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A Meta-Study of *Journal of College Counseling* (*JCC*) Author and Article Publication Characteristics From 1998 to 2009

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Patterns of articles accepted for publication in the *Journal of College Counseling* from the past 12 years were reviewed in this metastudy. Results were described and statistically analyzed to identify trends over time in characteristics of authors, including sex, institutional classifications, employment setting, and domicile, and characteristics of articles, including article type, research design, sample size, types of participants, and statistical procedures.

Keywords: meta-study, article characteristics, author characteristics

The *Journal of College Counseling* (*JCC*) was established in 1996 as the official journal of the American College Counseling Association (ACCA). The ACCA is a division of the American Counseling Association (ACA) that aims to provide support for "persons in higher education to include colleges, universities, community and technical college settings, whose professional identity is counseling and whose purpose is fostering students' development" (ACCA, 2009, para. 1). *JCC* was founded to further the ACCA's mission by publishing articles that educate counselors working in higher education settings and inform the practice of college counseling at 2-year and 4-year colleges and universities.

In 1995, the ACCA appointed James M. Benshoff as founding editor of *JCC* and shortly thereafter appointed a board of editorial reviewers, hired an editorial assistant, developed author guidelines and review procedures, and disseminated initial calls for manuscript submissions. The first issue (i.e., Volume 1, Issue 1) of *JCC* was distributed to ACCA members and journal subscribers in spring 1998. Benshoff's appointment as founding editor spanned 4 years (1996–1999). Over the past 10 years, *JCC* has had four more editors: N. Carolyn Owens (1999–2001), Timothy B. Smith (2001–2004), Laura Hensley Choate (2004–2007), and Alan M. "Woody" Schwitzer (2007–2010). Joshua C. Watson began his term as *JCC*'s sixth editor in July 2010.

The journal is published and distributed by ACA semiannually, in the spring and fall. *JCC*'s acceptance rate ranges from 20% to 25% per year (about 22% on average; A. W. Schwitzer, personal communication, March 12, 2010). From the journal's conception until 2007, three manuscript categories were

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delineated to enhance professional practice in higher education: Research, Professional Issues, and Innovative Practice. In spring 2008, beginning with Volume 11, the journal was updated to change the cover art, add the College Counseling Case Studies category, combine Professional Issues and Innovative Practice to one category, and expand the page limits for the Research and the Professional Issues and Innovative Practice sections to 25 pages each. The College Counseling Case Studies category was added to address the need for further development in practitioner issues and responses, and submissions are by editor invitation only. The journal continues to focus on the practice of college counseling and higher education by requiring submissions to be grounded in the most recent and relevant literature. Given that *JCC* has now produced more than a dozen volumes, it is useful to analyze the developmental trajectory of the journal, with an emphasis on the characteristics of what is published in *JCC* and who is publishing it in order to inform the decisions of the journal editor, editorial board, ACCA governing board, and college counseling practitioners and scholars, who are the ultimate consumers of *JCC*.

Erford, Miller, Duncan, and Erford (2010) identified three primary ways to illuminate a journal's historical evolution. The first method involves identification of special issues, sections, or topics published over time. Special issues and sections outline and circulate articles that address pertinent issues in the field, usually in response to critical professional concerns. To date, *JCC* has published three special sections: (a) the spring 2004 special section on "Nontraditional Students," (b) the fall 2005 special section on "Severe and Persistent Mental Illness on College Campuses: Considerations for Service Provision," and (c) the spring 2006 special section on "Addressing Contemporary Challenges to the College Counseling Profession."

Conducting a qualitative review is the second method of analyzing a journal's historical contributions (Erford et al., 2010). Qualitative reviews allow a close examination of journal articles while maintaining an orderly and methodical approach to such an inspection. A qualitative review notes trends in subject matter and in other article characteristics. When conducted by trained and experienced individuals, qualitative reviews identify themes in methodological, statistical, or author profile in the journal's existing literature.

Benshoff and Flint (2006) conducted a qualitative review of all published articles in *JCC* from the spring 1998 issue to the spring 2005 issue. In total, the researchers reviewed 138 articles from 15 issues. Each article was reviewed and coded for article typology, general article content, author information, topic and relevant student population, theoretical basis, and editorial board composition. With regard to the journal's composition, Benshoff and Flint reported that the majority (53%) of articles published in *JCC* were empirically based; however, they noted significant increases in the number of articles concerning innovative practice (i.e., a low of one in 1998 to a high of eight in 2001). In relation to published topics and trends, articles concerning multicultural issues, international students, and counseling approaches and outcomes made up 20.2% of journal contributions. Benshoff and Flint found that topics concerning assessment and career development were sparse in the

published articles and called for increased attention to these topics in future college counseling research. The majority (83%) of published articles included a faculty member or doctoral student as first author, and 45% of articles included two or more authors from different fields. Benshoff and Flint concluded that, overall, their findings supported the journal's goals and objectives.

The third method used for analyzing historical trends over time identified by Erford et al. (2010) was a quantitative analysis of publication patterns, called a *meta-study*, defined as a quantitative study of a set of studies. This particular method serves as the foundation of the present article. Variables that can be analyzed in a meta-study consist of leading contributors, author demographic characteristics, author institutional characteristics, issues explored, article types, research designs implemented, participant characteristics, sample characteristics, or statistical methods used, among others.

Several counseling journals have published meta-studies, including the *Journal of Counseling & Development* (*JCD*). For example, Weinrach, Lustig, Chan, and Thomas (1998) and Williams and Buboltz (1999) authored review articles focused primarily on topical and author characteristics, whereas three more recent *JCD* meta-studies (Bangert & Baumberger, 2005; Erford et al., 2011; Nilsson, Love, & Taylor, 2007) focused specifically on characteristics of *JCD* quantitative research articles, including design, sample, and statistical procedures used. Publication pattern reviews have been conducted for *Measurement and Evaluation in Counseling and Development* (*MECD*) from 1990 to 2009 (Erford et al., 2010), the *Journal of Addictions and Offender Counseling* from 1979 to 1998 (Charkow & Juhnke, 2001) and from 1999 to 2004 (Juhnke, Bordeau, & Evanoff, 2005), the *Journal of Mental Health Counseling* from 1979 to 1992 (Streicher & Gerstein, 1994), and *Counselor Education and Supervision* (*CES*) from 1985 to 2009 (Crockett, Byrd, Erford, & Hays, 2010). To date, however, no systematic publication pattern review has ever been conducted on *JCC* journal content, and this forms the purpose and focus of the present study.

The answers to two global questions regarding *JCC* publications were sought in this study: (a) What are the characteristics of articles published in *JCC*? (b) What are the characteristics of authors who publish in *JCC*? We used a trend analysis to determine whether answers to these questions have changed over the first 12 years of the journal's history.

Method

All articles published in *JCC* between 1998 and 2009 were examined. Author characteristics included the number, sex, and employment setting of authors, and the national/international domicile, departmental affiliation, and university affiliation of the lead author only. Frequencies of individual author contribution and lead author institutional affiliation were also documented, the latter using a simple tally of institutional affiliation. Individual author contributions were ranked using a weighting system described by Juhnke et al. (2005) whereby the lead author receives 3 points, the second author receives 2 points, and all

subsequent authors receive 1 point. Points are then tallied and contributing authors ranked accordingly. Thus, this ranking system rewards both number of articles and author contribution.

Article characteristics of interest followed similar categorization structures proposed by Erford et al. (2010, 2011) and Crockett et al. (2010) and included article typology (i.e., research, innovative practice, professional issues, and college counseling case studies), topical content (e.g., academic, career, multicultural issues, special student populations, gender), and focus (i.e., research, nonresearch). Research articles were subjected to subsequent coding and analysis to determine frequency of use of quantitative and/or qualitative methodology, type of research design (i.e., correlational, comparative, descriptive, quasi-experimental, test development, ethnographic, and true experimental), intervention or nonintervention, sample size, random or nonrandom sampling/assignment procedures, types of participants (i.e., undergraduate students, counselors, counseling students, administrators/directors, clients at a counseling center, and other), primary statistical analyses used (i.e., descriptive, analysis of variance [ANOVA], analysis of covariance [ANCOVA], regression analysis, multivariate analysis of variance [MANOVA], multivariate analysis of covariance [MANCOVA], correlation, *t* test, chi-square, and factor analysis/structural equation modeling), and reporting of effect size estimates. Sample size was reported as a median size for each time period, and actual sample sizes were collapsed into small (less than 30 participants), medium (30–99 participants), large (100–499 participants), and very large (500 or more participants). These categorizations were made to allow for identification of shifts in general sample sizes over time.

Author and article variables were coded independently by the first two authors. Coding disagreements were discussed by the two authors; in cases for which an agreement could not be reached, the third author independently adjudicated the decision. Coded data were entered into a Microsoft Excel spreadsheet, aggregated into 4-year convenient class intervals (i.e., 1998–2001, 2002–2005, 2006–2009), and analyzed using SPSS with descriptive statistical procedures. Trends over time were analyzed using univariate statistical procedures on weighted proportions, a methodology preferable to the repeated measures ANOVA procedure, because the latter assumes repeated measurement of the same individuals or units over time. Because this meta-study used different article and author units over a 12-year period, the repeated measures assumption was violated. Post hoc analysis of significant findings was conducted using Scheffé's test, and significance for Type I error was established at $\alpha < .05$. Effect sizes are reported as eta-squared (η^2), which has a rule-of-thumb interpretive range of .01 = small effect, .09 = medium effect, and .25 = large effect.

Results

Between spring 1998 and fall 2009, 226 articles appeared in print in *JCC*. Seventeen of these articles were not added to the present analysis because the

articles involved brief, nonscholarly contributions such as editorials or introductions to special sections. The data from the 209 articles selected into this analysis for each coded variable are presented in tables aggregated by 4-year convenient class interval and accompanied by a univariate trend analysis to determine stability or noted changes in the characteristic over time. Results and discussion are organized and presented by author characteristics and article characteristics.

Author Characteristics

An initial question pertained to whether *JCC* is developing an international audience of scholars. Overall, 98% of the articles published from 1998 to 2009 were submitted by first authors residing in the United States, and only about 2% were international submissions. The main effect variation across time periods was significant, $F(2, 206) = 4.06$, $p = .019$, $\eta^2 = .038$, indicating that the number of international publications has actually decreased over time. Indeed, only four international submissions (5.6%) were noted, and all occurred during 1998–2001, whereas no lead author international submissions have occurred since.

Proportions of male and female lead authors of *JCC* articles remained stable during the first 12 years of the journal, $F(2, 206) = 0.57$, $p = .57$, $\eta^2 = .005$. Over the past 12 years, just over half (53.1%) of all *JCC* lead authors were women. As an extension, the sex of all authors contributing to *JCC* over time mirrored the lead author results, $F(2, 501) = 0.57$, $p = .57$, $\eta^2 = .002$. Approximately 57% of all *JCC* authors since 1998 were women, meaning that women form a majority of both lead and total authors contributing to *JCC*. Also, the average number of authors per article published in *JCC* over the past 12 years increased by 0.38 authors, from 2.05 authors ($SD = 0.99$) in 1998–2001 to 2.43 authors ($SD = 1.43$) in 2006–2009.

Not surprisingly, data for lead author and all author primary employment settings indicated that nearly all *JCC* authors are based primarily at a university; the data indicate a consistent publication rate by authors employed by universities of about 95%. Also, over time, there was no significant change in author employment setting rates either for lead author affiliation, $F(2, 201) = 0.04$, $p = .96$, $\eta^2 = .000$, or for total authors' affiliation, $F(2, 504) = 0.08$, $p = .92$, $\eta^2 = .000$. Departmental affiliation of lead authors who were affiliated with a university changed over time, $F(2, 149) = 4.26$, $p = .016$, $\eta^2 = .054$. Nearly half of all *JCC* contributors were primarily affiliated with a counseling department, whereas approximately 35% were affiliated with a psychology, educational psychology, or counseling psychology department. Only about 6% of *JCC* lead authors were primarily affiliated with a university counseling center or career center.

Finally, when the question "Who publishes in *JCC*?" was asked, it is of interest to identify the top individual contributors and contributing institutions. When the weighting system described by Juhnke et al. (2005) was used, top

JCC contributing authors during the first 12 years were Laura Hensley Choate (12 points); Victoria White Kress (10 points); Mark Scholl (9 points); and James Benshoff, Madonna Constantine, Paul Granello, and Jane E. Myers (each with 7 points). The top institutional contributors were University of North Carolina at Greensboro (11 articles); Kutztown University (six articles); University of Florida–Gainesville (five articles); and Brigham Young University, Central Michigan University, Northern Arizona University, and Pennsylvania State University, each with four articles.

Article Characteristics

From 1998 to 2007, *JCC* categorized articles according to typology: (a) Research, (b) Innovative Practice, and (c) Professional Issues. In 2008, *JCC* combined Innovative Practice and Professional Issues into a single category and added a new category, College Counseling Case Studies. Even with this change, the analysis of article typology for the present study (see Table 1) indicated no significant change in effect over time, $F(2, 206) = 0.37$, $p = .69$, $\eta^2 = .004$. Specifically, the number of Research articles has remained stable at about 56%, and about 20% each for Innovative Practice and Professional Issues articles. The new category, College Counseling Case Studies, made up about 10% of the articles published between 2006 and 2009. Given that those articles only began appearing in the last 2 years of that time period, this new article type is likely to increase and then stabilize as a proportion of *JCC* articles in the future. Because articles in the College Counseling Case Studies section are by invitation only, the journal editor has some control over the ultimate proportion of this article type.

Topic content appearing in *JCC* is presented in Table 2, and an inspection of the data indicates that most of the 14 content categories were relatively stable over the past 12 years. There were slight increases in percentages of articles related to symptoms/disorders, treatment/intervention, and evaluation/measurement/diagnosis, and slight decreases in counseling process/outcome and professional issues articles.

TABLE 1

Type of Articles in the *Journal of College Counseling* From 1998 to 2009

	1998–2001		2002–2005		2006–2009		Total	
Type of Article	***n***	**%**	***n***	**%**	***n***	**%**	***N***	**%**
Research	40	56.3	40	53.3	38	60.3	118	56.5
Innovative Practice	18	25.4	15	20.0	10	15.9	43	20.6
Professional Issues	13	18.3	20	26.7	9	14.3	42	20.1
College Counseling Case Studies	0	0.0	0	0.0	6	9.5	6	2.9

Note. In spring 2008, the typology changed to combine articles focusing on Professional Issues and Innovative Practice into the new category, Professional Issues and Innovative Practice, and to add a new category, College Counseling Case Studies. Percentages may not total 100 because of rounding.

TABLE 2

Content Topics in the *Journal of College Counseling* From 1998 to 2009

Content Topic	1998–2001		2002–2005		2006–2009		Total	
	n	%	*n*	%	*n*	%	*N*	%
Symptoms/disorders	19	15.4	27	19.7	27	23.7	73	19.5
Multicultural issues	13	10.6	14	10.2	10	8.8	37	9.9
Counseling process/outcome	15	12.2	15	10.9	5	4.4	35	9.4
Special student population	11	8.9	10	7.3	7	6.1	28	7.5
Professional issues	15	12.2	6	4.4	6	5.3	27	7.2
Career/academic	11	8.9	10	7.3	5	4.4	26	7.0
Theory/technique	6	4.9	17	12.4	3	2.6	26	7.0
Family/relationships	7	5.7	9	6.6	8	7.0	24	6.4
Health/well-being	6	4.9	8	5.8	9	7.9	23	6.1
Gender/identity development	7	5.7	2	1.5	10	8.8	19	5.1
Treatment/intervention	5	4.1	4	2.9	9	7.9	18	4.8
Other	4	3.3	6	4.4	6	5.3	16	4.3
Evaluation/measurement/diagnosis	1	0.8	7	5.1	7	6.1	15	4.0
Practitioner training	3	2.4	2	1.5	2	1.8	7	1.9

Note. Many articles contained more than one content topic and were multicoded. Therefore, the total values may exceed the actual number of articles accepted into the analysis. Percentages may not total 100 because of rounding.

Results when all *JCC* articles were categorized as research or nonresearch articles indicate that the proportion of research articles has remained stable over time at about 58%, $F(2, 206) = 1.01$, $p = .37$, $\eta^2 = .010$. With this as context, the remainder of this section on article characteristics deals exclusively with the research articles published in *JCC* over the past dozen years.

The number of qualitative research studies published in *JCC* has been stable at about 8% since 1998, $F(2, 124) = 0.85$, $p = .43$, $\eta^2 = .014$. The types of research designs appearing in *JCC* research articles also remained stable (see Table 3), $F(2, 119) = 0.06$, $p = .95$, $\eta^2 = .001$. Over the past 12 years, 44.3% of all research studies published in *JCC* used a correlational design or methodology, and 23.8% used a comparative design. As an extension, less than

TABLE 3

Types of Research Designs Used in the *Journal of College Counseling* From 1998 to 2009

Research Design	1998–2001		2002–2005		2006–2009		Total	
	n	%	*n*	%	*n*	%	*N*	%
Correlational	18	46.2	21	50.0	15	36.7	54	44.3
Comparative	7	17.9	7	16.7	15	36.7	29	23.8
Descriptive	8	20.5	7	16.7	4	9.8	19	15.6
Quasi-experimental	3	7.7	2	4.8	2	4.9	7	5.7
Test development	1	2.6	2	4.8	3	7.3	6	4.9
Ethnographic	2	5.1	2	4.8	0	0.0	4	3.3
True experimental	0	0.0	1	2.4	2	4.9	3	2.5

Note. Percentages may not total 100 because of rounding.

10% of all published research studies were intervention based, a result that was also stable over time, $F(2, 118) = 0.22$, $p = .80$, $\eta^2 = .004$.

Three sampling-related variables were coded for the *JCC* research articles: sample size, use of randomization, and types of participants. The frequency of small, medium, large, and very large samples used in *JCC* research articles over the past 12 years remained stable, $F(2, 116) = 1.93$, $p = .15$, $\eta^2 = .032$. The median *JCC* research article sample size over this period was 185 participants. The proportions of random and nonrandom sampling/assignment procedures have also remained stable over time, $F(2, 118) = 0.14$, $p = .87$, $\eta^2 = .002$. An average of 15% of *JCC* research articles used randomization procedures. Also, the types of participants have remained unchanged over time, with nearly 90% of all *JCC* participant samples composed of undergraduate students, $F(2, 118) = 1.10$, $p = .34$, $\eta^2 = .018$ (see Table 4).

Types of statistical procedure and reporting of effect sizes in *JCC* research articles were the final categories analyzed. The proportions of types of statistical procedures *JCC* authors used did trend toward significance over time, $F(2, 249) = 2.51$, $p = .08$, $\eta^2 = .02$. As can be seen in Table 5, the proportions of *JCC* research studies using descriptive, ANOVA, and MANCOVA statistical techniques declined slightly over the past 12 years, whereas studies using correlations, *t* tests, and chi-squares increased slightly. Finally, a new *JCC* editorial policy of including effect size estimates is having the desired effect, because the number of studies reporting effect sizes has increased from 0% in the 1998–2001 time window to 40% in the most recent 4-year period, representing a significant increase over time, $F(2, 112) = 17.93$, $p < .001$, $\eta^2 = .243$.

Discussion

Several significant findings were evident from the analysis of results, indicating that the contents of *JCC* articles are primarily stable while still making evolutionary strides in important areas as the college counseling profession develops and matures. As in the Results section, our discussion of findings addresses the two primary questions of *JCC* author and article characteristics.

TABLE 4

Participant Type in the *Journal of College Counseling* From 1998 to 2009

	1995–1999		2000–2004		2005–2009		Total	
Participant Type	***n***	**%**	***n***	**%**	***n***	**%**	***N***	**%**
Undergraduate students	33	82.5	37	90.2	38	95.0	108	89.3
Counselors	1	2.5	2	4.9	0	0.0	3	2.5
Counseling students	2	5.0	0	0.0	0	0.0	2	1.7
Administrators/directors	1	2.5	1	2.4	0	0.0	2	1.7
Clients at counseling centers	1	2.5	1	2.4	0	0.0	2	1.7
Others	2	5.0	0	0.0	2	5.0	4	3.3

Note. Some articles used more than one sample. Therefore, the total values may exceed the actual number of research articles accepted into the analysis. Percentages may not total 100 because of rounding.

TABLE 5

Primary Statistical Procedures Used in the *Journal of College Counseling* Research Articles From 1998 to 2009

	1998–2001		2002–2005		2006–2009		Total	
Statistical Procedure	***n***	**%**	***n***	**%**	***n***	**%**	***N***	**%**
Descriptive statistics	21	30.9	23	30.7	26	23.9	70	27.8
ANOVA/ANCOVA	14	20.6	14	18.7	17	15.6	45	17.9
Regression analysis	8	11.8	14	18.7	17	15.6	39	15.5
MANOVA/MANCOVA	9	13.2	10	13.3	9	8.3	28	11.1
Correlation	5	7.4	4	5.3	12	11.0	21	8.3
t test	4	5.9	4	5.3	12	11.0	20	7.9
Chi-square	4	5.9	2	2.7	11	10.1	17	6.7
Factor analysis/SEM	3	4.4	4	5.3	5	4.6	12	4.8

Note. Many articles used multiple statistical approaches. Therefore, the total values may exceed the actual number of research articles accepted into the analysis. Percentages may not total 100 because of rounding. ANOVA = analysis of variance; ANCOVA = analysis of covariance; MANOVA = multivariate analysis of variance; MANCOVA = multivariate analysis of covariance; SEM = structural equation modeling.

Author Characteristics: Who Publishes in *JCC*?

An important characteristic to note is the journal's number of accepted international submissions. With an increase in global perspectives in the field of counseling, counseling journals have the opportunity to meet this international need. International submissions have not increased substantially over the journal's lifetime, and this finding is consistent with meta-studies conducted on *CES* (Crockett et al., 2010) and *JCD* (Erford et al., 2011). However, *MECD* currently has an international lead author publication proportion of close to 20% (Erford et al., 2010). *JCC*, much like the findings for *CES* and *JCD*, does not seem to be attracting international authors. In fact, the number of international articles has actually decreased over the years, with the only international submissions occurring in the earliest years of the journal (i.e., 1998–2001). With the field focusing more on international counseling and practitioner implications, the decrease in the number of published international submissions is perplexing. Encouraging and inviting international practitioners and scholars to submit to *JCC* is in keeping with the needs of the counseling profession and its attention to multicultural issues, international student needs and perspectives, and the globalization of counseling.

The representation of women as lead authors and among the total number of authors has remained relatively consistent over the past 12 years. Female authors constitute over half of the total authors contributing to *JCC*. Some other counseling journals (e.g., *CES*; see Crockett et al., 2010) have actually experienced a gender gap in authors, with women accounting for more than 60% of authors in recent years, mirroring demographic trends in counselor education.

The number of author contributions per article has increased in recent years, suggesting increased collaboration among college counseling professionals. From 1998 to 2001, the average number of authors per article was 2.05, and

there was a slight increase to 2.43 from 2006 to 2009. This slight increase is consistent with findings for *JCD* in that the average number of authors per article increased slightly from 2.12 authors per article in the mid-1990s to 2.36 authors per article in 2006–2009 (Erford et al., 2011).

Greater interdisciplinary collaboration was also noted, with nearly half of all contributors affiliated with counseling departments and approximately 35% affiliated with psychology, educational psychology, or counseling psychology departments. Possible explanations for the slight increase in number of author collaborations per article could reveal an increase in faculty focus on student involvement in research and more collaboration among college counseling professionals.

The majority (96.3%) of *JCC*'s contributing authors are employed at university settings. Lead author department affiliations include counseling, psychology, educational psychology, counseling psychology, and education, mirroring recent trends in college counseling to increase interdisciplinary collaboration. With *JCC*'s focus on informing practice and practitioner implications, it is surprising to note that only 6% of the journal's contributing lead authors are affiliated with a university counseling center or career center. It is important to call attention to the need for collaboration among academicians and nonacademicians (e.g., practitioners at campus counseling centers, site supervisors). To increase practitioner submissions to *JCC*, academicians should cultivate relationships with practitioners working in college and university counseling centers and invite them to participate in counseling research through data collection opportunities and coauthoring opportunities that help to explain field-based practices to share with other practitioners.

Article Characteristics: What Is Published in *JCC*?

Over the past 12 years, the publication rates of articles types have remained constant (see Table 1). Research articles remain the highest published category (56.5%), followed by Innovative Practice (20.6%) and Professional Issues (20.1%) articles. Only 2.9% of the published articles fell under the College Counseling Case Studies category, which was expected since the category was only established in 2008. *JCC*'s unwavering focus on research articles aligns with the journal's mission to provide implications for practitioners that are relevant and timely.

Examination of content topics in *JCC* reveals consistency over time with regard to specific content categories. For example, the symptoms/disorders category had the most contributions over time. In 1998–2001, symptoms/disorders made up 15.4% of the journal articles published, and in 2002–2005, symptoms/disorders made up 19.7%, which reveals a slight but not significant increase (see Table 2). Over time, the journal has consistently published between 6% and 10% of articles in each of the following categories: multicultural issues, counseling process/outcome, special student population, professional issues, career/academic, theory/technique, family/relationships, and health/

well-being. About 5% or less of the journal articles published were related to gender/identity development, treatment/intervention, evaluation/measurement/diagnosis, practitioner training, and other. Future submissions and/or special sections could further examine these low frequency categories. It is also hoped that with an increased number of practitioner contributions, some of the low frequency categories (e.g., treatment/intervention, practitioner training) will be explored in future journal publications.

More than half (58%) of the articles in the *JCC* are research focused. Although the number of qualitative and quantitative designs remained constant, the percentage at which these are published is quite different. Over time, the number of qualitative articles (7.9%) remains much smaller than the number of quantitative articles (92.1%). These findings appear inconsistent with the counseling field's growing focus on qualitative research (Crockett et al., 2010). Alternatively, a stable number of qualitative and quantitative methodologies could be just another indication that the college counseling field has reached a stable maturity and balance between inductive and deductive inquiry. Nearly half (44.3%) of all *JCC* research designs used were correlational (see Table 3). In addition to correlational studies, other nonexperimental designs such as comparative and descriptive research predominate. In *JCC*, intervention-focused articles make up a total of 9.9% of all articles. These findings are consistent with results found in Bangert and Baumberger (2005) and Erford et al. (2011), which reported that *JCD* research articles that were intervention-focused made up less than 15% of those published since 1990.

It is surprising that the most rigorous type of research design (i.e., true experimental) accounts for only 2.5% of the total research designs published in *JCC* since 1998 (see Table 3). Although significant differences were not reported, it is important to note that the number of true experimental designs seemed to increase slightly over time. From 1998 to 2001, no true experimental designs were published, and in 2006–2009, nearly 5% of all studies used true experimental designs.

Undergraduate students were the most frequently used type of participants in *JCC* research articles over the past 12-year period, making up nearly 90% of participants studied (see Table 4). The remaining 10% of participants were counselors, counseling students, administrators/directors, clients at counseling centers, and other. Given that academicians are predominantly publishing in *JCC*, this finding is not surprising and further illustrates the need for an increase in practitioner article submissions.

The frequency of small, medium, large, and very large sample sizes in *JCC* has remained stable over the past 12 years. A slight difference was noticed in the medium- and large-sized sample categories; that is, whereas medium-sized samples decreased slightly, the percentage of large-sized samples seemed to have increased slightly. With the journal's focus on quantitative research, it is not surprising that the relatively small percentage (3.4%) of small sample size exists. If the journal increases its frequency of qualitative studies, it is likely that the percentage of small sample size will increase in the future.

With the majority of articles focused on nonexperimental designs, it follows that 85.1% of the research studies used nonrandom sampling procedures. This percentage remained stable over time. The lack of random sampling coupled with the use of less rigorous research methods limits one's ability to generalize findings, and this limit in applicability of results should be acknowledged by *JCC* authors. Larger sample sizes using random assignment may assist in increasing the usefulness of results.

An examination of statistical procedures reveals that descriptive, ANOVA, and MANCOVA techniques have decreased slightly over the time periods from 1998–2001 to 2006–2009; that is, descriptive decreased from 30.9% to 23.9%, ANOVA decreased from 20.6% to 15.6%, and MANCOVA techniques decreased from 13.2% to 8.3% (see Table 5). A slight increase was noticed in use of correlations, *t* tests, and chi-squares. Specifically, the use of correlations increased from 7.4% to 11.0%, *t* tests from 5.9% to 11.0%, and chi-squares from 5.9% to 10.1% . An understanding of statistical procedures used is vital for comprehending benefits and limitations to the study and to the chosen research design. Such information is important for inclusion in *JCC* articles.

Significant differences were found when effect sizes were reported. From 1998 to 2001, effect sizes were not reported at all (0%). A significant increase is clear in that 40% of all research articles from 2006 to 2009 reported effect sizes. This significant increase reflects *JCC*'s recent emphasis on reporting effect size and furthers the mission to report quality empirically based research.

Limitations of the Study

Several important limitations exist in this meta-study. First, the findings yield descriptive data. Causal explanations cannot be made about various categories or information. This review discusses information about the articles published and who is publishing in the journal, not how or the degree to which *JCC* addresses professional and/or societal issues.

Although two authors cross-checked and a third author assisted in coding questions or disagreements, coding errors could still be present. Some other coding categories were more subjective in terms of author coding. For example, the content topics category could have yielded occasions in which some categories were more subjective, and we relied on greater coding expertise for such coding. It could have been the choice of other researchers to eliminate or add certain variables or entire categories depending on preference or evolving characteristics of interest.

Other limitations are noted in the primary employment setting category. Coding this specific category entailed researcher reliance on author report. For purposes of this analysis, the *JCC* authors were mostly from university settings, and some indicated their specific role at the university (e.g., professor, counselor at counseling center). In the future, it would be beneficial for all *JCC* authors to outline specific university department and work setting. Furthermore, missing data in some articles hindered the accuracy of some

analyses. Missing data for author sex occurred even after extensive online information searching, locating other articles for more author information, searching for previous and current institutional affiliation, and even attempting to draw conclusions based on cultural norm of how name was most commonly assigned to gender. Additionally, a more in-depth understanding of author characteristics was not easily identified and therefore not coded or analyzed, such as race, ethnicity, age of authors, years of experience, and so forth.

Conclusion

The aim of this metastudy was to be of assistance to journal readers; past, present, and future authors; board members; and scholars generally interested in trends and issues in the field of college counseling by exploring characteristics of articles published and characteristics of authors publishing in *JCC*. Trends in these areas are meant to provide an overall representation of the journal while avoiding overstating trends in publication of the journal. Over the years, *JCC* has published articles to educate counselors working in higher education settings and has sought to inform and enlighten the practice of college counseling. *JCC* has continued to update the journal's mission to reflect needs in the field and enhance practice while seeking to further develop practitioner issues and responses aimed to help the discipline of college counseling to evolve to meet changing societal needs.

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