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REVIEW ARTICLE

Citation Analysis of *The Analysis of Verbal Behavior* (2008–2018)

Tom Cariveau[1] · Halley Robbins[1] · Catia Cividini-Motta[2] · Caitlin Delfs[3]

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Abstract

Recent articles by the editorial board of *The Analysis of Verbal Behavior* (TAVB) include calls for greater integration, collaboration, and inclusion. In so doing, it may be helpful to consider TAVB's current reach. Previously, Petursdottir, Peterson, and Peters (*The Analysis of Verbal Behavior, 25*, 109–121, 2009) described the number of citations of articles published in TAVB from 1983 to 2007. The authors found that the greatest number of references to TAVB were self-citations, followed predominantly by other behavior-analytic outlets, such as the *Journal of Applied Behavior Analysis*. Here, we replicate and extend the work of Petursdottir et al. (*The Analysis of Verbal Behavior, 25*, 109–121, 2009) by conducting a citation analysis of references included in TAVB publications from 2008 to 2018 and also report citations by these venues to TAVB. This citation analysis allows for a more recent review of those outlets that articles published in TAVB commonly reference and those that cite TAVB. Generally, self-citations predominated, with articles published in TAVB commonly referencing books and chapters. The implications of these practices on the impact of TAVB and suggestions for moving forward are considered.

Keywords *The Analysis of Verbal Behavior* · citation analysis · impact factor

In 1982, *The Analysis of Verbal Behavior* (TAVB) began auspiciously as a newsletter titled *VB News*, authored by members of the Verbal Behavior Special Interest Group (VBSIG), under the guidance of Mark Sundberg, Kent Johnson, James Partington, and others. According to Sundberg (2014), TAVB originated due to the need for a

✉ Tom Cariveau
cariveaut@uncw.edu

[1] Department of Psychology, University of North Carolina Wilmington, 601 S. College Rd., Wilmington, NC 28403, USA

[2] University of South Florida, Tampa, FL, USA

[3] Village Autism Center, Marietta, GA, USA

publication venue for exploratory work based on Skinner's (1957) *Verbal Behavior*. In just 3 years, VBSIG members recognized the insatiable interest in verbal behavior (VB) as a subject and determined that a formal publication outlet for this work was desired. In 1986, TAVB updated and formalized its submission requirements and became an official journal, coedited by Sundberg and Joseph Spradlin. Sundberg continued to serve as editor of the journal through 1997, overseeing substantial growth in the number of publications, readership, and citations. In 1997, TAVB began publication with the Association for Behavior Analysis International, with a primary goal of publishing both "conceptual articles and empirical demonstrations of the behavior analytic account of human language" (Rosales, 2018, p. 1).

Over the years and under the stewardship of its illustrious editorial teams, including Mark Sundberg (1982–1997); Kent Johnson, coeditor (1982); James Partington (1983); Joseph Spradlin, coeditor (1985); Hank Schlinger (1998–2000); Sam Leigland (2001–2003); Jack Michael (2004–2008); Caio Miguel (2008–2011); Anna Ingeborg Petursdottir (2011–2014), Jim Carr (2015–2018), and Mark Dixon (current), TAVB's aim has remained consistent: to improve conceptual understanding of VB and foster research within and outside of the general VB community. In a recent editorial issue of TAVB, the new editor and associate editors outlined their vision for the future of the journal, which included "healthy discussion about the overlap and differences between the various conceptual analyses of the behavior-analytic account of language" (Rosales, 2018 p. 13), "dissemination of innovative research and conceptual analyses" (Ming, 2018, p. 7), and "continued debate about the controlling variables of complex verbal behavior and supporting empirical work" (Fienup, 2018, p. 22). Moreover, Dixon (2018) contends that "an evolution of TAVB is necessary for it to emerge once again as the flagship home for research on verbal behavior" (p. 2) and that "success for TAVB . . . should be measured by citation counts of our papers outside of the behavior-analytic journals, not within" (p. 3). The calls made by these members of the VB community will certainly guide the future of VB research. Even so, the extent to which research in TAVB is being cited in other journals, and how much we reciprocate by citing these journals, is unclear.

Prior work has attempted to quantify the impact of VB on the fields of behavior analysis and psychology using citation analyses of (a) Skinner's (1957) *Verbal Behavior* (e.g., Oah & Dickinson, 1989; Petursdottir & Devine, 2017), (b) research on Skinner's verbal operants (e.g., Sautter & LeBlanc, 2006), and (c) articles published by TAVB (e.g., Petursdottir, Peterson, & Peters, 2009). The first analysis of this sort appears to be the one published in 1989 by Oah and Dickinson, who searched for articles that included Skinner's *Verbal Behavior* in the references and research on Skinner's verbal operants. These authors found very few published articles, the majority of which focused on mands and tacts. Since the initial review by Oah and Dickinson (1989), two additional publications reviewed research on Skinner's verbal operants (DeSouza, Akers, & Fisher, 2017; Sautter & LeBlanc, 2006). Sautter and LeBlanc's (2006) review found that the number of publications tripled relative to those reported by Oah and Dickinson (1989) and expanded to 11 different journals, yet research continued to focus on the same two operants: mands and tacts. More recently, DeSouza et al. (2017) reviewed articles published between 2001 and 2017 that employed Skinner's analysis of VB in interventions for persons with autism. Results of their review

indicated that the number of empirical publications had increased, totaling 172 during the period selected for this review, and expanded to 22 different journals. However, similar to the previous reviews, the majority of publications focused on mands and tacts. Furthermore, most of the empirical literature was published in the *Journal of Applied Behavior Analysis* (JABA; 32%) and TAVB (25%). Finally, Petursdottir and Devine (2017) completed a reference search of Skinner's *Verbal Behavior* and found that, between the years of 2005 and 2016, the text was cited 890 times across 230 different journals, a significant increase from previous citation analyses (Dymond, O'Hora, Whelan, & O'Donovan, 2006; McPherson, Bonem, Green, & Osborne, 1984). In other words, it appears that interest in VB research and Skinner's (1957) text has flourished.

An additional method for quantifying the impact of VB in our field is to summarize citations of the main publication venue for VB related research, TAVB, and assess publication trends therein. In 2009, Petursdottir et al. (2009) conducted a citation review to determine the number of references to TAVB in other behavior-analytic journals from 1983 to 2007. Results of this analysis indicated that TAVB articles were only a small percentage of the references of articles in the *Journal of the Experimental Analysis of Behavior* (JEAB) and JABA, ranging from 0.0% to 1.7%. Furthermore, most of the references to TAVB articles were made by other articles published within TAVB, followed by JABA, *The Behavior Analyst*, and *The Psychological Record*.

Although being cited in diverse journals may be ideal (see Dixon, 2018), the success or prestige of a journal is often linked to the journal's impact factor. Impact factor refers to the journal's visibility (Sammarco, 2008), or its readability. Currently, TAVB does not have an official impact factor because it is not indexed in Clarivate Analytics (previously the Thomson Institute for Scientific Information). However, it is possible to estimate a journal's impact factor using information readily available in PsycINFO. Petursdottir et al. (2009) were the first to estimate the impact factor of TAVB. The authors calculated an estimated impact factor by taking the total number of times articles published in TAVB in the past 2 years were cited and dividing it by the total number of publications in TAVB during the same 2-year period. According to their calculations, TAVB's impact factor ranged from 0.3 to 0.6 between 2003 through 2007, which was well below the impact factor for JABA during the same period (range 0.5–1.1). Because the review by Petursdottir et al. (2009) included articles through 2007, whereas Petursdottir and Devine (2017) reviewed citations of *Verbal Behavior* from 2006 to 2017, it is unclear whether there has been a similar increase in reference to articles published in TAVB as was observed with Skinner's (1957) seminal text in the area.

The current citation review replicates and extends the work of Petursdottir et al. (2009). We reviewed all articles published in TAVB between 2008 and 2018 and coded the references of TAVB articles within a large group of journals. That is, it includes citations in JABA and JEAB, other behavior-analytic journals, and journals on developmental disabilities that were cited by or cite articles published in TAVB. Finally, using Petursdottir et al.'s (2009) method, we also estimated impact factors for TAVB. Thus, the purpose of this review is twofold: (a) to estimate the impact that publications in TAVB have and (b) to identify the journals that are citing and being cited in TAVB.

Method

References in TAVB

We reviewed all issues of TAVB published between the years 2008 and 2018. We coded the title, keywords, and references for each article. References were categorized as either journal articles, books, chapters, dissertations, presentations, or other. The journal name was recorded for each article, and the book title was recorded for all books and chapters. References were coded as "other" if they were not in English, personal communications, governmental reports, newsletters, or listed as under review, submitted, or in press. We recorded the total number of references for each article and corroborated this number with the listing in the PsycINFO database.

Citations in Other Journals

Similar to Petursdottir et al. (2009), we conducted a search using PsycINFO to identify the number of times each article published in TAVB between 2008 and 2018 was cited. Citations in other journals were not coded between 2016 and 2018 as PsycINFO did not reliably provide these data. As in the previous section, we recorded the type of publication and publication name for journal articles, books, and chapters. We also recorded the year of the publication in order to estimate the impact factor for the journal (see the next section).

Estimated Impact Factor

Similar to Petursdottir et al. (2009), an estimated impact factor was calculated for 2010 through 2016 using citations from PsycINFO. Scores were not calculated for 2008 or 2009 as this required data from years not included in this analysis. Scores were not generated for 2016, 2017, or 2018 as the number of TAVB articles cited by other sources was not reported by PsycINFO. To calculate an estimated impact factor, the total number of articles published in the past 2 years served as the denominator. For example, when calculating the impact factor for 2013, the total number of articles published in TAVB during 2011 and 2012 were summed. The numerator was the total number of citations of articles published in TAVB that occurred within 2 years of the publishing year. That is, we summed the number of citations that were made in 2013 to articles published in TAVB in 2011 and 2012.

Interobserver Agreement

A second independent reader scored 30.8% of articles. Readers recorded references by articles in TAVB and the citations in other journals (described previously). Both scores were used to calculate agreement. Interobserver agreement (IOA) was calculated for individual articles via an item-by-item comparison of scores. Agreements were scored if the readers indicated the same type of publication and publication name for articles referenced by those published in TAVB and if the readers indicated the same type of publication, publication name, and publication year for articles citing those published in TAVB. The number of agreements was divided by the number of agreements plus

disagreements and multiplied by 100. Mean IOA was 99.9% (range 94.74%–100%). A single disagreement occurred across two separate articles with 100% agreement across all other articles.

Results

Figure 1 shows the mean and range of articles cited in TAVB articles published between 2008 and 2018. The number of references remained fairly consistent over the years with a mean of 29.9 across years. The range of references is similar across years, excluding two outliers that referenced over 200 articles. Esch and Esch (2016) referenced 253 articles, and DeSouza et al. (2017) referenced 202 articles. Figure 2 shows the percentage of references included in TAVB publications between 2008 and 2018 to TAVB, JABA, JEAB, and books and chapters. Books and chapters are compiled into a single data path and accounted for an average of 21.3% of all references in articles published in TAVB. The most commonly referenced journal was TAVB (M = 16.9%), followed by JABA (M = 14.8%) and JEAB (M = 11.5%). The percentages of references to other behavioral journals are shown in Fig. 3. *The Behavior Analyst* (now *Perspectives on Behavior Science*; M = 3.5%) and *The Psychological Record* (M = 3.0%) each accounted for around 3% of articles referenced. *Behavior Modification* (M = 0.6%), *Behavior Analysis in Practice* (M = 0.6%), and *Behavioral Interventions* (M = 0.6%) all accounted for less than 1% of all references cited by articles published in TAVB. Figure 4 shows the percentage of references that

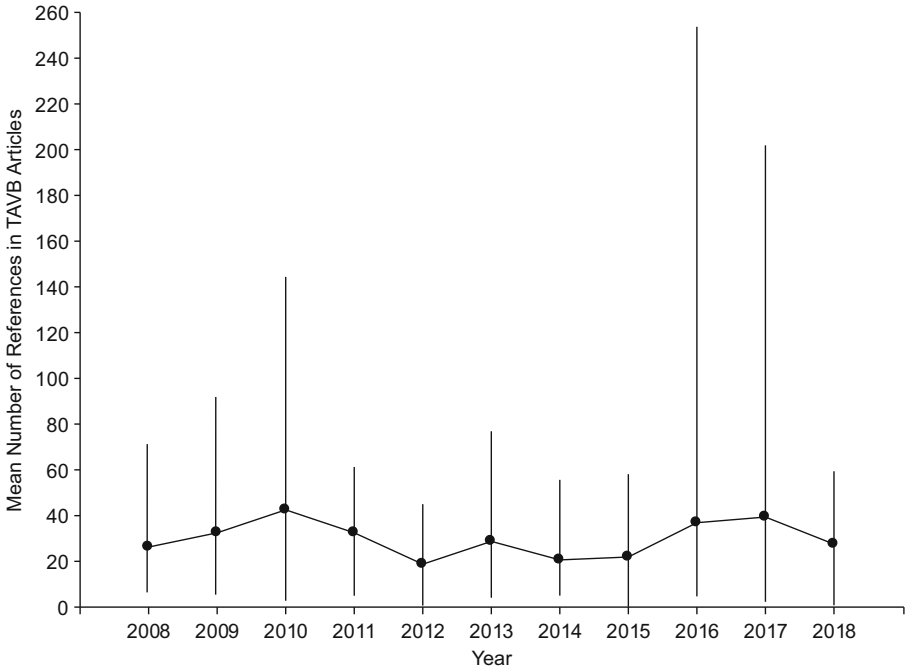

Fig. 1. Mean number of articles referenced by articles published in TAVB from 2008 to 2018. The vertical lines show the range for articles published in that year

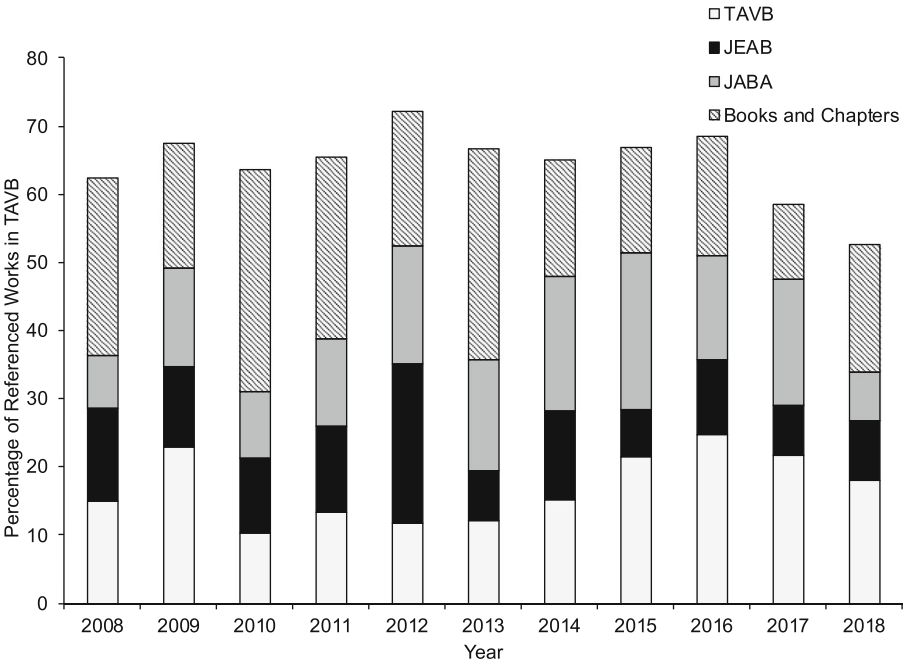

Fig. 2. Percentage of referenced works published across three behavior-analytic journals and books and chapters from 2008 to 2018. TAVB = *The Analysis of Verbal Behavior*; JEAB = *Journal of the Experimental Analysis of Behavior*; JABA = *Journal of Applied Behavior Analysis*

included journals publishing research on work with individuals with developmental disabilities. *Research in Autism Spectrum Disorders* accounts for an average of 1% of references in TAVB, whereas *Research in Developmental Disabilities* (M = 0.9%), the *Journal of Autism and Other Developmental Disorders* (M = 0.6%), and *Focus on Autism and Other Developmental Disabilities* (M = 0.2%) accounted for less than 1% of references.

Figure 5 shows the mean and range of citations to TAVB articles published in a given year by other venues. A decreasing trend over the reviewed period was observed with a large range in the number of citations across years, although this would be expected as there are fewer subsequent years in which the article may be cited. The numbers of citations to TAVB in TAVB, JEAB, JABA, and books and chapters are shown in Fig. 6. An overall decrease in the number of citations to TAVB was observed, with the greatest number of citations to TAVB articles being self-citations (M = 19.6), followed by books and chapters (M = 7.6), JABA (M = 5.3), and JEAB (M = 1.5). Figure 7 shows citations to TAVB in other behavioral journals. The number of citations to TAVB in *The Psychological Record* (M = 4.6) and *The Behavior Analyst* (M = 1.8) exceeded JEAB. Low levels of citations to TAVB were found in *Behavior Analysis in Practice* (M = 1.0) and *Behavioral Interventions* (M = 0.5), whereas TAVB was never cited in *Behavior Modification*. Figure 8 shows citations to TAVB by four journals publishing research on developmental disabilities. Trends of citations to TAVB in these journals were somewhat variable. *Research in Autism Spectrum Disorders* had the greatest percentage of citations to TAVB (M = 2), whereas *Research in Developmental Disabilities* (M = 0.9%), *Focus on Autism and Other Developmental Disabilities* (M =

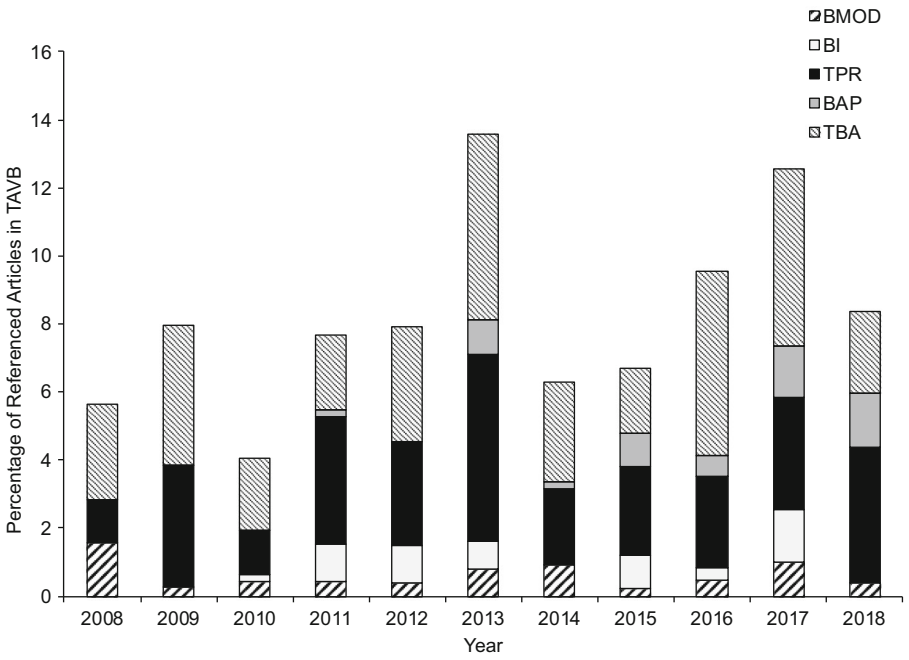

Fig. 3. Percentage of referenced articles across other behavior-analytic journals from 2008 to 2018. BMOD = *Behavior Modification*; BAP = *Behavior Analysis in Practice*; TBA = *The Behavior Analyst/Perspectives on Behavioral Science*

0.6%), and the *Journal of Autism and Developmental Disorders* accounted for less than 1% of citations to TAVB. Three articles were cited more than 15 times. Michael, Palmer, and Sundberg's (2011) article on multiple control was cited 22 times, followed by Axe's (2008) article on conditional discriminations in intraverbal relations, which was cited 19 times. Finally, Sundberg and Sundberg's (2011) article on intraverbal behavior in typically developing children and children with autism was cited 18 times.

Estimated impact factors from 2010 to 2015 are shown in Table 1. The estimated impact factor remained fairly stable from 2010 (0.92) to 2011 (0.91). A decrease in the estimated impact factor was observed in 2012 (0.44), before it increased to 0.89 in 2013 and then began to decline in 2014 (0.55) and 2015 (0.45). Nevertheless, the estimated impact factor was generally higher than those reported by Petursdottir et al. (2009) from 2003 to 2007, which ranged from 0.27 to 0.60.

Discussion

The number of articles referenced by publications in TAVB remained fairly stable over the reviewed period (Fig. 1). The greatest proportion of references was to books or book chapters, followed by TAVB and JABA. Other behavioral journals were infrequently referenced (Fig. 2), as were journals publishing on developmental disabilities (Fig. 3). Citations to books and book chapters included a range of primary, secondary, and theoretical sources. Common citations included Skinner's texts (e.g., 1957, 1969),

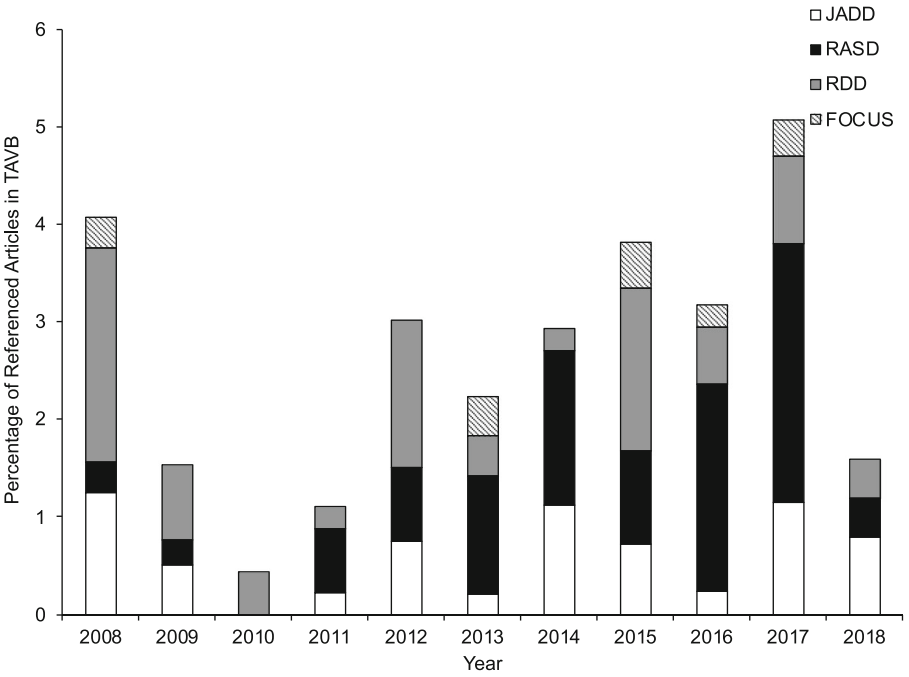

Fig. 4. Percentage of referenced articles across developmental disability journals from 2008 to 2018. JADD = *Journal of Autism and Developmental Disorders*; RASD = *Research in Autism Spectrum Disorders*; RDD = *Research in Developmental Disabilities*; FOCUS = *Focus on Autism and Other Developmental Disabilities*

textbooks (e.g., Catania, 2007), handbooks (e.g., Lattal & Perone, 1998), teaching manuals (e.g., Sundberg & Partington, 1998), and various edited texts (e.g., Zentall & Smeets, 1996). Moreover, references by articles published in TAVB to other TAVB articles were frequent, accounting for an average of nearly 17% of all references by articles published in the journal in the reviewed period. The preponderance of self-citations and citations to textbooks or chapters may be a major hindrance to the reach of VB research, potentially serving as an echo chamber of research in this domain.

The number of self-citations warrants further consideration, as it may be one factor that may lead to a distorted impact factor of a journal (Campanario, 2011; McVeigh, 2002). Self-citation rates are calculated in a given year by dividing the number of self-citations by the total number of citations and multiplying by 100. Rates of self-citation of 20% or less have been identified as an acceptable standard, although this rate is affected by numerous variables such as the age of the journal, the novelty or specificity of the topic area, and editorial practices (McVeigh, 2002). An inflated impact factor as a result of a high self-citation rate may lead to a journal being suppressed from reports on journal statistics such as those put forth by Clarivate Analytics (Clarivate Analytics, n.d.). To note, of the 12 journals meeting the criterion for suppression in 2019, none were behavior-analytic journals. In addition, the percentage of self-citations for these journals ranged from 48% to 94%, which was considerably higher than the rates of self-citations that were found for TAVB in the current review. Relative to other behavioral journals, rates of self-citation in TAVB (M = 19.6%; range 5.3%–35.1%) were similar to JABA (M = 24.2%; range 14.7%–39.62%) and *Behavioral Interventions* (M =

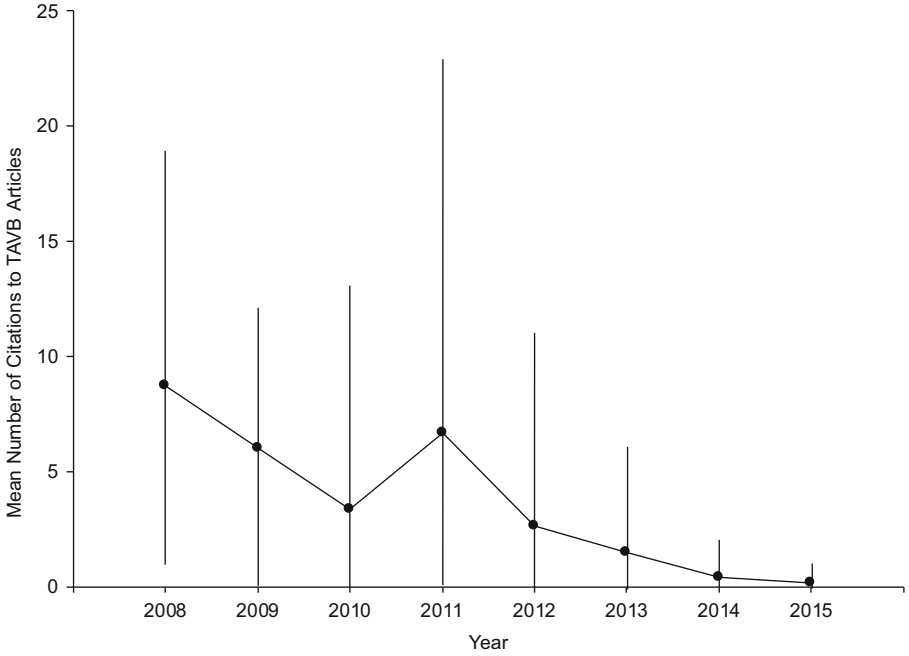

Fig. 5. Mean number of citations to TAVB articles published in a given year. The vertical lines show the range for articles published in that year

19.2%; range 0.0%–36.4%), significantly lower than rates of self-citations in JEAB (*M* = 38.0%; range 15.9%–63.3%), and much higher than rates of self-citation in *Behavior Modification* (*M* = 4.6%; range 0.0%–8.3%). As a whole, these data seem to suggest that journal self-citation in TAVB may not exceed acceptable standards, and are consistent with those of other behavioral journals.

When reviewing the journals and books or book chapters citing TAVB, similar proportions of citations to TAVB were found in accordance with those outlets referenced by TAVB. Specifically, TAVB was cited most frequently by other articles in TAVB, followed by books or chapters, and JABA. TAVB was cited five times in 2012 by articles published in *Research in Autism Spectrum Disorders*, the greatest number in a year by any journal on developmental disabilities in the reviewed period. TAVB was cited four times in *Behavioral Interventions* and never cited in *Behavior Modification*. The latter findings may be particularly concerning, as the practical utility of research on VB may be consistent with the goals of these practitioner-oriented outlets. Nevertheless, previous research on publication trends in TAVB (Marcon-Dawson, Vicars, & Miguel, 2009) suggests that the greatest proportion of publications in TAVB is research done in laboratory settings, which may hinder adoption by clinicians and citation in these outlets.

Despite the benefits of Skinner's analysis of VB in the treatment of language deficits for individuals with disabilities (see Sundberg & Michael, 2001) and the keywords "autism" and "autism spectrum disorder" being used 44 times in the reviewed period, a paucity of references to journals on developmental disabilities was found. The limited reach of TAVB based on these data is further corroborated by the number of citations to

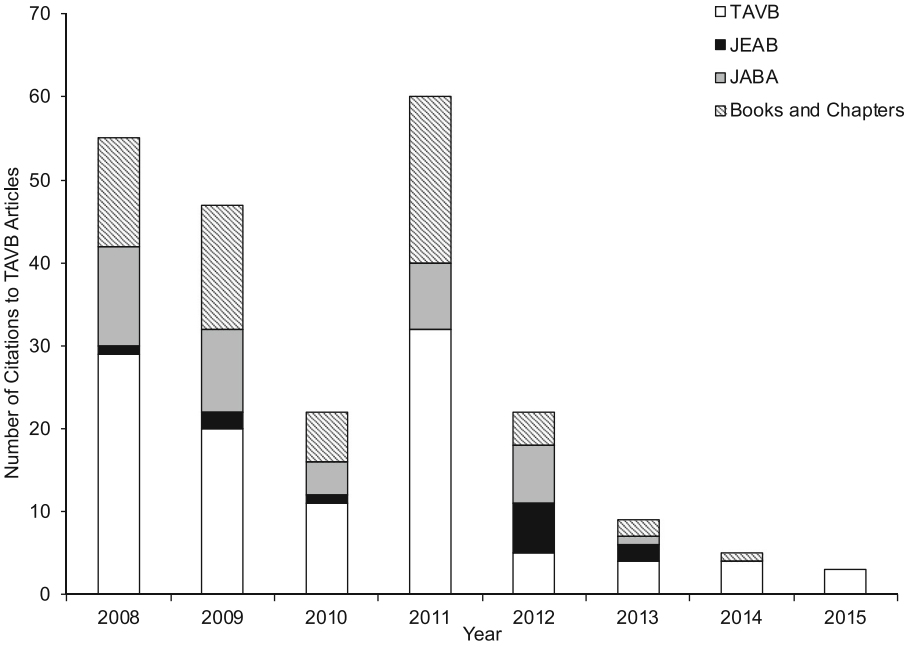

Fig. 6. Number of TAVB articles cited in TAVB, JEAB, JABA, and books and chapters from 2008 to 2015 by year of publication. TAVB = *The Analysis of Verbal Behavior*; JEAB = *Journal of the Experimental Analysis of Behavior*; JABA = *Journal of Applied Behavior Analysis*

TAVB by these same outlets. Perhaps the use of technical vocabulary in keywords used in TAVB also hinders impact. As an example, the term "speech" was used in only six keywords in the reviewed period, with "speech-language pathology" included as a keyword in a single article. In contrast, "intraverbal" serves as a keyword in some form 34 times, whereas "question" appears only twice as "question asking" and "question answering." Considerations for the use of behavioral or alternative terminology have been presented elsewhere (Becirevic, Critchfield, & Reed, 2016; Critchfield et al., 2017; Lindsley, 1991); however, it may be necessary for the authors and editors of TAVB to consider keyword usage to increase the impact of the journal.

The estimated 2-year impact factor of TAVB approached 1.00 in 2010 and 2011 before decreasing to 0.44 in 2012. An increase to 0.89 was observed in 2013 with a decreasing trend in estimated impact 2014 to 2016. The observed decrease may be the result of the methods that were used in the current review to identify articles citing TAVB. Additionally, Petursdottir et al. (2009) suggest that citations to TAVB may be affected by low readership numbers of the journal, leading to citations commonly occurring after literature reviews, which may fall outside of the 2-year impact factor calculations. Transition to the Springer publishing system may have increased the availability of TAVB articles through greater access to the journal online. Nevertheless, a concomitant increase in the estimated impact factor was not observed despite greater online access. As such, alternative methods to increase the impact of TAVB should be considered.

Petursdottir et al. (2009) offered numerous methods to increase the impact of TAVB, such as increasing the rigor of the editorial process, which would hopefully increase the

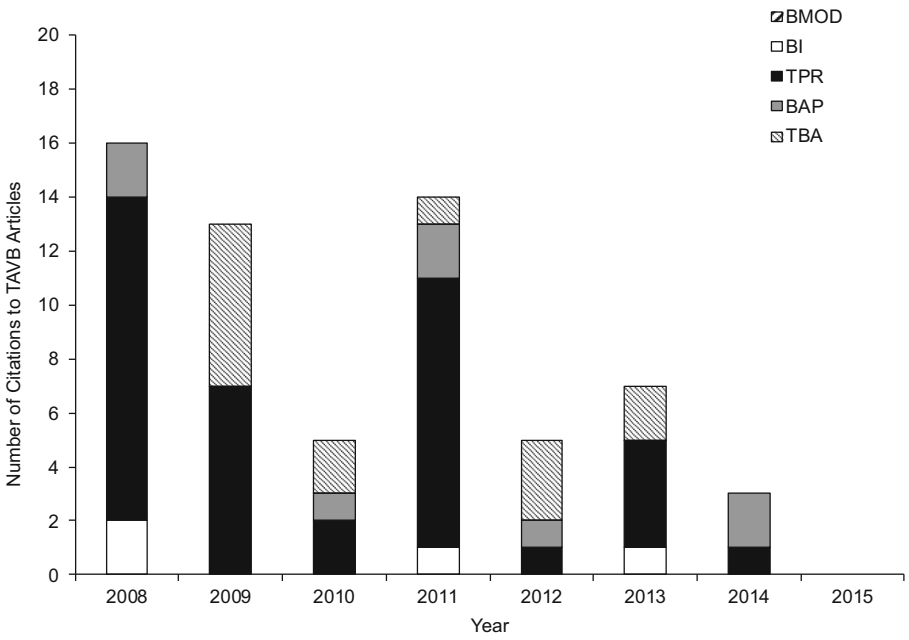

Fig. 7. Number of TAVB articles cited in other behavior-analytic journals from 2008 to 2015 by year of publication. BMOD = *Behavior Modification*; BAP = *Behavior Analysis in Practice*; TBA = *The Behavior Analyst/Perspectives on Behavioral Science*

prominence of work published therein. Methods to increase the impact of articles published in TAVB should certainly be considered, yet this type of selection may only be available when the total number of submissions is sufficiently large. Petursdottir et al. (2009) suggested that calls for manuscript submissions following conference presentation may allow for the selection of potentially high-impact submissions to TAVB. An additional method for increasing impact may include introducing mentorship programs for students or early career faculty with frequently cited or published authors in TAVB. These collaborative projects may assist young scholars in developing lines of research under increasing demands, while furthering the overall productivity of more senior or particularly productive members (see Dal Ben & Goyos, 2017). Relatedly, contingencies for submitting and publishing articles may be related to the number or quality of manuscripts being submitted to TAVB. Recently, Dixon (2018) outlined an expedited review process for Brief Reports submitted to TAVB. This will likely increase the number of submissions to this particular category. This increased opportunity may have considerable practical utility for the readers of TAVB (Dixon, 2018) and increase the number of submissions by practice-oriented professionals or graduate students (Fienup, 2018). However, this arrangement would likely not increase the impact of TAVB—but it may increase readership by practitioners. If the goal, however, is to increase the impact of articles published in TAVB, perhaps similar editorial processes may be arranged for those articles that may have a greater impact, such as original research or discussion articles. Including expedited review processes may increase the number of submissions to the journal and may also require greater

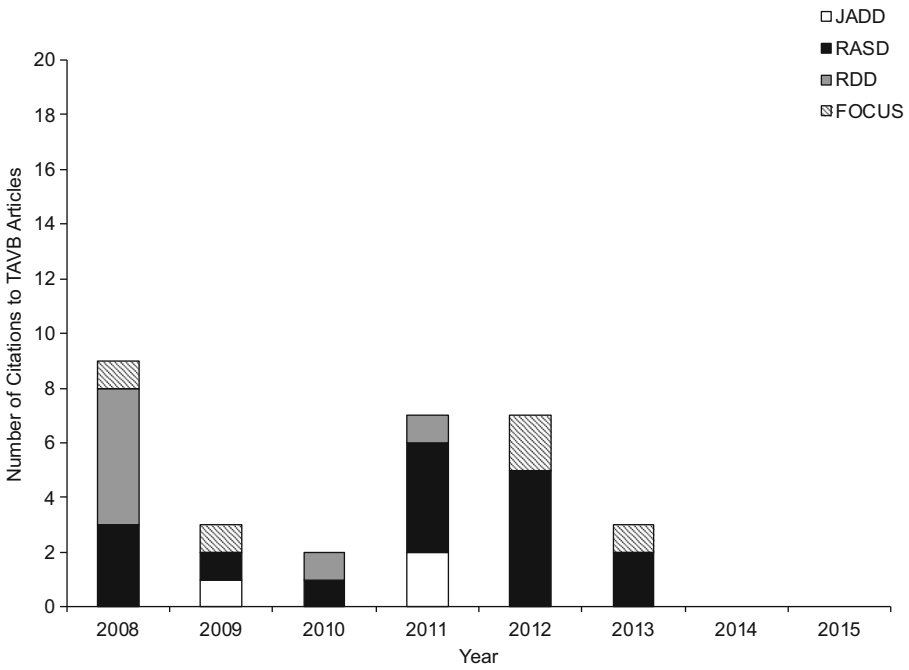

Fig. 8. Number of TAVB articles cited in developmental disability journals from 2008 to 2015 by year of publication. JADD = *Journal of Autism and Developmental Disorders*; RASD = *Research in Autism Spectrum Disorders*; RDD = *Research in Developmental Disabilities*; FOCUS = *Focus on Autism and Other Developmental Disabilities*

time on the part of the editors and reviewers. As a result, when expedited review is arranged, journals may require stricter word limits to ensure that the editorial timeline is feasible (e.g., Hoppeler & Mandel, 2013).

Recently it was suggested that citations to TAVB by those outside of behavior analysis, rather than within the field, may be a better indicator of TAVB's influence and success (Dixon, 2018). The current findings of low rates of citations of TAVB by more practitioner-oriented journals may be unexpected. As mentioned, behavior-analytic journals that frequently publish applied research (e.g., *Behavioral Interventions* or *Behavior Modification*) rarely, or never, cited TAVB. This is particularly interesting,

Table 1 Estimated Impact Factor for TAVB 2010–2015

Year	Number of Citations to Articles From Past 2 Years	Number of Articles Published	Estimated Impact Factor
2010	22	24	0.92
2011	21	23	0.91
2012	11	25	0.44
2013	25	28	0.89
2014	17	31	0.55
2015	17	38	0.45

as *Behavior Modification* and *Behavioral Interventions* cited articles in JABA a total of 313 and 297 times from 2009 to 2018, respectively. This placed *Behavior Modification* and *Behavioral Interventions* as the second- and third-most frequent citing journals of JABA behind only JABA itself (Clarivate Analytics, 2020). Recent calls for greater publications on practical topics (Dixon, 2018; Fienup, 2018; Ming, 2018; Rosales, 2018) may increase the number of citations by other practitioner-oriented journals to TAVB. Moreover, prominent TAVB authors may attempt to publish in more diverse journals, including behavior-analytic outlets focused on applied technologies to increase the reach of VB research. Perhaps arranging for special issues that include tutorials, discussion, and empirical articles on practical topics would increase the reach of TAVB to these outlets. Moreover, these special issues may provide an opportunity to find areas of agreement and potentially translate jargon that may predominate in these outlets (Fienup, 2018). The current review covered two special issues: Petursdottir (2013) and LeBlanc (2016); however, only reference data were available for the 2013 special issue. Our findings suggest that these articles were not more frequently cited than other editions of TAVB, yet determining the value of special issues based on a single exemplar is presumptive. Additionally, the topic of the special issue should be considered. As one example, the LeBlanc (2016) special issue was on the intraverbal, a topic that coincides with one of the most frequently cited articles in the reviewed period by Axe (2008). Arranging future special issues on those topics that are more frequently cited or have clear practical implications may bolster the impact of a given special issue.

An additional hindrance to the impact of VB research might include the references made by articles in TAVB. The preponderance of references to books or book chapters in TAVB may significantly reduce the likelihood that other outlets are citing these works. Increasing the breadth of citations to other peer-reviewed journals may increase the overall reach of TAVB and help illustrate the utility of VB research to professionals consuming or publishing in those outlets. In doing so, researchers might also heed the call of the editors and "evolve" lines of research that have grown in popularity in other journals or fields. Another option may be to further diversify the discussion of current vogue topics in TAVB and extend the reach of these works to other interested parties. Addressing the needs of clinical populations may be one fruitful domain for VB research, and methods for effectively doing so may align with any number of suggestions made by the editors.

Some limitations of the current citation analysis should be mentioned. First, the current analysis is only one method of assessing the relative impact or influence of TAVB in the broader literature. Alternative methods and publications (described previously) in combination with the current findings may be more illustrative of the impact of TAVB. Second, the method for estimating the impact factor may be affected by the accuracy of the indexing by PsycINFO. Future research may utilize other engines, such as Web of Science (Petursdottir & Devine, 2017), or alternative methods for identifying citations to TAVB when estimating impact. Finally, we did not include any evaluation of specific authors in TAVB. Future research might identify the publication practices of authors in TAVB. As an example, it is unclear whether authors choose to submit a particular type of article to the journal or if submissions to TAVB occur after consideration for publication in other outlets. Considering the submission behavior of these authors may allow for the effective arrangement of editorial or review

practices that may increase the probability of particular submissions to TAVB. Despite these limitations, we sought to heed the call of TAVB's editors by examining citations to, and by, recent publications in TAVB. In doing so, we may better understand who is talking about TAVB, but also whom TAVB talks about. We believe that both of these directions are critical to evolve and elevate (Dixon, 2018), integrate (Fienup, 2018), and foster collaboration (Ming, 2018; Rosales, 2018) in TAVB. There remain many avenues by which TAVB may increase its impact or readership, which are worthy of consideration. Yet it will depend on the editors, editorial board, and VB community to determine how best to move forward to ensure the continued success of the journal.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Ethical Approval This research did not include human participants.

Informed Consent As this research did not include human participants, informed consent was not sought.

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