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School Counseling Intervention Research on College Readiness, College Access, and Postsecondary Success: A 10-Year Content Analysis of Peer-Reviewed Research



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ABSTRACT

Recent demands from educators and policymakers require school counselors to ensure that students are college and career ready. In this 10-year content analysis of peer-reviewed research, investigators sought to review and describe the available intervention research designed to improve post-secondary success. Ten ($n = 10$) articles published between 2007-2016 met the inclusion criteria and were coded across the dimensions of project leadership, program goals, and research rigor. All ten intervention studies identified were implemented in high school settings, and five of the ten were large-scale, multi-modal collaborative interventions. None of the articles were published in counseling journals, and various levels of rigor were represented across the studies. Implications for researchers and school counselors are discussed.

Keywords: postsecondary education, college access, college enrollment, college and career readiness, school counseling, content analysis

The central goal of any successful educational system is to create and foster learning opportunities that promote long-term growth and potential for future generations. K-12 education is meant to teach youth how to think critically, behave responsibly, and discover ways in which they can contribute to the overall betterment of society (Finn et al., 2014). The benefits of a college degree are clear; salaries have been shown to increase with higher levels of educational attainment and unemployment decreases among those

with higher degrees (U.S. Bureau of Labor Statistics, 2014; 2015). Moreover, a robust K-12 educational system filters into a healthier higher education system later on, which in turn provides a wide variety of advantages for the larger community. These include a higher quality of life, better trained leaders for civic service, and more educated citizens to participate in a democratic society, and developing a cadre of individuals who are employable and better prepared to successfully meet the demands of an increasingly diverse workforce (Kezar, Chambers, & Burkhardt, 2005).

It has been predicted that by 2020, 65% of all jobs in the United States (U.S.) will require some form of postsecondary education (Carnevale, Smith, & Strohl, 2010). Yet, at the current rate of educational attainment, the U.S. will fall far short of the number of qualified workers to meet that need (Carnevale, Smith, & Strohl, 2014). Once a leader in terms of college completion, the U.S. now lags behind 10 other countries (Organization for Economic Co-operation and Development [OECD], 2015). Noting the



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nation's decline in educational attainment, as well as the need to stay economically competitive, the Obama Administration introduced the North Star Goal stating, "America cannot lead in the 21st century unless we have the best-educated, most competitive workforce in the world" (Obama, 2009). By encouraging educators to use data to guide curriculum and services, make better use of technology and cognitive sciences, and involve parents and students in decision making, the intent of this program was to increase public school students' college and career readiness, so that by 2020 the United States would again lead the world in college graduation rates (Duncan, 2010).

The call for a renewed focus on creating a college-going culture also led to several collaborative initiatives, such as the Reach Higher Initiative (Reach Higher, 2015) and the creation of the Council of National School Counseling and College Access Organizations (CNSCCAO). These initiatives focus on postsecondary preparation, access, and success (CNSCCAO, 2017). Though still in the beginning stages, evidence suggests increasing returns on efforts to make college more accessible (Page & Scott-Clayton, 2016). However, postsecondary education enrollment and completion rates vary across variables such as race and ethnicity, family income status, geography, and parental college attainment, and in some cases, these equity gaps have widened over time (Goodwin, Li, Broda, Johnson, & Schneider, 2016). As equity gaps in college enrollment and graduation gained attention, a slight

change in language occurred, shifting from terms such as "college and career readiness" to that of "college access," or "college persistence" (Castleman & Long, 2016). This change likely represents a subtle, yet important, shift in the conceptualization of educators' responsibility, from helping students to be ready for college, to identifying and addressing systemic barriers in an attempt to ensure that postsecondary education is a viable, accessible option for every student.

The Role of School Counselors in College Access

Former First Lady Michelle Obama created the Reach Higher Initiative to provide additional assistance to students as they navigate their path toward college and careers (Reach Higher, 2015). Although this was one of several national initiatives concerning college access created during the Obama Administration, it was unique in that it specifically focused on mobilizing school counselors as an underutilized resource in meeting the goal of increasing postsecondary success for all students (Reach Higher, 2015). The vision of school counseling as systemic support for post-secondary access and equity has been embraced by the American School Counselor Association (ASCA) and fits well with both the ASCA Mindsets and Behaviors (2014), the ASCA School Counselor Competencies (2012a), and the ASCA National Model (2012b). Furthermore, emerging evidence supports the idea that school counselors can have a significant influence on students' postsecondary

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planning; this is particularly true for African American students (Cholewa, Burkhardt, & Hull, 2015). Although the Reach Higher Initiative focused mostly on high school counselors, research also indicates that the earlier students are exposed to college and postsecondary planning the better prepared they will be to deal with workforce and life demands (Blackhurst & Auger, 2008; Dougherty, 2013). To achieve their full potential, students must be taught the necessary competencies related to positive academic, social-emotional, and career development (ASCA, 2014). Though most states now require that every student have an academic career plan on file by middle school (Trusty, Niles, & Carney, 2005), schools vary considerably in the manner, scope, and sequence in which they provide college and career preparedness curriculum (NOSCA, 2012).

Purpose Statement

School counselors have been identified as key players in promoting college access due to their unique skill sets and positions within schools; therefore, it is vital that these professionals understand the current research regarding evidence-based practice and college access interventions and that school counseling researchers contribute to that body of knowledge. Furthermore, political leaders and professional organizations urge school counselors to assume stronger leadership roles in promoting college access and persistence (e.g., ASCA, 2014; Reach Higher, 2015; U.S. Department of Education, 2014). In order to take advantage of this unique

opportunity, however, school counselors must be prepared to utilize evidence-based practices to meet the needs of their students. One way to do this is for school counselors to utilize intervention studies to identify specific school counselor practices that lead to desired outcomes (Carey & Martin, 2015).

Intervention research, defined here as investigations that determine the impact of a specific practice, intervention, or program on selected participant outcomes (Griffith & Greenspan, in press), are particularly important as we learn more about school counselor practices that help promote college access and postsecondary success. Thus, the purpose of this study was to provide an overview of contemporary intervention research related to college readiness, college access, and postsecondary success with implications for school counselors. The following research questions guided the study:

Who is conducting the research studies looking at college access programming, where are these studies being published, and when were they published?

What are the logistics behind the intervention being studied? (i.e., who facilitated the interventions, were they funded by grants or other contracts, what were the age group served, the setting, the mode of delivery, and the intervention length?)

What is the level of rigor of these intervention studies in terms of research design and data analysis?

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Method

Content analysis is a quantitative method by which mass quantities of text are reduced via a systematic, replicable technique into fewer, measurable variables (Stemler, 2001). The approach results in the detection of trends and patterns while removing subjectivity from the process. In addition, content analysis can provide a thorough overview of what is receiving institutional attention within large volumes of scholarly literature for an identified subject area. Various content analyses of school counseling-related journals have been completed (e.g., Blancher, Buboltz, & Soper, 2010; Evans, 2013; Falco, Bauman, Sumnicht, & Engelstad, 2011), many of which highlight: (a) subject matter of major interest to the scholarly community; (b) trends in research topics, design, populations, and intention of research related to the counseling field; and (c) gaps between identified needs and published materials. In the current investigation, a content analysis was determined as the most efficient means of compiling and reporting what is already known, as well as which direction the scholarly community needs to shift to in the future, about what school counselors can do to promote college readiness and access among their students.

The research team, consisting of four counselor educators from various universities, used a quantitative, descriptive content analysis strategy. They chose to limit the review to a 10-year period ranging from January 2007 to December 2016. In order to

best identify current trends in the major academic and professional fields working on college access, the team identified 20 journals across the fields of counseling, school counseling, college admissions, higher education, and educational research. The initial list was then sent to experts in the fields of higher education, college student services, and college access for feedback on their appropriateness for inclusion in the current investigation. As a result of this consultation, five journals were excluded and five were added based on the experts' opinions of the journals' rigor and reputation within the profession, as well as the likelihood they would publish manuscripts related to the topic of college access (see Appendix A on page 23). The research group then identified inclusion criteria for the articles, including: a) articles must report the findings of intervention research; b) the research must evaluate an intervention that promotes college access/enrollment or postsecondary success; and c) the research and/or the intervention must involve school counselors. It should be noted that quantitative, qualitative, and mixed methods studies were all deemed to be appropriate for analysis, provided that the inquiry focused on outcomes of a specific intervention rather than describing participants' or practitioners' experiences only. Finally, the researchers selected specific subject search terms to use when collecting articles for review (See Appendix B on page 24).

An initial search of the 20 identified journals using the ERIC database with the identified

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search terms yielded a very small number of selected articles, none of which were determined to have met the inclusion criteria after an initial review. The authors then decided to open the search to any peer-reviewed journals. In addition, the team decided to use a multi-database search and add several new search terms in hopes of casting a wider net to locate relevant articles. The inclusion criteria were kept, but the third criteria (the research and/or the intervention must involve school counselors) was slightly expanded to include interventions that fit within a school counselors' role according to the ASCA National Model (2012), regardless of whether the particular intervention utilized school counselors. Finally, the group elected to search for the selected terms in the abstract rather than in subject descriptors in order to compensate for the inconsistent use of subject terms across databases. The research team hypothesized that this strategy would result in a larger number of false positives identified within the search, but given the difficulty in finding articles in the first attempts, it was deemed preferable to error on the side of identifying more false positives rather than failing to locate articles that were appropriate for inclusion in the study.

The final search was performed using four databases: ERIC, Academic Search Complete, Education Research Complete, and PsycINFO, and was limited to peer-reviewed journals published in English between January of 2007 and December of 2016. In addition, the abstract search used a wide range of terms to help identify articles that

met each of the three core criteria: a) being an intervention research study (e.g., *evaluat** OR *experiment** OR *intervention* OR *impact* OR *investigat** OR *trial*, etc.); b) focusing on college access and postsecondary success (e.g., *“college success”* OR *“college attendance”* OR *“college access”* OR *“college admission”* OR *“college-going culture”* OR *“postsecondary success”* OR *“summer melt,”* etc.); and c) involving or related to school counselors (i.e., *school counsel** OR *guidance**). For a complete list of search terms used in the study, please refer to Appendix B on page 24. This search yielded 123 articles ($n = 123$) for potential inclusion. The first author then read through the abstracts to ensure that they met all the inclusion criteria. Based on the reading of the abstract, 14 articles ($n = 14$) were selected for detailed content analysis and coding.

Before full review of the selected articles, the research team created a codebook to guide the analysis of each article (Neuendorf, 2016). The codebook used for this study was adapted from Griffith, Mariani, Zyromski, McMahon, and Greenspan (2017). This codebook was selected as appropriate because it was specifically developed to analyze intervention research in school counseling, and provides categories for topics and goals of interventions as well as the rigor of the methodological approach and subsequent analysis. Changes to wording of categories were made to make the codebook more relevant to the current investigation. The research team discussed each change in

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category until consensus was reached for the revised codebook.

The first two authors engaged in an iterative pilot coding for three, randomly selected articles from the pool of 14. After coding those initial articles, the researchers held a consensus meeting and any discrepancies were discussed and appropriate changes were made either to the coding language or to the operational definitions of the coding criteria. At the conclusion of the first consensus meeting, it was decided that the first two authors would each code the 14 articles separately in order to enhance the rigor of the design and the stability of the findings. After the coding was completed, the researchers met for a second consensus meeting and any discrepancies in coding were negotiated until full consensus was reached across all articles; this process resulted in a Cohen's kappa score of 1.0, indicating 100% inter-rater reliability in the coding of the articles. During this process, it was decided that five of the articles in the original pool did not meet full criteria. Three did not meet full criteria because data were presented as a part of a larger overview regarding a conceptual topic, one did not meet full criteria because the data highlighted participants' experiences rather than the impact of an intervention, and one did not meet full criteria because the intervention took place in a medical school with medical students as mentors, and therefore was not considered to be in the scope-of-practice for school counselors. With the elimination of those 5 articles from the pool, the researchers were left with 9 articles to evaluate.

During the review process, the authors were made aware of an additional article that met the study criteria for inclusion. Upon further investigation, it was determined that the reason that article was not identified in the search is because the article appeared in a newer journal, *Journal of College Access*, that was not yet indexed and thus did not appear in the ERIC database. The researchers ultimately decided to include this article in the analysis because it fit the inclusion criteria. In addition, the first author then reviewed all abstracts from articles published in the *Journal of College Access*, and found one additional article that possibly would fit the selection criteria (Arnold, Chewing, Castleman, & Page, 2015); however; ultimately the article was deemed not appropriate for inclusion as the intervention described was not within the scope-of-practice for school counselors. The first and second authors then coded these remaining new article, following the same procedure as the previous analyses. This brought the final number of articles analyzed to 10.

Results

Of the 125 peer-reviewed articles identified through the search process, only 10 ultimately met the criteria for inclusion in the current investigation in that: (a) they described the results of a specific, intervention research study; (b) the intervention focused on career readiness, college access, or postsecondary success; and (c) the authors mentioned implications for school counseling. The numerous false positives were the result of the researchers use of broad abstract search

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terms (e.g., “evaluation” and “guidance”) in an attempt to limit the possibilities of false-negatives (missing articles that were relevant). The 115 articles that were identified by search terms but were excluded for not fitting the selection criteria included studies that were related to our topic but did not evaluate an intervention (e.g., surveys, data-mining, descriptive qualitative research), intervention studies related to the topic that did not have implications for school counseling practice or education (e.g., focused on interventions that could not take place in a school or could not be offered by a school counselor), or articles that included only brief overviews of interventions (e.g., book chapters and articles that mentioned interventions, but without the primary focus on presenting a research study). The remaining 10 articles (i.e., Barnard-Brak, Schmidt, Wei, Hodges, & Robinson, 2013; Castleman, Arnold, & Wartman, 2012; Castleman & Page, 2015; Castleman, Owen, & Page, 2015; McWhorter, 2007; Owen & Westlund, 2016; Parikh, 2013; Stephan & Rosenbaum, 2013; Stillisano, Brown, Alford, & Waxman, 2013; Yavuz, 2016) were subject to coding.

Table 1 (see page 15) reflects data related to the first research question (who is conducting the research studies looking at college access programming, where are these studies being published, and when were they published). The majority of journals were education-focused ($n = 8$), with most representing a specialty area within education (e.g., school counseling, policy, special education, etc.). None of the journals were solely counseling-

focused. The mean average number of authors is 2.40, and eight of the ten articles were the work of multiple authors. Notably, no two articles were published in the same journal and no articles meeting the inclusion criteria appeared in any journal between 2008-2011. Nine of the ten articles were published after 2011, while one article was published in 2007. Notably, three of the ten articles had the same first author. Nearly all of the studies were led by faculty members in higher education institutions ($n = 9$), with four of those research teams including school counselor educators. One study was led by a school counselor practitioner.

The second research question explored the logistics behind the intervention being studied: who led them, whether they were grant funded, the age group served, the setting, the mode of delivery, and the intervention length. For the most part, these interventions were led by school counselors ($n = 5$), teachers ($n = 3$), graduate students ($n = 2$), college counselors/coaches ($n = 2$), or some other combination thereof ($n = 3$). One study involved facilitation from an administrator, one study enlisted the help of outside peer mentors, and one study relied heavily on a text messaging application to deliver components of the intervention. Five of the ten studies received some form of grant funding to support the work, while the remaining five studies did not note specifically whether outside funding was received. Interestingly, all of the studies included high school students ($n = 7$) or recent high school graduates ($n = 3$). As such, all of

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Table 1.
Compilation of data related to Research Question 1.

| Authors | Year | Abbreviated Article Title (first eight words) | Journal Title | Field | Spearheaded By |
|--|------|---|--|------------------------------|--------------------|
| Barnard-Brak, Schmidt, Wei, Hodges, & Robinson | 2013 | Providing postsecondary transition services to youth with disabilities... | <i>Journal of Postsecondary Education & Disability</i> | Special Education, Higher Ed | Higher Ed Faculty |
| Castleman & Page | 2014 | Summer nudging: Can personalized text messages and peer... | <i>Journal of Economic Behavior and Organization</i> | Behavioral Economics | Higher Ed Faculty |
| Castleman, Arnold, & Wartman | 2012 | Stemming the tide of summer melt: An experimental... | <i>Journal of Research on Educational Effectiveness</i> | Education | Higher Ed Faculty |
| Castleman, Owen, & Page | 2015 | Stay late or start early? Experimental evidence on... | <i>Economics of Education Review</i> | Education, Economics | Higher Ed Faculty* |
| McWhorter | 2007 | At-risk students plan for successful transitions. | <i>Georgia School Counseling Association Journal</i> | School Counseling | School Counselor |
| Parikh | 2013 | Urban high school students' experiences in an afterschool... | <i>Urban Review</i> | Urban Education | Higher Ed Faculty* |
| Owen & Westlund | 2016 | Increasing college opportunity: school counselors and FAFSA completion. | <i>Journal of College Access</i> | College Access | Higher Ed Faculty* |
| Stephan & Rosenbaum | 2013 | Can high schools reduce college enrollment gaps with... | <i>Educational Evaluation and Policy Analysis</i> | Education Policy | Higher Ed Faculty |
| Stillisano, Brown, Alford, & Waxman | 2013 | The effects of GO Centers on creating a... | <i>The High School Journal</i> | Education | Higher Ed Faculty |
| Yavuz | 2016 | Exploring the impacts of school reform on underrepresented... | <i>Educational Research and Evaluation</i> | Education Research | Higher Ed Faculty* |

Asterisk (*) denotes higher education faculty who are school counselor educators.

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the studies took place in a high school setting, with one study including an additional university-level site for some of the participants. Specific populations being researched included high school seniors, high school freshmen, students with disabilities, low-income students who intended to go to college, students identified to be at-risk, and youth in urban settings. Four of the interventions were intended to improve outcomes for students with low socio-economic status.

The most widely explored constructs of interest were college enrollment ($n = 5$), while other dependent variables included college persistence ($n = 1$), self-advocacy ($n = 1$), transition skills ($n = 1$), college readiness ($n = 1$), college going culture ($n = 1$), and Free Application for Federal Student Aid (FAFSA) completion ($n = 1$). One study was qualitative and explored the intervention's impact and lived experiences of the students who participated. The majority of studies ($n = 7$) included a one-on-one mode of delivery for the intervention, while others employed small groups ($n = 2$), classroom guidance ($n = 2$), and multi-modal, school-wide services ($n = 2$). In terms of intervention length, the majority were either offered for the entire academic year ($n = 4$) or longer, two-to-four years ($n = 2$). Four of the interventions were shorter in duration; three took place over six-to-ten weeks, and one study involved a 1-2 hour consultation.

Of particular interest to the research team was the level of rigor reflected in the research

design and subsequent data analysis of each study. Various factors contribute to how robust and replicable an intervention is considered to be, including whether the study: (a) is quantitative, qualitative, or mixed methods; (b) is a pilot or replication; (c) employs a standardized curriculum; (d) is a randomized controlled trial or quasi-experimental; (e) uses a control group and/or comparison group; (f) uses repeated measures; (g) gathers follow-up data to ascertain the stability of results; (h) incorporates assessment measures other than self-report; (i) has a large sample size; and (j) includes an interpretation of effect size. Table 2 contains data related to these variables.

Table 2.
Compilation of data related to Research Question 3.

n = number

| Study Descriptors | n | % |
|------------------------------------|-----|-------|
| Quantitative research | 8 | 80.00 |
| Qualitative research | 1 | 10.00 |
| Mixed methods research | 1 | 10.00 |
| Described as a pilot study | 4 | 40.00 |
| Standardized curriculum | 4 | 40.00 |
| Randomized controlled trial | 3 | 30.00 |
| Quasi-experimental design | 6 | 60.00 |
| Used a control or comparison group | 7 | 60.00 |
| Used repeated measures | 2 | 20.00 |
| Gathered post-intervention data | 0 | 0.00 |
| Assessment went beyond self-report | 8 | 80.00 |
| Sample size was over 100 | 7 | 70.00 |
| Sample size was over 1,000 | 5 | 50.00 |
| Reported effect size | 1 | 10.00 |

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The majority of studies were quantitative ($n = 8$), though one study was qualitative, and one study used mixed methods. Four of the investigations specifically noted that the intervention was being piloted for the first time, and no investigation specifically noted being a replication study. Regarding standardization, four interventions noted having an associated curriculum, three involved facilitator training in lieu of a manual, and three made no mention of any level of standardization. While three of the studies randomly selected participants to be placed in the intervention group, control group, or a comparison group, the remaining studies employed quasi-experimental methods ($n = 6$). Of these six quasi-experimental studies, two compared outcomes with a control group, two with a comparison group, and two studies used no control or comparison group. Use of pre-post tests was less common ($n = 3$) in favor of post-test only methods ($n = 7$). No studies gathered post-intervention follow-up data.

The majority of studies did, however, incorporate data that went beyond self-report ($n = 8$; e.g., grades, test scores, application completion, college enrollment). Sample sizes ranged considerably (10 - 44,627), with seven of the ten studies involving over 100 participants. Of those, five had over 1,000 participants. One study, the phenomenological investigation, would have been unusual to have over 100 participants. Notably, four of the five studies with sample sizes over 1,000 were also grant funded. Finally, in only one study was an effect size

calculated and interpreted, with the majority of studies failing to do so ($n = 9$).

Discussion

This result of this investigation revealed several interesting issues for further investigation, some based on the results of the content analysis, others based on the difficulties which arose during the search process itself. First and foremost, procedural difficulties were encountered by the research team in finding appropriate and adequate numbers of intervention studies on college access and postsecondary success. The researchers struggled to determine which search terms to include in order to most accurately identify articles. The overall lack of success in finding a large number of fitting studies to include clearly presents challenges to the validity of this study (e.g., how many additional intervention research articles exist that we did not find?), but also calls into question the research teams' ability to adequately conduct a comprehensive literature review on college access interventions when such limited content exists along this line of research.

There are likely several factors contributing to the difficulties the researchers encountered in identifying relevant articles. First, it seems that there is little consistency in the use of subject terms among researchers in this field, both to describe the topic and to describe the research methods. This inconsistency may be exacerbated by the fact that the line of published research in college and career readiness, although small, is spread out

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among a wide range of disciplines. In addition, a newer key journal in the field of college access and postsecondary success (*Journal of College Access*) is not yet indexed through major databases, further limiting the accessibility of its important content. Scholars finding a way to use similar subject terms to identify college access and postsecondary success research articles, as well as using specific research terms to identify research methods, could help improve the validity of such literature reviews.

It is also worth noting that two initial assumptions of the research process had expected and unexpected results. Initially, although disappointing, the researchers did not expect to find a large number of intervention research articles addressing college access. This initial assumption was reinforced by the results. However, the second assumption of the researchers, that existing intervention studies would have been published in the major journals in the fields of school counseling, higher education, college access, and educational research, did not prove true. In fact, of the original 20 major journals identified by the researchers, only two of those journals published an article that met the criteria for review. And none of the journals closely associated with the relevant national professional associations (e.g., American Counseling Association, American School Counseling Association, National Association for College Admission Counseling, American College Personnel Association, Association for the Study of Higher Education, American Educational

Research Association) published any of the articles that were identified in the search. While this analysis does not provide answers as to why this might be, it certainly raises concerns about the congruence between the increased focus on college access at the practitioner level, and the lack of published intervention studies within academe.

Given that the current investigation employed an open-journal search, broad search terms, and a 10-year time span, the research team also found it notable that ultimately only ten articles fit the search criteria. It would appear as though there is no shortage of scholarly works that address college readiness, college access, and postsecondary success, nor articles that address this issue from a school counseling framework. The primary issue was the lack of studies that evaluate the outcomes of specific interventions. Moreover, many of the intervention studies found in this area were conducted by researchers outside of school counseling. This lack of intervention research in school counseling seems to be a far-reaching issue, as prior content analyses of the status of outcome research in school counseling continually indicates a dearth of investigations that examine the impact of interventions (Griffith, Mariani, Zyromski, McMahon, & Greenspan, 2017; McGannon, Carey, and Dimmitt, 2004; Whiston & Sexton, 1998). Indeed, this is an issue in the counseling field as a whole, as Ray and colleagues (2011) identified that only six percent of articles within ACA-affiliated journals examined the effectiveness of interventions. There are likely several reasons

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for this lack of intervention research in school counseling specifically and counseling generally, and it may well be grounded in a professional identity that is still evolving from a primarily practitioner orientation to a professional practice informed by evidence. The idea that a practitioner focus, and a correlating focus on practitioner-friendly journal articles (perhaps at the expense of research rigor), may hinder professional research expectations is supported by the fact that no school counseling focused journal is identified as having a journal impact factor (Thomson Reuters, 2017).

It has also been noted that, even where there is an interest in conducting intervention research in school counseling, there seems to be a lack of adequate training and experience when it comes to creating methodologically sound intervention studies (Griffith & Greenspan, in press). An inauspicious history of rigorous research coupled with school counseling programs often being isolated from programs that have a stronger history of research (e.g., counseling psychology or educational psychology) may have led to a self-sustaining cycle of school counselor educators who are better prepared to teach and supervise than to conduct rigorous research. This may lead to minimal training in research methodology, and thus lower research self-efficacy related to developing rigorous research projects (Griffith & Greenspan, in press).

Furthermore, within the current investigation's sample, there was a

concerning lack of school counselor involvement or centrality to these efforts to identify effective practices, despite college and career matters being a key component of a school counselor's scope of work with young people (ASCA, 2012). School counselors are at a disadvantage in being able to engage in best practices in this area with scant data indicating what works in schools.

The present study's findings also indicate a lack of rigor in the few intervention studies identified. Several of the studies relied on post-test only quasi-experimental design, which is troubling due to high threats to validity. Only three of the studies were randomized controlled trials, the gold standard in intervention research. Furthermore, none of the studies gathered post-intervention data, which would serve as an indication of the stability and longevity of the intervention's effects – key information in determining whether a program will ultimately be worth the time, cost, and resources to implement. Relatedly, only one study provided an analysis of effect size, which also provides needed context as to whether it is wise to implement a program. A further salient issue is related to whether any of the studies could be successfully replicated; while some articles simply do not provide enough information, the majority of studies also did not incorporate any standardized curriculum. Therefore, if the program were to be implemented at another site, vastly different results could be expected. That said, some elements of the studies were impressive in terms of rigor. Overall, the majority of

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studies incorporated ample sample sizes, (lending strength the analysis and level to which the findings can be generalized), and almost all of the studies included objective data, going beyond self-report instruments. It was somewhat surprising to the researchers that the majority of the research projects (six of ten) described were complex, school wide interventions, many involving the collaboration of several educators and lasting for an entire academic year. These studies bring up a few concerns. First of all, the complex nature of the multi-faceted interventions and collaborative teams are likely effective practice, but it makes it difficult to determine the degree to which each element of an intervention contributes to the overall results (and subsequently which are having the greatest impact). Moreover, because these interventions were not standardized for the most part, replication is nearly impossible. Finally, these studies were largely supported by grants, making it difficult for most practicing school counselors to implement the interventions without corresponding resources.

The notable exceptions to the issues stated above are the three articles authored by Castleman and colleagues (Castleman, Arnold, & Lynk Wartman, 2012; Castleman, Owen, & Page, 2015; Castleman & Page, 2015), each of which focused on interventions delivered over the summer after high school graduation. These studies stood out not only for their timing, but also for the simplicity of design and efficiency in terms of both lower financial costs and limited strain on resources.

This raises an interesting question about the relative merits of large scale, year-long collaborative programs compared to smaller, more focused and nimble interventions that can be implemented with relative ease. Regarding the focus and goals of the intervention, it is interesting to note that six of the ten studies focused at least partially on goals that are realized after high school graduation (five studies identified college enrollment, and one study identified college persistence as of sophomore year in college). Of the remaining four studies, one focused on building transition skills in students. This may be an example of the shift in focus from college readiness to college access and persistence, as the evaluation of the (slim) majority of these programs is based not on being ready for college, but in the actuality of attending and persisting college. Similarly, the fact that all of the interventions in the current investigation were focused on high school students or recent graduates suggests that even though ASCA promotes the idea that preparing children to be college ready should start in elementary school, that idea does not appear to have yet been translated into interventions – or at least not into published research studies. Further work promoting the importance of designing and evaluating elementary and middle school programs to promote college access is necessary.

Limitations

One of the potential limitations to the validity of this study is related to the research team's difficulty finding intervention research

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articles in the initial search attempts. Although the researchers took great care to re-examine their approach in order to design a search strategy that successfully identified fit for inclusion, it is not clear how many false negative articles might still exist. Therefore, the authors cannot say with absolute certainty that this represents an exhaustive analysis of intervention research studies related to college access. Furthermore, although the number of articles identified is small, a simple counting method does not take into account the impact that any single research article may have had on the field.

In addition, this content analysis includes recent articles (as recent as December 2016), but it cannot account for the current research projects underway, or for the intervention research articles that are currently in the publication pipeline, which can be quite long (12-36 months)

for some journals. As the focus on college access is still a fairly new emphasis, as is the call for evidence-based practice and intervention research in school counseling, it may be that there are several intervention research articles in preparation to be published in the next few years.

Implications for School Counselors and School Counselor Educators

Perhaps the primary implication of this study is to shine a light on the need for school counselors and school counselor educators to take an active role, even a leadership role, in: a) designing and implementing college access interventions; and b) researching and disseminating their findings. Several of the interventions that were reviewed in this content analysis included components that would fit well within a comprehensive school counseling program, with goals that are

consistent with the ASCA Mindsets and Behaviors, and which contained appropriate avenues for school counselor advocacy, leadership, and collaboration. Yet, in the majority of these articles, school counselors were tangential players in the intervention and rarely cited as being part of the research team.




“There may be great benefit to be had from counselor educators encouraging their doctoral students to conduct college access/postsecondary success intervention studies for their dissertations.”

Likewise, there may be great benefit to be had from counselor educators encouraging their doctoral students to conduct college access/postsecondary success intervention studies for their dissertations. Not only would it help add to the knowledge base in this important field that clearly lacks intervention research, but it would help doctoral students be more marketable for having complete intervention research on a timely, and likely fundable, topic area. It will also be important to ensure

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these dissertation studies get published, and to pursue publication in school counseling and counseling journals. This will help the doctoral students, but will also help to educate other counselors and school counselors about the role school counselors can play in college access and postsecondary success interventions. This is particularly important given that many counselors may not be reading the education-focused journals or journals outside of the field of education in which these studies are currently being published.

The lack of school counselor leadership in research has implications for school counselor preparation programs as well. School counseling preparations programs are professional degrees, and although research is included as one of the eight common core areas of counseling curriculum according to the Council for Accreditation of Counseling and Related Educational Programs (CACREP, 2016), it is unclear the degree to which school counseling graduates see research as part of their part of their professional identity. To have a topic that is so timely be under-researched should be not only a call to the profession of school counseling to conduct more research and to disseminate the findings, but should also be a call to counselor educator programs to infuse the process of research and dissemination to advance the profession as a core feature of school counseling professional identity. 

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Appendix A

Selected Journals

College Access Intervention Study Content Analysis

8/26/16

Professional School Counseling (ASCA)

Journal of Counseling & Development (ACA)

Journal of College Counseling (ACCA)

Journal of College Admission (NACAC)

Journal of College Student Development (ACPA)

Journal of Student Affairs: Research and Practice (NASPA)

Review of Higher Education (ASHE)

Journal of Higher Education (Ind)

Journal of College Access (MCAN)

American Educational Research Journal (AERA)

Educational Researcher (AERA)

Educational Leadership (ASCD)

Urban Education (Ind)

Journal of Diversity in Higher Education (APA)

Journal of School Counseling (Montana St.)

Journal of College Student Retention: Research, Theory, Practice (Ind?)

Theory into Practice (Ind)

Contemporary Issues in Education Research (The Clute Institute)

Journal of Research on Educational Effectiveness (SREE)

Research in Higher Education Journal (Academic and Business Research Institute, AABRI)

Italics: Identified by experts in College Student Affairs and Higher Education

Appendix B

Final Search Terms

In Abstract:

"college success" OR "college attendance" OR "college outcomes" OR "college access" OR "college admission*" OR "college preparation" OR "college preparedness" OR "college acceptance" OR "college enrollment" OR "college participation" OR "college readiness" OR "college attainment" OR "college affordability" OR "college intending" OR "college counseling" OR "college entry" OR "access to college" OR "college-going culture" OR "postsecondary success" OR "postsecondary education" OR "postsecondary attendance" OR "postsecondary outcomes" OR "postsecondary access: OR "postsecondary admission" OR "postsecondary preparation" OR "postsecondary preparedness" OR "postsecondary readiness" OR "postsecondary enrollment" OR "postsecondary attainment" OR "postsecondary affordability" OR "postsecondary intending" OR "postsecondary counseling" OR "postsecondary entry" OR "access to postsecondary" OR "financial aid" OR "summer melt"

AND

In abstract:

control OR evaluat* OR experiment* OR intervention OR impact OR investigat* OR trial OR "single subject" OR "multiple baseline" OR "action research" OR "repeated measures" OR replication OR outcome OR pilot OR pretest OR post* OR quasi* OR random* OR effect*

AND

IN abstract:

School Counsel* OR Guidance*

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