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The Measurement and Conceptualization of Career Stages

Arthur G. Bedeian
Louisiana State University

Allayne B. Pizzolatto
Nicholls State University

Rebecca G. Long
University of New Orleans

Rodger W. Griffith
George Mason University

The last decade or so has seen a growing interest in relationships between work attitudes and behaviors as moderated by career stage (e.g., Isabella, 1988; Jans, 1989; Ornstein, Cron, & Slocum, 1989). As an outgrowth of this interest, vocational theorists have developed numerous models that purport to explain the career dynamics of the average worker (for a review, see Greenhaus, 1987). In general, these models build on three assumptions: (a) Individuals progress through distinct career stages, each with distinct developmental tasks; (b) Each successive stage is characterized by different work attitudes and behaviors; and (c) Individuals in the same career stage seek to satisfy their work-related needs in similar ways.

Although considerable research has been devoted to understanding career stage dynamics, conflicting results have slowed the accumulation of knowledge. With mounting research, it has become increasingly clear that measurement inconsistencies in the published literature are likely responsible for many reported contradictory findings

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Address all correspondence to Arthur G. Bedeian, Department of Management, Louisiana State University, Baton Rouge, LA 70803-6312, U.S.A. Telephone: (504) 388-6141.

(for a review of such findings, see Morrow & McElroy, 1987). As Slocum and Cron (1985) simply state, "there needs to be some agreement in the field concerning the measurement of a central construct: career stage" (p. 143).

The purpose of the present study was straightforward. That is, to provide data on the sensitivity of selected career correlates to multiple operationalizations of career stage. The research to be reported is similar to previous studies (e.g., Morrow & McElroy, 1987) in that it uses multiple career stage operationalizations: age, organization tenure, and position tenure. It extends much of this earlier research, however, in three important ways. First, by focusing on the nursing profession, it addresses the question of whether the notion of career stages is generalizable to an occupation not yet included in such research. It is well documented that the attitudes, beliefs, interests, and values of individuals differ according to their vocational choices. Second, while the present study does examine several commonly used career stage correlates (i.e., organizational commitment, job satisfaction, and intention to remain), it extends extant understanding by considering professionalism, career commitment, and actual turnover. Thus, it contributes to a more refined examination of the link between career stage theory and the experiences of individual employees. Finally, the present study extends current understanding by moving beyond the examination of self-reported affective reactions (e.g., organizational commitment and job satisfaction) and behavioral intentions (i.e., intention to remain) to a consideration of actual behavior (*viz.*, turnover).

In sum, additional research is necessary to clarify the nuances of career stage theory. Due in part to measurement inconsistencies, career stage research has been plagued by contradictory findings. A better understanding is needed concerning how different measures of career stages mask or reveal relationships of interest. By utilizing multiple measurement procedures for defining career stages, the present study was an effort to address what is likely a major contributing force behind the conflicting results that have hampered theory development in the career area.

Independent Variable: Career Stages

Reviewing Morrow and McElroy's (1987) summary of the relevant literature, it is immediately evident that career stages have been

measured following numerous formats. The various differences in operationalization have largely been a function of both criterion specification and time frame. Thus, career stage definitions have not only varied widely in the number of years they embrace, but also in their theoretical justification.

Among the various criteria available for defining career stages, three are perhaps the most commonly accepted (Morrow & McElroy, 1987). The first involves operationalizing career stages on the basis of age ranges. For example, Gould (1979) writes of a trial stage (≤ 30 years old), a stabilization stage (31-44 years), and a maintenance stage (≥ 45 years). In essence, this definition holds that age, or more generally work life experiences, shape occupational aspirations and concerns, and thus is a factor pinpointing career stages.

A second common definition builds on the belief that individuals undergo a career stage progression as they build seniority in an organization. Thus, career stages have also been based on organization tenure. As an example, Gould and Hawkins (1978) employ an establishment stage (≤ 2 years), an advancement stage (> 2 to ≤ 10 years), and a maintenance stage (> 10 years).

Finally, job tenure has also frequently served as a method for defining career stages. As such, job longevity has been used to gauge various career transitions an individual might experience in a particular position within an employing organization. Following this definition, Katz (1978), for example, focuses on the orientation (≤ 2 years), growth (> 2 to ≤ 10 years), and plateau (> 10 years) phases associated with specific positions or assignments.

All three of the preceding definitions were used in the present study.

Dependent Variables: Work-Related Outcomes

Dependent variables were selected largely on the basis of their relevance to career stage theory and the purpose of the present study. Past research findings and availability were also considered. Thus, *organizational commitment*, *intention to remain*, and *job satisfaction* were specifically included in the analysis since all three variables have been the object of previous research reporting contradictory findings.

Professionalism, *career commitment*, and *actual turnover* were selected for inclusion in the present study based on their theoretical

relevance and practical significance to the reported study's focus sample (i.e., nurses). All three constructs have been identified as important work-related outcomes in the larger constellation of career-related variables (Greenhaus, 1987). They are thus of continuing interest to vocational theorists.

Method

Subjects and Data Collection

Data were collected from 318 permanent employees in the nursing services of two medium-size general hospitals. Inclusion in the present study was limited to those employees who had complete data on all variables relevant to the present study. This restriction yielded a sample of 302 participants. The distribution included 58 nursing assistants, 78 licensed practical nurses, and 166 registered nurses. Nearly all respondents (95%) were female. The samples included representative cross-sections of employees from all levels of the nursing hierarchy and from all departments. The combined two-hospital response rate was 62%. Given that there were no significant differences between the two hospitals in response rates, employment status (full-versus part-time), sex, child care responsibilities, type (rotating versus straight) and time of work shifts, marital status, age, and education, they were treated as one sample.

Procedure

Questionnaires were distributed with a cover letter explaining the importance of the study. Participants were asked to complete the questionnaire on their own time and return it either via U.S. mail or via internal hospital mail service. A pre-addressed envelope was attached to each questionnaire for ease of return. Confidentiality was guaranteed and participation voluntary.

Measures

Career Commitment was measured using an eight-item scale developed by Blau (1985). A 5-point response scale ranging from *strongly disagree* (1) to *strongly agree* (5) was used. Responses were summed so

Professionalism was measured by a seventeen-item scale taken from a longer instrument developed by Bartol (1979a & 1979b). Mindful of Morrow and Goetz's (1988) suggestion that the measurement of professionalism might benefit from further refinement, this scale was specifically constructed to trim items that obviously overlapped with Blau's (1985) career commitment measure (for details, see Pizzolatto, 1988). A recent example of this approach has been illustrated by Birnbaum, Farh, and Wong (1986). In the present analysis, response categories ranged from *strongly disagree* (1) to *strongly agree* (5). Items were summed so that higher scores indicated higher degrees of professionalism.

Job satisfaction was gauged using the twenty-item Minnesota Satisfaction Questionnaire, Short Form (Weiss, Dawis, England, & Lofquist, 1967). Each item has a 5-point rating scale ranging from *very dissatisfied* (1) to *very satisfied* (5). Items were summed so that higher scores corresponded to higher job satisfaction.

Organizational commitment was measured using the fifteen-item scale developed by Porter, Steers, Mowday, and Boulian (1974). Response options ranged from *strongly disagree* (1) to *strongly agree* (5). Scores were summed, with a higher score corresponding to higher organizational commitment.

Intention to remain was assessed with two-items taken from Price and Mueller (1981). Respondents were asked to select one of five response categories which best answered each of two questions: (a) "Which of the following statements most completely reflects your feelings about your future at [hospital]?" and (b) "Do you expect to leave [hospital] in the near future?" (reverse scored). Both questions were interpreted using a five-option scale ranging from *definitely will not leave* (1) to *definitely will leave* (5). Responses on both items were summed to form a single score with higher values reflecting a greater intention.

Turnover data were collected from hospital records six months after the questionnaires were distributed. This time interval was selected based on the recommendation of Price and Mueller (1981) who reasoned that fewer extraneous changes are likely to occur within an organization during this as compared to a longer time period (e.g., 12 months), thereby increasing explained variance. A score of 0 was assigned to stayers and 1 to leavers. Of 302 respondents in the com-

these 45, all were recorded by the hospitals as voluntary terminations. There was no differential turnover rate between survey respondents and non-respondents, $\chi^2(1, n = 95) = 2.74, p = ns$.

Demographic information was collected with a series of questions pertaining to age, sex, educational level, marital status, organization tenure, position tenure, income, employment status (full- or part-time), shift, and childcare arrangements.

Descriptive statistics and coefficient alpha reliability estimates for the study's independent variable and dependent variables are presented in Table 1. Zero-order correlations are also reported. The three career stage measures displayed moderate to limited independence relative to the necessary confounding of age and tenure. Age demonstrated a correlation of .37 with organization tenure and .35 with position tenure, while the two tenure measures correlated .71. This latter correlation is explained by the large percentage (see below) of respondents with less than three years of employment and thus still holding their initial appointment.

Data Analyses

Multiple analysis of variance (MANOVA) was used to assess whether the dependent variables identified above were sensitive to different operationalizations of career stage. Specifically, six dependent variables (i.e., career commitment, professionalism, job satisfaction, organizational commitment, intention to remain, and actual turnover) were examined by three separate MANOVAs (i.e., career stages by age, by organization tenure, and by job tenure). Career stages were first defined by respondent's self-reported ages categorized into three levels ($1 < 30$ years, $2 = 30$ to 39 years, $3 = > 39$ years). This division was selected based on research associated with career stages suggesting that each break-point is a significant watershed for career growth opportunities and career attitudes (Levinson, 1986). Respondents were spread fairly evenly across all three levels (i.e., 33.4%, 34.1%, and 32.5%, respectively).

Career stages were secondly defined by organization tenure divided into three levels ($1 = < 3$ years, $2 = 3$ to 10 years, $3 = > 10$ years). This division was selected because the relevant literature indicates that the relation between career stage and various outcomes can be variable in terms of direction and strength for new employees, and for employees who are reasonably well established for reasons that are

Table 1
Descriptive Statistics and Correlations for Study Variables^a

Variable	M	SD	1	2	3	4	5	6	7	8	9
1. Organizational commitment	54.27	9.37 (.86)	.54	.37	.46	.46	.05	-.12	.05	-.03	.05
2. Job satisfaction	71.95	14.28 (.91)	.25	.30	.33	.33	.04	-.05	.04	.07	.07
3. Professionalism	37.46	5.45 (.71)	.50	.50	.17	.03	.18	.03	.18	.01	.10
4. Career commitment	25.76	5.88 (.81)	.25	.25	.12	.08	.08	-.08	.02	.10	.02
5. Intent to remain	6.89	2.11 (.84)	-.31	-.31	.16	.16	.12	.16	.12	.10	.10
6. Actual turnover	0.15	0.36	-.07	-.07	-.16	-.16	-.07	-.07	-.16	-.08	-.08
7. Career stages by age ^b	1.99	0.81	—	—	—	—	—	—	.37	.35	.35
8. Career stages by organization tenure ^b	1.71	0.68	—	—	—	—	—	—	—	—	.71
9. Career stages by position tenure ^b	1.46	0.62	—	—	—	—	—	—	—	—	—

Note. N = 302. Coefficient alpha reliability estimates reported in parentheses. Correlations in this table $\geq \pm .11$ are significant at the .05 level (two-tailed test). See text for operationalization.

45

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likely to be specific to these employees (Super, 1980). Respondents were distributed across the three levels in the following manner: 42%, 45%, and 13% respectively.

Finally, career stages were defined by job tenure using the same cutoff points and values as for organization tenure. This division was selected since it is virtually identical to that employed by Morrow and McElroy (1987). Respondents were spread across all levels in the following manner: 61%, 32%, and 7%, respectively.

To interpret significant MANOVA differences, discriminant analysis was used as a follow up. Discriminant analysis is the method of choice when dependent variables are correlated (Borgen & Selig, 1978). Interpretation of discriminant functions was based on structure coefficients, which are the correlations between respondents' scores on the study's original measures and derived discriminant functions. A variable was considered to define a function if it was strongly (≥ 0.40) correlated with that function.

Results

Career Stages by Age

Results of the MANOVA for career stages defined by age indicate a significant main effect. Multivariate F equals 2.07 ($df = 2/299$) and is significant ($p < .01$). Given this main effect, a three-group discriminant analysis was conducted using career stages by age as the group variable and the six focal dependent measures as the discriminant variables. This yielded one statistically significant function ($p \leq .01$), accounting for 79% of the discriminable variance. The multivariate analogue of the omega squared was .06. That is, 6% of the variance in the dependent measures can be attributed to between-group (i.e., stage) differences.

The structure coefficients, discriminant weights, and group mean scores (i.e., the group centroids) on the single significant discriminant function are presented in Table 2. The structure coefficients indicate that *intention to remain* (.59) and *professionalism* (.72) define this function. In addition, the lower the group mean, the lower the rating on the structure coefficients defining the function. Using the group centroids and the structure coefficients as interpretive tools, it is clear that younger respondents in their initial career stage evidenced a less determined intention to remain and scored substantially lower

Table 2
Structure Coefficients, Standardized Discriminant Weights,
and Group Means in a Three-Group (Career Stages by Age)
Rotated Discriminant Function

Dependent Measures	Structure Coefficients	Standardized Discriminant Weights
Professionalism	0.72	0.93
Intention to remain	0.59	0.70
Career commitment	0.18	-0.26
Job satisfaction	0.16	0.01
Organizational commitment	0.13	-0.45
Actual turnover	-0.15	-0.07
Career stages by age	Means (centroids)	
1. < 30 years	-0.31	
2. 30 to 39 years	0.03	
3. > 39 years	0.29	

on professionalism than their older colleagues in either of the later career stages. Moreover, this trend seems to increase as career stage defined by age increases.

Career Stages by Organization Tenure

Data for this analysis are shown in Table 3. Results once again indicate that there is a multivariate main effect attributable to career stage ($F = 2.51$, $df = 2/297$, $p \leq .01$). To interpret this significant main effect, a second three-group discriminant analysis was performed using career stages by organization tenure as the group variable and the six focal dependent measures as the discriminant variables. The results of this analysis found one statistically significant ($p \leq .05$) function, explaining 75.7% of the discriminable variance. The multivariate analogue of omega square was 0.08. Thus, 8% of the variance in the dependent measures was explained by between-group (i.e., stage) differences.

The structure coefficients, discriminant weights, and group mean scores (i.e., centroids) for the single significant discriminant function

Table 3
Structure Coefficients, Standardized Discriminant Weights,
and Group Means in a Three-Group (Career Stages by
Organization Tenure) Rotated Discriminant Function

Dependent Measures	Structure Coefficients	Standardized Discriminant Weights
Actual turnover	0.65	0.77
Career commitment	0.43	0.57
Organizational commitment	0.41 ^a	0.65
Professionalism	0.10	-0.36
Job satisfaction	-0.05	-0.43
Intention to remain	-0.07	-0.09
Career stages by age	Means (centroids)	
1. < 30 years	0.27	
2. 30 to 39 years	-0.16	
3. > 39 years	-0.34	

^aAlthough this variable loaded (.41) on the first function, it loaded primarily on the second function (.63), which was not significant. Therefore, it was not interpreted.

are also presented in Table 3. This function is marked by *actual turnover* (.65) and *career commitment* (.43). Additionally, the higher the group mean, the higher the rating on the structure coefficients defining the function. Interpreting this result suggests that both actual turnover and career commitment decline as respondents increase in career stage defined by organization tenure.

Career Stages by Position Tenure

Results for this analysis revealed no main effect for career stage operationalized as position tenure. Thus, it may be concluded that any differences in the six focal dependent variables across career stages (as defined) can be accounted for by chance alone ($F = 0.99$, $df = 2/297$, ns).

Discussion

The purpose of the present study was to provide data on the sensitivity of selected career correlates to the multiple operationalizations

of career stage represented by the above models. Career research in general has been plagued by measurement problems. Efforts to understand career stage dynamics have been particularly hampered. It is difficult, if not often impossible, to compare results across studies owing to multiple measurement procedures.

Considering the state of measurement discrepancies between career stage studies, the results of the present effort are not surprising. Different operationalizations of career stage clearly produce different correlational patterns across career stages. Although reported results show no differentiation in outcome between affective reactions, behavioral intentions, or actual turnover as dependent measures, the amount of variance explained by the two models (i.e., career stages by age and career stages by organization tenure) with significant discriminant functions was limited (i.e., 6% and 8%, respectively).

As is, given individual researchers predilections as to the choice of a particular career stage definition, the results of the present study can likely be claimed to support or not support a wide range of competing career stage claims. The confusion that has already resulted from such a situation works against the steady accumulation of knowledge. This is especially apparent when the results of successive studies (using different measurement procedures) are in opposite directions.

The varied results of the present study offer an opportunity to raise several related measurement issues. It must be acknowledged that in the absence of empirical support the cutoff points used to define career stages are somewhat arbitrary. Decisions as to where the stages of an individual's career begin and end (e.g., first stage < 3 years), seem to have been made either on the basis of convenience or, at best, inferred from other research. Likewise, the distinction between careers in organizations as opposed to careers in professions has seldom been addressed.

Career stages based on age ranges are no less exempt from criticism. All age-based schemes must be recognized as approximations. In real life, the onset and termination of different transitional periods varies widely. Thus, an undergraduate may take a first full-time job at 21, whereas a Ph.D. may accept an initial academic appointment at 26 or 27 (Greenhaus, 1987, pp. 90-91).

Another bothersome issue is the seemingly implicit assumption of most career models that they depict development in a "normal" career. In truth, many careers are not pursued fully or successfully. The ideal condition of an individual selecting a career at an early age and remaining in it (or even the same organization) until retirement is

becoming more the exception than the rule.

Given the above concerns and the inconsistent results that have been reported, it would seem likely that past career stage research has failed to accurately capture the multifaceted complexities embodied in vocational behavior. In truth, career stage models may well have survived more because of their common sense appeal than their scientific utility. Without a more compelling theoretical rationale, career stage operationalizations and the results they yield (such as those reported here) will likely continue to seem arbitrary and meaningless.

A question that naturally follows is whether career theorists should be interested in career stage models at all. Given that there is interest in career stage dynamics, however, the existing theoretical and methodological weaknesses of current career stage models require that an attempt be made to develop some agreement in the field concerning the measurement of a central construct. Whether career stage models are merely incomplete, leaving much variance unexplained, or whether they are simply incorrect remains to be established. It may even be possible that a better operationalization of career stages might result from placing the concept of career development within a broader context.

Thus, while career stages may be viewed as outlining discernible activities in a career, they may also supply a cognitive basis for interpreting work life experiences. Taking a social-information processing (SIP) perspective (Salancik & Pfeffer, 1978), it is entirely possible that career stage models are incomplete as a result of being too narrowly focused. The SIP model holds that a jobholder's work attitudes and behaviors are largely socially-constructed realities derived from social information available in the workplace. Minorities and women, for example, may not perceive themselves as having "careers" per se due to such social realities as restricted job ladder access and the exclusion of both groups from certain professional fields. If this is true, it is possible that the notion of "career stage" as an "objective construct" should be abandoned and reconceptualized as a "socially-constructed reality." This would thus require that future researchers let respondents indicate the career stage they perceive themselves to be in, rather than relying on "objectively" determined career stage operationalizations such as age, organization tenure, or job tenure. In this regard, a measure like Super, Zerkowicz, and Thompson's (1981) Career Concerns Inventory would seem especially attractive since it allows current career stage to be operationalized in terms of individual respondents' perceptions.

The results and arguments that have been presented suggest that prevailing career stage models should be reexamined and do not warrant the unquestioned acceptance they enjoy in the vocational behavior literature. Future vocational behavior research that focuses on the informational and social environment within which that behavior occurs and to which it adapts would seem especially desirable. As regards the latter, it would be interesting to know how varying social cues, as well as an individual's past activities and perceptions constrain different career dynamics.

In summary, this study's results underscore a need to be concerned with how different measures of career stage mask or reveal important relationships of interest. Given the discrepant findings which have been reported, and the potential for continued confusion in the career stage literature, it is argued that career stage theorists should not only acknowledge past measurement difficulties when drawing conclusions from prior studies, but should also explore alternative perspectives for operationalizing one of the field's central constructs.

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