park and Recreation Costing Employee Turnover Survey

#### Human Resource Turnover

Please answer the following questions with the closest possible figure that represents the expense incurred by your agency. If no expense was incurred during your latest turnover, please respond N/A.

#### Separation Costs Associated with Departing Employee

- 1.1 Separation Pay
- 1.11 Terminal vacation pay \$ \_\_\_\_\_
- 1.12 Unused sick pay \$ \_\_\_\_\_
- 1.13 Payment for other fringe benefits \$ \_\_\_\_\_
- 1.2 Cost of time associated with exit interviews (hours x pay rate) \$ \_\_\_\_\_
- 1.3 Administrative costs associated with exit \$ \_\_\_\_\_
- 1.4 Loss of productivity (estimate) \$ \_\_\_\_\_
- 1.5 Overtime to existing staff required before replacement staff hired \$ \_\_\_\_\_

#### Costs Associated with Replacing Employee

- 2.1 Advertising for replacement \$ \_\_\_\_\_
- 2.2 Time for management to screen applications/resumes (hours x pay rate) \$ \_\_\_\_\_
- 2.3 Interviews
- 2.31 Number of candidates interviewed \_\_\_\_\_ candidates
- 2.32 Number of staff hours involved in interview process \_\_\_\_\_ hours
- 2.33 Staff hourly rate of pay \$ \_\_\_\_\_
- 2.34 Total cost of staff time for interviews \$ \_\_\_\_\_
- 2.4 Miscellaneous interview expenses (e.g., transportation, accommodations, meals) \$ \_\_\_\_\_
- 2.5 Reference/background checks
- 2.51 Number of hours to check references/background checks \_\_\_\_\_ hours
- 2.52 Hourly rate of pay for individual responsible for completing reference/background checks \$ \_\_\_\_\_
- 2.53 Total cost of staff time for reference checks \$ \_\_\_\_\_
- 2.6 Cost of pre-employment testing (drug testing, etc.) \$ \_\_\_\_\_
- 2.7 Cost of appointment for new hire
- 2.71 Additional incentives \$ \_\_\_\_\_
- 2.72 Moving costs \$ \_\_\_\_\_

#### Costs Associated with Placing/Training New Employee

- 3.1 Cost of training (literature, formal and informal) \$ \_\_\_\_\_

**Thank you for your time and responses.**

### ***Data Analyses***

The turnover cases were categorized based on the job position of the departed employee, full-time recreation staff, and operations/support staff. Once the jobs were categorized, the data was subjected to preliminary and substantive analyses. Preliminary analyses focused on assessing: (a) the data set for any outliers, and (b) the normality and homogeneity of variance. The substantive analyses focused on providing a statistical representation of the data.

First, the data was graphically analyzed (i.e., box and whisker plots) and two outliers were removed from the data set. It is worth mentioning that the two outliers were both executive directors (the only two in the sample) with substantially higher costs in all three turnover cost categories. Consistent to the approach by Mawell and Delaney (2004), the data were also subjected to Q-Q plots to check for normality assumptions. In addition, histograms were created for each variable as a graphical display of the data for evaluating distributional assumptions.

The Q-Q plot analyses indicated the data did not meet normality assumptions. Therefore, nonparametric procedures were employed to analyze the data. In contrast with parametric procedures, nonparametric procedures do not assume that the data under analysis were drawn from a normally distributed population and are particularly useful with small samples (Daniel, 1990; Siegel, 1956). Thus, Spearman correlation coefficients were obtained to determine the strength of the relationships among the various elements of the employee turnover model. In addition, the Sign test was performed to obtain confidence intervals for each variable and the Mann-Whitney U test was computed to assess mean differences between the turnover costs of recreation staff and operations/support staff (Hollander & Wolfe, 1973; Siegel & Castellan, 1988).

## **Results**

### ***Turnover Costing Model & Profiles of Departed Employees***

Prior to examining the costs, patterns of association among the variables in the turnover costing model were investigated. In particular, Spearman correlations were computed for the relationship between each of the seventeen variables in the turnover model (see Table 1). Several significant positive correlations were found among the variables. The variables within the replacement costs category accounted for almost 60% of the significant correlations found in the data. Time for management to screen applications correlated with the most variables, including: cost associated with exit interviews, administrative costs associated with the exit of the departing employee, loss of productivity, advertising for a replacement, number of candidates interviewed, total cost of staff time for interviews, and total cost of staff time for reference checks.

Next, the data was examined to provide a clearer understanding of the profile of the departing employees in the study. Turnover of employees occurred in almost every position typically found within public park and recreation agencies. To assist in the subsequent analyses and interpretation, the positions of the departing employees in this study were grouped into two areas: recreation staff (recreation supervisors,

**Table 1. Intercorrelations for Costing Model of Employee Turnover**

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Terminal vacation pay	-																
2. Unused sick pay	.13	-															
3. Payment for other fringe benefits	.14	.10	-														
4. Cost associated with exit interviews	.15	-.13	-.01	-													
5. Administrative costs associated with exit	.01	-.05	-.08	.43*	-												
6. Loss of productivity	-.12	-.25	.06	.18	.35*	-											
7. Overtime paid to existing staff	.25	.02	.09	.24	.11	.01	-										
8. Advertising for replacement	-.14	-.10	-.03	.07	.25	.33*	.21	-									
9. Time for management to screen applications	-.18	-.07	.04	.42*	.59*	.45*	.27	.50*	-								
10. Interview expenses	.17	-.16	.20	.02	-.01	-.01	.11	.05	-.10	-							
11. Number interviewed	-.37*	-.04	-.10	.06	.14	.16	.07	.46*	.38*	.01	-						
12. Total cost of staff time for interviews	-.05	.01	.12	.15	.34*	.25	-.14	.41*	.46*	-.05	.46*	-					
13. Total cost of staff time for reference checks	-.07	-.06	.05	.27	.41*	.10	.20	.43*	.63*	-.06	.31*	.37*	-				
14. Cost of pre-employment testing	.14	.19	.03	.04	.22	.01	.02	.12	.13	-.12	.14	.25	-.05	-			
15. Moving costs	.13	.11	.40*	.07	.18	.17	-.14	-.01	-.10	.18	-.08	.16	-.25	.17	-		
16. Additional incentives	-.05	.04	-.13	.21	.06	.13	-.08	-.04	-.12	.05	.01	-.15	-.08	.13	-.08	-	
17. Cost of training new employee	.24	.13	.17	.34*	.32*	.31*	.20	.07	.10	.20	-.16	-.01	-.25	.15	.23	.17	-

\* $p < .05$

athletic supervisors, program managers, and special facility managers) and operations/support staff (foremen, area coordinators, building/ground supervisors, park managers, field staff, janitors, office managers, secretaries, receptionists, and planners). Specifically, 61.8% (n = 34) of the employee turnover represented positions within recreation and 38.2% (n = 21) was operations/support positions.

In addition to identifying the job position of the departed employee, the survey asked agencies to identify as specifically as possible why the full-time employees voluntarily left. The results from the responding executive directors noted that more than 70% (n=39) of the 55 cases of turnover reported in the sample occurred so employees could take a better job or explore other career paths. The remaining responses ranged from spousal relocation to pursuing their own business.

### ***Employee Turnover Costs (Separation, Replacement and Training)***

To determine the costs of employee turnover, Hollander and Wolfe's (1973) Sign tests were computed. Intervals for the costs of employee turnover in public parks and recreation are presented in Table 2. Confidence intervals obtained for the direct costs associated with the departed employee indicate wide ranges in most areas. For instance, the confidence interval for terminal vacation pay of a recreation employee ranged from \$896 to \$1,580 while unused sick pay ranged between \$142 and \$1,765. Similarly, for operations/support staff, the interval for terminal vacation pay was between \$330 and \$3,581 and the unused sick pay was between \$126 and \$6,865. In contrast, those turnover cost elements under greater control by the agency, such as the costs associated with exit interviews, were found to have more restrictive ranges for both employee groups.

Findings from the indirect cost categories were also found to have large variance. In particular, the Sign test results suggest the median loss of productivity value for recreation staff in the state of Illinois is somewhere between \$656 and \$2,500 per departing employee. The median loss of productivity for the operations/support employees was between \$150 and \$4,500 per departing employee. True median values associated with the overtime costs paid to existing staff (until the agency finds a replacement) were between \$300 and \$3,000 for each occurrence of recreation staff turnover and \$240 and \$1,088 for operations/support staff turnover.

The arithmetic summation of the Hollander and Wolfe (1973) Sign tests taken from the direct and indirect costs constituted the total separation costs associated with the departing employee. The analyses suggest the total separation costs agencies spend for a recreation staff turnover employee is somewhere between \$2,178 and \$9,689. The total separation costs for operations/support staff is somewhere between \$991 and \$17,959 per departing employee.

The total costs that were spent for replacing the new employee consisted of advertising for a replacement, the time to screen applications, interview expenses, staff costs (the number of candidates interviewed, number of staff involved in interview, and their hourly pay), reference costs (the number of hours to check references and the hourly rate of pay for completing the reference checks), cost of pre-employment testing, moving costs, and any additional incentives paid to the newly hired employee. Results indicated interviews, moving costs, and the payment of additional



**Table 2. Employee Turnover Costs (Separation, Replacement, and Training)**

	Recreation Staff (n=34) Median 95% C.I.	Operations/Support Services Staff (n=21) Median 95% C.I.
<b>Separation Costs</b>		
<i>Direct Costs</i>		
Terminal vacation pay	\$896, \$1,580	\$330, \$3,581
Unused sick pay	\$142, \$1,765	\$126, \$6,865
Payment for other fringe benefits	\$89, \$558	\$87, \$1,350
Costs associated with exit interviews	\$50, \$61	\$28, \$75
Administrative costs associated with exit	\$60, \$225	\$30, \$500
<i>Indirect Costs</i>		
Loss of productivity (estimate)	\$656, \$2,500	\$150, \$4,500
Overtime paid to existing staff	\$300, \$3,000	\$240, \$1,088
<b>Separation Costs Subtotals</b>	<b>\$2,178, \$9,689</b>	<b>\$991, \$17,959</b>
<b>Replacement Costs</b>		
Advertising for replacement	\$124	\$50, \$250
Time for management to screen applications	\$155	\$100, \$240
Interview expenses	\$50	\$25, \$67
Number interviewed	5	4, 6
Total cost of staff time for interviews	\$330	\$200, \$500
Total cost of staff time for reference checks	\$48	\$40, \$78
Cost of pre-employment testing	\$77	\$65, \$80
Moving costs	\$500	\$300, \$600
Additional incentives	\$2,000	\$1,000, \$2,000
<b>Replacement Costs Subtotals</b>	<b>\$1,780, \$3,815</b>	<b>\$1,406, \$3,783</b>
<b>Training Cost</b>		
Cost of training new employee	\$500	\$250, \$960
<b>Training Cost Subtotals</b>	<b>\$250, \$960</b>	<b>\$250, \$1,400</b>
<b>Total Costs of Turnover</b>	<b>\$4,208, \$14,464</b>	<b>\$2,647, \$23,142</b>

Note: Results have been rounded to the nearest dollar.

\* All of the 21 responses indicated spending no money on moving costs for operations/support staff.

incentives to be some of the largest costs associated with the replacement of recreation staff. The overall analyses suggest the total replacement costs by an agency for recreation staff to be somewhere between \$1,780 and \$3,815 per employee.

Interview costs and additional incentive costs were found to be two of the predominant costs for replacing an operations/support employee. Interestingly, all of the agencies indicated spending no money on moving costs associated with replacing an operations/support staff. The total replacement costs for each operations/support services staff employee was found to be somewhere between \$1,406 and \$3,783.

In addition to the separation and replacement costs, this study assessed the training costs required by an agency to orientate and develop a new employee. The findings suggested the true costs associated with training a new employee for recreation staff was between \$250 and \$960. The operations/support service training costs experienced greater variance with the Sign test indicating the true median cost to be between \$250 and \$1,400.

The summation of the three costing categories suggests turnover costs for recreation staff to be somewhere between \$4,208 and \$14,464 per employee. Thus, an agency losing a recreation supervisor is likely to encounter an immediate expense of thousands of dollars for each occurrence of turnover. According to the findings, agencies losing an operations/support services employee will experience an expense somewhere between \$2,647 and \$23,142.

### ***Comparison of Employee Turnover Costs***

In an effort to identify significant differences in turnover costs by job position, Mann-Whitney  $U$  tests were performed (Table 3). In particular, differences in the variables in the turnover costing model were compared between recreation and operations/support staff. Significant differences were found for costs of pre-employment testing and training costs. Specifically, costs of pre-employment testing were significantly higher for operations/support staff compared to recreation staff ( $U = 181.50, p < .05$ ). Training costs were also found to be significantly higher for operations/support staff compared to the training costs for recreation staff ( $U = 200.00, p < .05$ ).

### **Conclusion**

The purpose of this paper was twofold. First, the study sought to review the literature on turnover costing models. The second was, propose and test a suitable model for public parks and recreation agencies. Organizing the literature review into separation costs, replacement costs, training costs, and indirect costs, this paper focused on the development of a turnover model to quantify the financial costs of employee turnover in public park and recreation agencies. Extending Cascio's (2000) costing model, this study integrated the indirect costs of employee turnover into a proposed model for public parks and recreation.

The research on the indirect costs of turnover suggested two areas to consider when assessing the expense associated with a departed employee (Hinkin & Tracey, 2000; Tziner & Birati, 1996). Specifically, the loss of productivity that occurs

Table 3. Mann-Whitney U Difference Tests

	Recreation Staff (n=34)		Operations/Support Services Staff (n=21)		U	p
	Mean Rank	Sum of Ranks	Mean Rank	Sum of Ranks		
<b>Separation Costs</b>						
Terminal vacation pay	26.86	859.50	27.21	571.50	331.50	.93
Unused sick pay	27.18	924.00	29.33	616.00	329.00	.43
Payment for other fringe benefits	27.97	951.00	28.05	589.00	356.00	.98
Costs associated with exit interviews	29.97	1019.00	24.81	521.00	290.00	.23
Administrative costs associated with exit	28.68	946.50	25.64	538.50	307.50	.49
Loss of productivity (estimate)	28.34	907.00	24.95	524.00	293.00	.43
Overtime paid to existing staff	26.02	806.50	24.66	468.50	278.5	.69
<b>Replacement Costs</b>						
Advertising for replacement	27.47	934.00	26.16	497.00	307.00	.77
Time for management to screen applications	28.34	963.50	26.08	521.50	311.50	.61
Interview expenses	27.94	950.00	26.75	535.00	325.00	.65
Number interviewed	29.78	1012.50	25.12	527.50	296.50	.29
Total cost of staff time for interviews	27.20	897.50	25.29	480.50	290.50	.66
Total cost of staff time for reference checks	27.86	891.50	22.87	434.50	244.50	.24
Cost of pre-employment testing	22.17	709.50	32.45	616.50	181.50	.02
Moving costs	26.55	876.00	26.42	502.00	312.00	.94
Additional incentives	26.39	871.00	26.68	507.00	310.00	.90
<b>Training Cost</b>						
Cost of training new employee	22.45	696.00	30.47	579.00	199.95	.05

when an employee leaves an agency and the costs associated with the overtime of the existing staff until a replacement is hired were identified and appeared applicable to public parks and recreation. The rationale for the application of these costing elements is embedded in the unique environments in which public park and recreation agencies operate. From the increasing pressures for public park and recreation agencies to do more with less to the agency's ongoing pivotal presence in their communities, a more complete understanding of the financial costs associated with a departing employee is needed. Regarding these issues, Edginton, Hudson, and Lankford (2001) stated:

“With inflation, personnel costs can easily get out of control. The competent manager does all that he or she can to monitor personnel costs and plan for the future, making sure that adequate revenue is provided to cover personnel costs.” (p. 337)

Not considering the financial costs associated with loss of productivity and the overtime pay to existing staff to compensate for the departed employee's absence limits the agency's ability to plan and control a portion of these personnel-related costs. This can be problematic for a public park and recreation agency as a majority of the operating expenses are personnel-related (Edginton, Hudson, & Lankford, 2001, McKinney & Yen, 1989). Thus, a more comprehensive view of personnel turnover costs for public parks and recreation agencies appears to have merit. Responding to these concerns, this study sought to integrate indirect costs associated with employee turnover into the model.

The model that emerged from the review of literature was then tested in a study of turnover costs of park and recreation professionals in the state of Illinois. First, the model's variables were examined to identify possible relationships. Within the separation costs category, the administrative costs associated with the exit and exit interview and the loss of productivity were found to be significantly related to several elements in the turnover costing model. All three of these elements were significantly related to the time for management to screen applications and the training costs for the new employee. A possible explanation for the positive relationship between the administrative costs associated with the departing employee's exit and the time for management to screen applications could be attributed to the roles and responsibilities of the HR staff in a public park and recreation agency. Most public park and recreation agencies within the state of Illinois are park districts and a majority of their human resource responsibilities are performed in-house with a limited number of staff performing a variety of human resource functions (Edginton, Hudson, & Lankford, 2001; McKinney & Yen, 1989). The human resource manager in these agencies is likely to be involved with both the administrative work associated with the exiting employee (i.e., paperwork, exit interviews) and the initial screening of applications. Furthermore, a component within each of these turnover costing elements is the pay rate of the administrator and if one administrator performs each of these functions, it is likely that the costs among each of the elements will be related. A similar explanation is feasible when considering the relationship

between the administrative costs associated with the departing employee's exit and training costs for the new employee. Another responsibility of the HR manager in a public park and recreation agency is the development of orientation materials for incoming newly hired employees (Edginton, Hudson, & Lankford, 2001; McKinney & Yen, 1989).

The loss of productivity correlation with training costs of the new employee highlights the value of highly skilled staff within public parks and recreation. For example, researchers of public parks and recreation have argued that park and recreation staff put the material resources (i.e., financial and physical) into use and convert them into leisure services and programs (Chelladurai, 1999; Edginton, Hudson & Lankford, 2001; McKinney & Yen, 1989). Therefore, the agency is likely to experience a decline in productivity or service quality when they lose a highly skilled employee. This decline in service quality or productivity will continue to occur until the new employee has developed the necessary knowledge, skills, abilities, and motivation to successfully perform the job functions.

Well over half of the significant correlations were found among the replacement cost elements. These findings suggest interrelatedness of the elements within the replacement costs category. This finding is not surprising as several of the replacement costs elements are oftentimes dependent on another element. For example, the time for management to screen applications, the number of candidates interviewed, the total cost of staff time for interviews, and the total cost of staff time for reference checks were positively related. Not surprisingly, these results suggest that reviewing and interviewing more candidates leads to increases in overall interview costs for a park and recreation agency.

Next, the study implemented the turnover costing model in an effort to obtain an overview of the turnover costs in public park and recreation agencies. The turnover costs of the 55 employees, 34 recreation staff, and 21 operations/support staff were examined. General findings indicate high variance in certain direct separation costs across both groups of employees. Not surprisingly, large variance was found across employees within the terminal vacation pay, unused sick pay, and payment for other fringe benefits areas. The finding suggests that employees often differ on the amount and utilization of vacation days and sick days. However, by categorizing these areas the public park and recreation agency can more accurately identify the significance of these costs.

Despite the large variance, the general findings suggest separation costs far exceeded the replacement cost of a new employee. Specifically, these findings suggest vacation and unused sick pay owed to the departing employee are important factors to be considered by agency administrators. For example, if an agency discovers unused vacation pay has become an excessive financial expense associated with employee turnover, the agency might implement strategies to encourage their employees to utilize the allotted vacation days.

The results of the indirect separation costs also suggest high variance. Results from both employee groups indicated the costs associated with a loss of productivity and overtime pay to existing staff range from hundreds to thousands of dollars. These results evoke a series of questions. Are some public park and recreation agen-

cies able to adapt more efficiently to employee turnover in their agency than others? If so, what strategies are they employing to manage turnover? Perhaps the variance is a result of uncertainty by the agencies. Specifically, have agencies been monitoring these indirect costs? Consistent with the argument by Abbasi and Hollman (2000), indirect costs are often underestimated or unknown due to the "hidden" nature of these costs.

The results of the costs associated with replacing an employee suggest recreation staff costs are between \$1,780 and \$3,815 compared to a range between \$1,406 and \$3,783 for operations/support staff. In general, the Sign Test intervals for the replacement cost sub-categories had less variance compared to the separation cost sub-categories. This is supported by research suggesting replacement costs are more recognizable by agencies as turnover costs than separation costs such as overtime required by existing staff, exit interview costs, and decreased productivity levels (Abbasi & Hollman, 2000; Fitz-Enz, 1997; Oh, 1996). Furthermore, these findings suggest public park and recreation agencies appear to employ similar recruitment, selection, and placement practices. From the advertising to the hiring, public park and recreation agencies appear to follow a pattern that is consistent across the field.

Similar to separation costs, training costs for both groups appeared to have high variance across agencies. This could be explained by the lack of consistency in socializing the new employee with the practices, procedures, and culture of the job and agency. This lack of consistency is supported by Edginton, Hudson, and Lankford (2001) who suggested that after spending a considerable amount of time in the recruitment and selection process, many public park and recreation agencies ignore the last step – training and orientation. Thus, it would be expected that an amount of variance in the training costs would be present between those agencies that seek to prepare their newly hired employee compared to those who assume the employee already has the necessary knowledge, skills, and abilities for the job.

Finally, the study utilized the turnover costing model to examine differences in turnover costs between recreation and operations/support staff. Overall, the findings indicated significant differences in two areas: pre-employment testing costs and training costs of the new employee. Both of these differences indicated operations/support staff spent significantly more on these areas compared to recreation staff. Fewer dollars are being spent to test the knowledge, skills, and abilities of recreation staff to ensure a qualified candidate is hired and less money is being invested in training newly hired recreation staff. Taken together, these differences suggest that public park and recreation agencies are devoting fewer financial resources to evaluating and preparing recreation staff compared to operations/support staff, and it is expected that recreation staff enter the agency with the necessary knowledge, skills, and abilities for the job.

These lower expenditures for recreation staff could become problematic as a much more prospective issue confronting public parks and recreation is the convergence of senior-level retirement and the decreasing numbers of students choosing public parks and recreation as an emphasis area with fewer university faculty identifying with public parks and recreation in their teaching and scholarship (Parr, 2005). Steve Dice, director of park operations for Cleveland Metro-parks stated,

“We are having difficulty in finding potential employees academically prepared to work toward park and recreation management and administration positions, especially in the resource area. Further, we are finding no potential employees with academic preparation in both parks and recreation, and fringe positions in human resources, engineering, accounting, marketing, etc.” (Parr, 2005).

### ***Limitations and Future Research***

Clearly, there are limitations and constraints on our conclusions based on the research methods used. First, our study examined the suitability for a costing model of employee turnover by using a sample from one state. In particular, park districts represent the norm in the state of Illinois, but public park and recreation departments housed within municipal government represent a predominant type of leisure service organization in the United States (Kraus & Curtis, 2000). Thus, research examining the costs of employee turnover in public park and recreation departments and in other administrative contexts is needed. Second, caution is suggested in interpreting the results. The purpose of the study was to propose and examine a costing model of employee turnover for public park and recreation agencies. In particular, the study sought to obtain a snapshot description of each of the categories and sub-categories of the proposed costing model. Consequently, the results represent the costs associated with turnover in the responding agencies and at a specific point in time.

Building upon the results of this study, future research is needed to examine reasons for the high variance in some of these cost categories. In particular, how are some agencies able to better minimize the overtime to existing staff and loss of productivity costs? What strategies are those agencies adopting? Research is needed to examine the presence (or lack) of a strategic approach to human resource planning and its impact on an agency's employee turnover costs. Additional future research should also seek to employ longitudinal designs to track turnover costs. Analysis techniques could also consider incorporating additional financial measures from data sources such as inflation rates, average relocation/moving expenses for specific localities, and aggregate state-level wage growth patterns for public service managers.

Finally, future research could examine the impact of turnover costs on the operation of the entire human resource management. Adopting a human resource accounting approach would allow agencies to examine turnover from a systems theory perspective providing managers with evidence on how organizational strategy, human resource management, and agency performance are linked (Becker, Huselid, & Ulrich, 2001). Such an approach also highlights the investments to programs, facilities, operations, or additional training and development for staff that are foregone if turnover is costing an agency \$23,142 for each departing employee. Thus, tracking and managing the cost of employee turnover will play an important role in the future success of a public park and recreation agency.

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