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Development of the Reasonable Accommodation Factor Survey: Results and Implications

Shengli Dong¹, Kim L. MacDonald-Wilson¹,
and Ellen Fabian¹

Abstract

The purpose of this study was (a) to explore the latent factors in the *Reasonable Accommodation Factor Survey* (RAFS) instrument and (b) to compare scores on the latent factors of the RAFS by participant's role. Eight latent factors were identified through an exploratory factor analysis with orthogonal rotation. The reliability tests indicated satisfactory reliability scores on each of the eight latent factors of the RAFS. Comparison of scores by roles of stakeholders (employee, employer, and service provider) indicated statistically significant differences in scores on three latent factors: Employee Competence in Reasonable Accommodation, Workplace Impact, and Employee Work Record. Implications for practice and research are discussed.

Keywords

reasonable accommodations, employment, factor analysis, survey instrument development

One of the most important rights under Title I of the Americans with Disabilities Act of 1990 (ADA) is the provision of reasonable accommodations to qualified individuals with disabilities (Americans with Disabilities Act of 1990). Reasonable accommodations are any adjustments to the work environment that allow people with disabilities to enjoy equal employment opportunities (Equal Employment Opportunity Commission [EEOC], 2000). Although EEOC regulations identify broad categories of allowable accommodations (EEOC, 2000), successful accommodations are unique to the specific functional needs of the individual matched to the demands of the job (Gates, 2000; MacDonald-Wilson, Rogers, & Massaro, 2003). Despite several studies demonstrating the positive effects of provision of accommodations on such outcomes as job satisfaction (Fesko, 2001), job tenure (Fabian, Waterworth, & Ripke, 1993), and improved performance and productivity (Rumrill, Roessler, Battersby-Longden, & Schuyler, 1998), recent studies report that employees with disabilities remain reluctant to request accommodations (Baldrige & Veiga, 2001), and employers are resistant to providing them (Pearson et al., 2003). In an analysis of ADA complaints filed with the EEOC since 1992 (West et al., 2008), allegations related to reasonable accommodations accounted for 31% of all complaints filed, or the second highest category after hiring.

Recent empirical findings have shed some light on the challenges encountered by employees in requesting accommodations. One issue is employees' reluctance to disclose

their disability, a necessary step in invoking their rights under the ADA (Gioia & Brekke, 2003; Granger, 2000). Employees and jobseekers have identified the perceived risks involved in disability disclosure, including stigma (Fesko, 2001; Frank & Bellini, 2005), negative reactions from employers (Frank & Bellini, 2005), and even harassment (Simoni, Mason, & Marks, 1997). These issues are particularly salient for individuals with invisible disabilities, such as psychiatric disabilities (Ellison, Russinova, MacDonald-Wilson, & Lyass, 2003), learning disabilities (Madaus, Foley, McGuire, & Ruban, 2002), and HIV/AIDS (Conyers & Boomer, 2005; Fesko, 2001). Other studies have focused on workplace challenges in reasonable accommodation (RA) requests, including organizational culture (Gilbride, Stensrud, Vandergoot, & Golden, 2003), employer and coworker attitudes (Colella, Paetzold, & Belliveau, 2004), organizational policies and procedures (Florey & Harrison, 2000; Lee, 1996), and business size and sector (Bruyere, Erickson, & VanLooy, 2006). In addition, certain RA types and nature were studied as barriers in RA requests, such as cost (Hendricks, Batiste, Hirsh,

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Schartz, & Blanck, 2005), duration (Michaels & Risucci, 1993), and timing (Friedman, 1993).

RA Conceptual Models and Empirical Studies

A review of available studies indicates that there are multiple complex factors involved in the request and provision of reasonable accommodations (MacDonald-Wilson, Fabian, & Dong, 2008) and that, in general, "our understanding of reasonable accommodations in the workplace is incomplete" (Balsler, 2007, p. 657).

Several researchers have proposed models of factors related to different components of the RA process, such as willingness to request RA (Baldrige & Veiga, 2001), workplace reactions to RA (Cleveland, Barnes-Farrell, & Ratz, 1997), coworker fairness judgments about RA (Colella, 2001), and outcomes of RA such as satisfaction with (Balsler & Harris, 2008) and predictors of receiving RA (Balsler, 2007). These theoretical or conceptual frameworks contribute to our understanding of the RA process, but each identifies different specific individual, workplace, and accommodation characteristics that play a role.

Multiple empirical studies also examined different RA variables and their relationship to diverse RA outcomes. Based on a comprehensive analysis of empirical RA studies from 1992 to 2008 by MacDonald-Wilson et al. (2008), empirical studies of the variables contributing to the provision and request of accommodations can be categorized into five groups: variables related to persons with disabilities (PWDs), variables related to employers or supervisors, variables related to the organization, variables related to the nature of RA, and variables related to the nature of disabilities. Outcome domains that have been associated with studies on RA processes in the workplace include (a) whether the accommodation was provided; (b) effect of the accommodation on employee job satisfaction, performance, wages, and tenure; and (c) effect of the accommodation on the workplace (i.e., coworker attitudes, cost).

The RA literature on theoretical frameworks and empirical research provides a solid starting point for understanding the complicated process of reasonable accommodation request and provision. However, there are some notable limitations in the existing research that led to the current study. First, none of these theoretical models is comprehensive and converging, with each focusing on only a particular component of reasonable accommodation processes and outcomes. Second, most of the empirical studies focus on certain random variables and specific outcomes without considering a more comprehensive or integrated approach. Third, except for a few empirical studies (factors related to communication between employers and employees, employers' knowledge of ADA), the mixed findings in the literature prevent an in-depth understanding of the relative importance of the factors in the request and provision of reasonable accommodations. Finally, the large number of

variables explored in the existing empirical literature, without an overarching and empirically driven framework or guide, may confuse rehabilitation professionals and PWDs as they develop accommodation plans, including weighing the risks and benefits of requesting workplace accommodations (Baldrige & Veiga, 2001).

Despite the significance of an overarching and empirically driven RA framework, rehabilitation professionals and consumers lack an empirically supported list of factors related to the request and provision of reasonable accommodations in the workplace. A uniform checklist of the factors involved in the RA request process can provide a framework to assist in the development of reasonable accommodation plans based on a consideration of organizational, attitudinal, personal, and RA-related features. In addition, new understanding of these RA factors will help to build a comprehensive model of reasonable accommodation request and provision that may provide guidance for PWDs, employers, and service providers.

To understand the RA factors comprehensively, the input of stakeholders (people with disabilities, employers, and service providers) is crucial. This study will examine the relative importance of RA factors by analyzing the stakeholders' perceptions of significance of the *Reasonable Accommodation Factor Survey* (RAFS) items drawn from a comprehensive review of the empirical RA literature.

The purpose of the study was to develop and explore the latent factors in the RAFS instrument and to compare scores on the latent factors of the RAFS by participant's role. This type of empirically derived survey instrument can help in the decision-making process about requesting accommodations, as well as serve as a basis for developing a theoretical model identifying the relative contributions of the multiple complex factors contributing to a successful outcome.

The research questions for this study are as follows:

Research Question 1: What are the latent factor(s) among the RAFS items identified in a systematic analysis of the RA literature?

Research Question 2: What are the differences among stakeholders in their perceptions of the importance of the latent factor(s)?

Method

Reasonable Accommodation Factor Survey Development

The development of the survey instrument involved the following steps: (a) identification of survey items from a comprehensive analysis of empirical studies on reasonable accommodation in the workplace, (b) input from a Participatory Action Research (PAR) team, and (c) a pilot testing of the instrument.

Forty-nine of the 52 RAFS items were derived from a comprehensive analysis of empirical studies between 1992 and 2008 on variables related to provision and request of reasonable accommodations in the workplace. The literature search on reasonable accommodation was conducted by using major databases such as PsychInfo, Medline, ABI Info, Business Source Premier, ERIC, Dissertation Abstracts and Dissertation Abstracts International, Social Science Citation Index, and governmental Web sites. The online searches noted above were supplemented by searches of reference lists of eligible studies and relevant review articles in fields such as business, human resource management, economics, psychology, sociology, and social work. The following keywords were used for the search: reasonable or workplace accommodations, disability and disclosure, employment discrimination, and the Americans with Disabilities Act. Seventy-five empirical articles (both quantitative and qualitative) were identified through this process.

The survey items were expanded and refined through three rounds of feedback from the members of the study's PAR team. The nine members of the PAR team included experts in disability and rehabilitation services, individuals with disabilities (visual impairments, wheelchair users, learning, and psychiatric), and employers, including some who had expertise in the development of large-scale surveys. The PAR team made suggestions on survey item clarity and the addition and removal of items. As a consequence, 52 survey items related to request and provision of reasonable accommodations were identified. The 52 survey items were grouped into five major categories: items related to employees with disabilities, items related to employers/supervisors, items related to the organization, items related to the nature of accommodations, and items related to the nature of disabilities. Besides the 52 survey items, 10 questions were also included about demographic information (i.e., age, race, gender, educational level) and reasonable accommodation experiences in terms of requesting, providing, and handling RAs.

The researchers pilot-tested the RAFS by using SurveyMonkey (an online survey engine) in 2008 among 20 individuals representing PWDs, employers, and service providers prior to the survey's first administration. The pilot test provided feedback concerning survey content and wording clarification as well as accessibility for Job Access With Speech (JAWS) screen-reader users. Although the initial pilot seemed to demonstrate that the SurveyMonkey version was accessible for JAWS screen-reader users, some accessibility issues for users of earlier versions of JAWS were reported during the first roll out of the online survey in 2008. The researchers switched to a different survey program (SurveyGizmo), as it was more accessible to all users of JAWS. During this round of survey administration, the researchers added four questions related to participants' demographic information in the survey questionnaire: gender, race/ethnicity, educational level, and age.

Participants

Participants in this study were recruited through the following sources: the Region III Disability and Business Technical Assistance Center (DBTAC), the Job Accommodation Network (JAN), and the Business Leadership Network (BLN).

The sample consisted of 531 participants, with an approximately equal distribution among persons with disabilities (31%), employers (33%), and service providers (36%). In addition, individuals with disabilities (50%) and individuals without disabilities were equally represented. All the participants self-reported to have had various levels of RA experience.

During the first round of data collection, only participant role was collected on 263 participants. However, during the second round, additional demographic information (age, race, gender, educational level) was collected on 268 participants using SurveyGizmo. The percentages of persons with disabilities, employers, and service providers were similar between the first and the second rounds of data collection: 31% (32%), 34% (31%), and 35% (37%), respectively. Among the 268 second round participants, the participants varied in age from 18 to 65 and older; those age 25 to 64 accounted for 94.5% of the participants, although two thirds of this sample were between the ages of 45 and 64. They were predominantly female (67.5%) and Caucasian (76%). The participants were mostly well educated, with 82% of the sample reporting having at least a bachelor's degree.

Procedure

The researchers contacted the directors of the DBTAC, JAN, and BLNs and asked them to invite their constituents to participate in this study. The Region III DBTAC also contacted directors of other nine regional DBTAC ADA centers for their interest in participating in this study. The researchers e-mailed the Web link of the online survey to the directors of the above-mentioned agencies and asked them to invite participants through their e-newsletters and listserves. In addition to the above-mentioned endeavors, researchers also invited participants through regional DBTAC meetings as well as rehabilitation and employment-related conferences. Interested participants followed the links to the Web survey, having no direct contact with the researchers, and no personal identity or contact information was collected in the survey. Once they completed the survey and submitted their responses, participants were given the option to contact researchers to enter a drawing for a gift card, at which time contact information was requested.

The researchers provided alternate survey formats (paper format and Braille) to meet the needs of the participants. In addition, 50 gift-card drawings (\$20 each) were used to enhance recruitment to the study. Because most of the survey promotion and recruitment was conducted through

online notices and Web sites in multiple branches of these organizations, no response rate was estimated.

Scoring and Data Analysis

Participants were asked to rate how important the RAFS items are in the request and provision of RA according to their experience, using a Likert-type scale with a range from 1 to 5. The scale responses were coded as follows: 1 = *not at all important* to 5 = *extremely important*. In addition, scores for latent factors were calculated by totaling the scores on items under specific factors.

Given the nature of the research questions in this study, exploratory factor analysis was used to analyze the latent factor structure of the survey items in the RAFS. In addition, an analysis of variance (ANOVA) was used to examine differences in perception of importance of the latent factors among employees with disabilities, employers, and service providers.

Results

Descriptive Analysis

Descriptive statistics summarized the ratings of the perception of importance of survey items among the participants. Participants differed in the perceptions of importance of the 52 survey items related to request and provision of reasonable workplace accommodation. The means ranged from 1.24 (sexual orientation of the employee) to 4.36 (direct supervisor's support). Those survey items associated with employer and organizational support and employee capability in requesting RA were rated highest in importance; those items associated with employee demographic information were rated lowest. The top-five rated survey items were the following: direct supervisor's support ($M = 4.36$; $SD = 0.90$), employer's RA request support ($M = 4.29$; $SD = 0.96$), communication between employee and employer ($M = 4.28$; $SD = 0.92$), employer's understanding of disabilities and ADA eligibility ($M = 4.27$; $SD = 0.96$), and extent to which the accommodations are matched to job requirements ($M = 4.18$; $SD = 0.90$).

The bottom-five rated survey items included employee's educational level ($M = 1.99$; $SD = 1.12$), employee's age ($M = 1.54$; $SD = 0.96$), employee's race ($M = 1.27$; $SD = 0.74$), employee's gender ($M = 1.26$, $SD = 0.74$), and sexual orientation of the employee ($M = 1.24$; $SD = 0.71$).

Reliability

The internal consistency alpha coefficient (.927) of the entire RAFS survey scale indicated that it was robust for the sample size and the participant mix. All of the factors had adequate reliability for exploratory research (Pett, Lackey, & Sullivan, 2003). See Table 1 for the Cronbach's alpha value of each factor.

Factor Analysis

The researchers applied the principal component analysis (PCA) to explore the underlying constructs among RAFS items. The Kaiser-Meyer-Olkin measure was .923. In addition, Bartlett's test of sphericity was significant ($\chi^2 = 14096.166$, $p = .000$), which indicated that the correlation matrix was not an identity matrix. These results suggested that factor analysis was appropriate and the sample size was sufficient for meaningful factorability (Pett et al., 2003). The choices of PCA and Varimax rotation were made based on the exploratory nature of this study and the low correlation among latent factors (Pett et al., 2003). Furthermore, the solution of oblique rotation was identical to that of orthogonal rotation. Orthogonal rotation needs to be used if the oblique rotation does not contribute more information over the orthogonal rotation (Pett et al., 2003).

The number of factors was based on the analysis of Kaiser Normalization criteria (Pett et al., 2003), scree plots, and theoretical frameworks in the related reasonable accommodation research (Baldrige & Veiga, 2001; Balser, 2007; Balser & Harris, 2008; Cleveland et al., 1997; Colella, 2001; Stone & Colella, 1996). The researchers chose the eight-factor orthogonal solution for factor interpretation based on simple structure convergence, item loadings, and conceptual clarity. Each of the eight factors had eigenvalues greater than 2. The eight factors accounted for 55% of the total variance explained.

Correlations among the factors, in general, were relatively low (0 ~ .20), supporting the findings of the factor analysis that the RAFS measured relatively distinct factors within the accommodation process. However, the high item-total correlations (.312–.587) indicated that all of the items related to the overall phenomenon within the reasonable accommodation process. The eight factors and their factor loadings are detailed in Table 1.

The researchers and the PAR team reviewed the eight factors and named the properties reflected by the loaded items. These consisted of the following:

1. *Employer and Organizational Support (EOS)* consisted of 11 items reflecting employer knowledge of the ADA, as well as positive attitudes toward employees with disabilities and the RA process. It accounted for 11.2% of the total variance explained in the sample.
2. *Employee Competence in RA (ECA)* included seven items reflecting employee knowledge of their rights under the ADA and their skill in identifying the need for and requesting an accommodation. It accounted for 8% of the total variance explained in the sample.
3. *Employee Demographic Characteristics (EDC)* consisted of four demographic characteristics. It accounted for 7.5% of the total variance explained in the sample.

Table 1. Eight Latent Factors Related to Reasonable Accommodation Through Factor Analysis

Latent Factor and Constituent Item	Factor Loading	M/SD	Alpha
Factor 1: Employer and organization support (EOS)		4.139/1.001	.893
Employer's support for requesting accommodations	.779		
Employer's understanding of disabilities and ADA eligibility	.757		
Organizational policies concerning the ADA and workplace accommodations	.755		
Supervisor's knowledge of accommodation procedures in the organization	.726		
Supportiveness of the employee's direct supervisor	.670		
Role of the individual who is handling the request (e.g., direct supervisor, HR manager, etc.)	.660		
Extent to which the supervisor is involved in the accommodation process	.602		
Employer's attitudes toward employees with disabilities	.594		
Communication between the employee and employer	.590		
Employer's knowledge of technology and other means of accommodations	.463		
Factor 2: Employee competence in RA (ECR)		3.267/1.281	.866
Employee's capacity to address barriers when seeking accommodations	.731		
Employee's creativity in identifying accommodations	.711		
Employee's communication skills in requesting accommodations	.657		
Employee's perception of the benefits and risks associated with requesting accommodations	.635		
Employee's knowledge and awareness of the ADA and reasonable accommodations	.603		
Employee's knowledge of RA procedures in the organization	.570		
Employee's experience with stigma or discrimination	.521		
Factor 3: Employee demographic characteristics (EDC)		1.326/0.785	.901
Employee's race	.905		
Employee's gender	.890		
Sexual orientation of the employee	.862		
Employee's age	.716		
Factor 4: Workplace impact (WI)		2.885/1.270	.782
Perceived fairness of the accommodation by coworkers	.776		
Coworkers' reactions to accommodations provided	.752		
Supportiveness of coworkers with regard to the request	.687		
Duration of the accommodation	.460		
Scope and intensity of the accommodation	.387		
Employer's perceptions of the cause of disabilities/illness	.368		
Relationships between the employee making the request and the supervisor	.332		
Type of accommodations requested	.314		
Whether a job coach/service provider is available	.286		
Factor 5: Workplace structure and resources (VSR)		2.915/1.422	.781
Physical size of the workplace where the employee is located	.744		
Overall resources of the organization (e.g., size, profitability)	.711		
Size of business in terms of number of employees	.699		
Type of business	.639		
Cost of the accommodation requested	.519		
Structural modifications necessary to provide accommodations	.346		
Factor 6: Employee work record (EWR)		2.214/1.240	.822
Occupational classification of the employee's job	.685		
Employee's educational level	.614		
Whether the employee's position is temporary or permanent	.605		
Employee's job level (managerial/entry level) in the workplace	.577		
Phase of the employment process when seeking accommodations	.522		
Employee's job tenure (years of employment) in the organization	.352		
Employee's productivity/performance	.255		
Factor 7: RA characteristics (RAC)		3.719/1.087	.702
Benefits of providing accommodations	.637		
Urgency of the accommodation request	.628		
The extent to which the accommodations are matched to job requirements	.587		
Ease of use of the accommodations	.473		
Timing of the request to the employer	.406		
Formality of the accommodation process/procedure in the organization	.361		

(continued)

Table 1. (continued)

Latent Factor and Constituent Item	Factor Loading	M/SD	Alpha
Factor 8: Nature of disabilities (ND)		2.782/1.317	.735
Severity of the employee's disability and resulting functional limitations	.819		
Employee's type of disability	.810		
Visibility of the disability	.477		

Note: Mean and standard deviation refer to the mean and standard deviation for each factor, which is an average of the scores of all items listed for that factor. Alpha refers to Cronbach's alpha. ADA = Americans with Disabilities Act of 1990; RA = reasonable accommodation.

4. *Workplace Impact (WI)* included eight items reflecting the effect of the accommodation on coworkers and workplace procedures and policies. It accounted for 6.3% of the total variance explained in the sample.
5. *Workplace Structure and Resources (WSR)* consisted of six items tapping business capacity to provide accommodations. It accounted for 6.3% of the total variance explained in the sample.
6. *Employee Work Record (EWR)* contained seven items reflecting the employee's skills, qualifications, and job performance issues. It accounted for 6.2% of the total variance explained in the sample.
7. *RA Characteristics (RAC)* included six items addressing the nature, duration, and type and process of the accommodation request. It accounted for 5.2% of the total variance explained in the sample.
8. *Nature of Disabilities (ND)* contained three items relevant to type, visibility, and severity of the disability. It accounted for 4.4% of the total variance explained in the sample.

Differences in Perceptions of RAFS Latent Factors Among Stakeholders

The researchers conducted one-way ANOVAs, using the general linear models (GLM) procedure in the Statistical Package for Social Sciences (SPSS), to examine the differences in perceptions of the importance of latent factors among the three stakeholder groups (i.e., PWDs, employers, and service providers). Statistically significant main effects were found for the following factors: Factor 2 (Employee Competence in RA), $F(2, 528) = 13.99, p < .01$; Factor 4 (Workplace Impact), $F(2, 528) = 3.20, p < .05$; and Factor 6 (Employee Work Record), $F(2, 528) = 3.505, p < .05$.

The researchers chose the Bonferroni test to conduct the post hoc analyses to examine the standardized mean differences for Factor 2 (Employee Competence in RA) and Factor 4 (Workplace Impact) because the result of Levene's Test of Homogeneity of Variance was statistically significant (Hinkle, Wiersma, & Jurs, 2003). Statistically significant

results were found between the standardized mean score of employers and those of PWDs and service providers in terms of their perception on Factor 2 (Employee Competence in RA) at the .01 alpha level. The standardized mean score for employers (-.313) was lower than those of service providers (.111) and PWDs (.207). Similarly, statistically significant results in standardized mean scores were found between employers and service providers in terms of their perception on Factor 4 (Workplace Impact) at the .01 alpha level. The standardized mean score for employers (-.155) was lower than that of service providers (.089).

The researchers chose the Tukey test to examine the standardized mean differences for Factor 6 (Employee Work Record) because the result of Levene's Test of Homogeneity of Variance was not statistically significant (Hinkle et al., 2003). Statistically significant results were found between scores of employers and those of PWDs and service providers in terms of their perception of importance on Factor 6 (Employee Work Record) at the .05 alpha level. The standardized mean score for employers (-.162) was lower than those of service providers (.69) and PWDs (.094).

Discussion

The study reveals that RA request and provision is a multidimensional process, consisting of eight major underlying constructs: Employer and Organizational Support, Employee Competence in RA, Employee Demographic Characteristics, Workplace Impact, Workplace Structure and Resources, Employee Work Record, RA Characteristics, and Nature of Disability.

Except for Factor 4 (Workplace Impact) and Factor 6 (Employee Work Record), the other six factors are quite clean (i.e., each item loaded at least .35 on each factor plus no cross-loadings on other factors). Three items loaded below .35 on Factor 4: "Whether a job coach/service provider is available," "Relationships between the employee making the request and the supervisor," and "Type of accommodations requested." The item "Type of accommodations requested" had a cross-loading on Factor 4 and Factor 8. It made more sense theoretically to include this item under Factor 4. In addition, the one item that loaded below .35 on Factor 6 is

“Employee’s productivity/performance.” The low factor loading may be due to the vague wording of the survey item and thus may have been misread by the participants.

Despite the lower factor loadings of these survey items, the researchers decided to retain these items on the survey because of their conceptual relevance in the RA process. In addition, due to the exploratory nature of the current study, it is appropriate to retain these items so that future research may further explore and determine their relative importance in the RA process.

The study also revealed that employer’s perceptions of the importance of Employee Competence in RA (Factor 2), Workplace Impact of the RA (Factor 4), and Employee Work Record (Factor 6) were significantly lower than those of employees with disabilities and/or service providers. This may indicate the effect of the ADA that requires employers to provide RAs to qualified individuals regardless of the individual’s job level, years of employment, educational level, or other characteristics. However, it can also be true that employers may not have adequate awareness and knowledge related to RA effect on the workplace. Further studies should be conducted to explore the roots of the employer’s lower perceptions of importance on these factors.

Another way to examine the factor structure of the RAFS and its validity is by comparing the factors derived in this study and their importance ratings to conceptual/theoretical models described in the literature reviewed earlier. These conceptual/theoretical models relate to varied outcomes associated with the request and provision of reasonable accommodations, including likelihood of requesting accommodations (Baldrige & Veiga, 2001), workplace reactions (Cleveland et al., 1997), coworker perceptions of justice concerning accommodation provision (Colella, 2001), employee satisfaction with accommodation (Balser & Harris, 2008), and receipt of accommodations (Balser, 2007). As these are all critical outcomes associated with the reasonable accommodation process, it is important to consider similarities of factors in these models to the results of our study. For example, across the majority of the models of the RA process (i.e., Balser, 2007; Balser & Harris, 2008; Cleveland et al., 1997; Colella, 2001), interpersonal processes, in particular communication, were highlighted, with regard to either RA request initiation or RA receipt. In our study, interpersonal process was incorporated into Factor 2 (Employee Competence in RA), which includes items related to employee competence in requesting the accommodation and employee communication skills, among others.

Although all of the conceptual RA models we reviewed earlier incorporated variables associated with employee demographic and disability characteristics, the results of our research indicated relatively little importance assigned to either demographic or disability characteristics in the RA process. In most of the models we reviewed, features

associated with the accommodation itself (such as timing, duration, and salience) were considered important; however, the results of our study indicated that items concerned with the accommodation itself were not rated very highly across the three groups of employees, employers, and service providers. One explanation for this finding is that the RA Characteristics factor serves as a mediating, rather than a direct, effect on overall outcomes associated with the provision of accommodations in the workplace. This explanation is consistent with Balser (2007), who suggested that the provision of accommodation was dependent on multiple complex factors and that ultimately, “generic models that predict receipt of any type of accommodation are likely to misinform researchers, practitioners, and the public” (p. 679). Although there do appear to be common factors associated with requesting and receiving accommodations (i.e., positive employer attitudes), it appears from this study, as well as other studies reviewed, that the process is variable and dependent on the reciprocal interaction of individual, situational, and environmental factors.

The results of our study are also consistent with some empirical findings on RA research. Factor 1: Employer and Organization Support, Factor 2: Employee Competence in RA, and Factor 7: RA Characteristics were rated highly by the stakeholders in our study and correspond with RA variables that have received strong support in the empirical literature. For example, several of the items clustering in Factor 1 of our study were related to significant findings in the empirical literature. These include supervisor’s knowledge of accommodation procedure (Bruyere et al., 2006; Unger & Kregel, 2003), organizational policies on the ADA and workplace accommodation (Florey & Harrison, 2000; Gates, 2000), and employer’s attitudes toward persons with disabilities (Gates, 2000; Gilbride et al., 2003). Empirical literature also supported items under Factor 7: RA Characteristics. For instance, perceived benefits of RA provision and ease of use of RA were positively related to provision of RAs (Campolieti, 2004; Frank & Bellini, 2005), whereas scope of intensity of RAs (Florey & Harrison, 2000; Friedman, 1993) was found to be negatively related to request and provision of RAs.

Empirical findings also support items clustered under Factor 2: Employee Competence in RA. Such items as employee’s capacity to address RA barriers, communication skills in requesting RAs, knowledge of RA procedures, and perception of RA benefit were found to be positively associated with request and provision of reasonable accommodations (Banks, Novak, Mank, & Grossi, 2007; Frank & Bellini, 2005; Gates, 2000; Gioia & Brekke, 2003; Granger, 2000). The above findings further highlight the importance of Employer and Organizational Support, RA Characteristics, and Employee Competence in RA in the process of reasonable accommodations.

Limitations

There are several limitations in this study. First, the sample may not be representative of people with disabilities, employers who are employing PWDs, or service providers. The sample in this study is mostly female, Caucasian, and middle-aged, which may be related to the constituencies of the recruiting agencies but not representative of all employers, PWDs, or service providers. Although the recruiting agencies (DBTAC, JAN, and BLN) include diverse constituencies, the relatively high educational level of the participants may be related to characteristics of Internet users for online surveys, who are more likely to have a higher level of computer proficiency and thus more likely to have a higher education level. The relatively high concentration of middle-aged participants may also be related to the characteristics of the constituencies of the DBTACs, JAN, and BLNs. Caution should be taken when trying to generalize findings beyond the scope of the sample for this study. A second limitation may be length of the survey. For instance, individuals with a lower reading level and cognitive impairment may have difficulty completing all the items. Long surveys may result in lower response rates. The reading level and length of the survey may need to be adjusted to accurately measure the scales underlying the RA process. Third, the self-report nature of survey questionnaires may lead some participants to choose answers that may be more socially desirable.

Conclusions and Implications for Rehabilitation Counseling

This study is the first of its kind to identify and gather multiple RA variables from a comprehensive analysis of empirical studies (ranging from 1992~2008) that examined the RA process from different stakeholder perspectives with varied RA outcomes. In addition, it is also the first of its kind to systematically explore the latent factors within the reasonable accommodation process by assessing the perceptions of importance of the 52 RA items from the perspectives of various stakeholders: employees with disabilities, employers who are employing PWDs, and service providers. The identification of diverse RA variables and examination of the latent factors will provide a solid base for developing a comprehensive RA conceptual model and future RA research and will offer help on decision making about RA requests for individuals with disabilities and rehabilitation professionals.

The psychometric properties of the RAFS were sound and robust. The findings of the research both provide support that the RA decision process consists of multidimensional constructs and offer strong evidence of the reliability of the survey instrument. The PAR team input, the pilot test, and the high

mean score of most of the survey items rated by the stakeholders provide evidence for the content validity of the RAFS.

There are several ways that rehabilitation professionals can use this survey and its findings. One strategy might be to use it as a framework for assisting jobseekers and employees to develop accommodation plans. For example, it is important for the employee to be specific and creative in identifying the need for and type of accommodation required to perform job tasks. Although this finding is well known to rehabilitation professionals, the results of the study suggest the need for developing and communicating an accommodation plan based on specific task performance requirements linked to concrete accommodation needs.

The results of this study also highlight the importance of organizational/environmental attitudes and culture with regard to disability and accommodations. More attention may focus on updating employer and human resource professionals about current knowledge and understanding of the ADA as well as the provision of accommodations. In general, studies have found that the more accurate information employers have about the ADA and accommodation, the more open they might be to the accommodation process (Unger & Kregel, 2003). A few of the studies we reviewed for the development of this survey instrument (i.e., Gates, 2000) stressed the importance of educating the immediate workgroup concerning the entire accommodation process.

The results of this study also support the consensus in the field of the unique nature of the reasonable accommodation process in the workplace. Although the study did not attempt to tap differences in importance relative to different types of disabilities, patterns of responses among the three stakeholder groups in rating the importance of these factors suggest common factors across settings (culture, attitudes, employee preparation) as well as unique variations affecting outcomes (nature of the request, timing, coworker support, and so on).

The provision of reasonable accommodation in the workplace is a complex and unique process. Despite the comprehensive literature review conducted by the researchers, and invaluable input from panel experts, further research may need to explore what additional variables would contribute to enhance the validity of this instrument or the validity of these factors as separate scales.

Future research may need to further explore and validate the factors involved in the RA process and the relationships among these factors. In addition, future research may be conducted to test the criteria-related validity of the RAFS. For example, employers can be presented with different types of disabilities in different settings and then asked to make judgments about responding to requests.

Finally, further research can be conducted to explore the reasons behind the discrepancies in perceptions of importance of factors between employers, and employees with

disabilities and service providers. Researchers may also explore factors that may affect an employer's decision to provide accommodations requested by others (service providers) on behalf of the employees with disabilities.

The request and provision of reasonable accommodations in the workplace has been studied extensively since the enactment of the Americans with Disabilities Act. It is a complex process based on an interaction between person and environment and dependent on internal and external factors, such as employee characteristics and attributes, the nature of the disability, disclosure, workplace attitudes, and job factors. The *Reasonable Accommodation Factor Survey* can be used by employees and rehabilitation professionals to understand and even develop accommodation request plans based on a consideration of multiple and diverse factors. The RAFS may eventually be useful in developing a comprehensive model of the factors and processes involved in the request and provision of reasonable accommodations in the workplace.

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