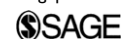


Thirty years of *International Journal of Behavioral Development*: Scope, internationality, and impact since its inception

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Abstract

The article presents 30-year bibliometrical results on trends in the scope, internationality, and impact of the *International Journal of Behavioral Development* (*IJBD*) from its inception in 1978 to 2007. Bibliometric data were collected using the databases PsycINFO and Social Science Citation Index (SSCI), and the *IJBD* itself. In comparison to other journals on developmental psychology, the special features of *IJBD* include its frequent publications of research on mother–child relations, childhood development, cross-cultural studies, and longitudinal studies, an increasing multinationality of authorships (from 52 countries) and citations as well as increasing international citation rates (impact) since 1990. Uncitedness of articles published in *IJBD* is comparably low. The h-index for all articles published in *IJBD* between 1978 and 2007 ranges between 8 and 27.

Keywords

bibliometrics, developmental psychology, history of psychology, international research cooperation, scientometrics

Bibliometric analyses provide important information about certain aspects of psychological journals as well as their impact on the scientific community in general. The data from such analyses can be used by researchers, for instance, when determining where to send their work for consideration of publication. In 1990, Schoepflin and Müller-Brettel published the findings of a bibliometric analysis of the development of the *International Journal of Behavioral Development* (*IJBD*) and its position in the scientific community during its first 12 years of existence. Leaning on and extending this early work, we will present a 30-year bibliometric trend analysis with particular focus on the *IJBD*'s scope, internationality of authorship and impact, from its inception in 1978 up to and including 2007. Of special interest is the question of whether there have been any changes in the content, internationality, and/or impact of *IJBD* over time – a question that was ‘difficult to answer’ for Schoepflin and Müller-Brettel (1990: 395) ‘for a journal that has been issued for only 12 years’.

Methods

Bibliometric data were collected in exactly the same way as Schoepflin and Müller-Brettel (1990) did almost two decades ago using the PsycINFO and Social Science Citation Index (SSCI) databases. The documentation fields that are referred to in this analysis are the descriptors, classification codes, and age groups for PsycINFO (Tuleya, 2007), and country and number of citations for SSCI. Information on author affiliations was obtained online from the original articles published in *IJBD*. For the time period 1978 to 2007, PsycINFO provides information for 1,185 articles published in *IJBD* whereas SSCI lists 1,174, a slight difference of 11 articles which is due to different document type classifications.

Scope and content

The largest proportion of *IJBD* articles (73%) are classified in PsycINFO in the category ‘developmental psychology’, a result broadly consistent with Schoepflin and Müller-Brettel’s (1990) reported 74% for 1978–1989. The remaining 27% refer to ‘social processes and social issues’ (8.4%; research on phenomena in society and culture, including research on childrearing and child care as well as marriage and family), ‘educational psychology’ (4.6%), ‘clinical psychology’ (4.3%), ‘social psychology’ (1.5%; basic research in social psychology), ‘personality traits and processes’ (1.2%), as well as ‘research methods and designs’ (0.9%). Further classifications are below five articles per category, so articles cross-referencing to other psychological domains were rarely published in *IJBD*. Thus, the main domain of *IJBD* is developmental psychology while reaching out to some applied developmental issues in the domains of educational, family, and clinical psychology.

Examined next are the descriptors most frequently assigned to *IJBD* articles in PsycINFO and how they change over time. The trend analyses point toward robust decreases of articles assigned the descriptor ‘cognitive development and processes’ (from 35% in the late 1970s to 9% in the early 2000s) and – somewhat weaker – on those assigned ‘age differences’ (indicating cross-sectional designs) which showed increases up to the 1990s and decreases

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in the early 2000s. In contrast, there have been continuous increases of the relative number of *IJBD* articles assigned 'childhood development' (from 0% to 23%) and 'cross-cultural differences' (from 0% to 13%), the latter providing us with a first hint at the internationality of *IJBD*.

Which research areas are key features of the *IJBD* in comparison to the PsycINFO average? Compared are the percentages of the descriptors most frequently and consistently assigned to *IJBD* articles with the percentages of the same terms within the total developmental psychology literature in PsycINFO (timeframe 2003–2007). Key areas of the *IJBD* are identified as 'cross-cultural comparisons' (11% more frequent in *IJBD* articles than in the total developmental psychology literature in PsycINFO), 'mother-child relations' (+9%), and 'childhood development' (+7%).

Examination of the relative frequency of different *age groups* under study in *IJBD* articles between 1978 and 2007 shows the following trends: most publications refer to preschool and school-age children – this trend has been slightly decreasing since the 1990s – yet is a special feature of *IJBD* in comparison to the total developmental psychology publications in PsycINFO (see Schoepflin & Müller-Brettel, 1990). *IJBD* articles on adolescence increased markedly from 15% in the late 1970s up to 35% in the early 21st century. The same is true for publications on adulthood (from 10% up to 40%), however, with a slight decline in the first five years of the 21st century (30%). At the same time, articles on infancy decrease from 26% in the 1970s to around 10% after the turn of the century. Research on the elderly is seldom published in *IJBD*, but there is an upward trend from the 1970s (5%) to the late 1990s (10%). In addition, it should be noted that research results of *longitudinal studies* are now published more often in *IJBD*: The trend is rather robust, starting with 8% in the 1970s and going up to 20% in 2003–2007. This is a response to compensate for the continuous decrease of published articles referring to age differences (i.e., cross-sectional studies) in the last decade.

Internationality and impact

In total, 3086 authors have contributed to *IJBD* between 1978 and 2007. The number of articles co-written by authors from more than one country (1978–1982: $M = 2.4$; 2003–2007: $M = 17.6$) increased by approximately one article every two years (corrected for the number of authors per article, which increased as well; 1978–1982: $M = 1.9$; 2003–2007: $M = 3.2$). There are 221 multinational articles (i.e., 19% of all *IJBD* articles) in total, written by 920 authors from 52 countries (i.e., 30% of the *IJBD* authorships). Approximately 80% of these authors are from the 10 most internationally active countries. Collaborations with authors from the USA dominate, followed with some distance by authors from Canada, Germany, China, Israel, the Netherlands, the UK, Japan, Sweden, and Italy. *IJBD* authors from all of these countries most frequently collaborate with authors from the USA as it is the leading country in *IJBD* contributions in national as well as international co-authorships.

For a journal with emphasis on its international orientation, it is important how articles are internationally received. Impact is measured by citation rates (mean citations per publications) for the 10 most productive countries for all the publication years of *IJBD*. Citation counts in these national citation patterns are cumulative, thus giving older *IJBD* publications greater chances of higher

citation rates. Uncitedness is low, ranging between 7% to 16%. An additional measure to reflect the citation distribution for a set of publications is the h-index (Hirsch, 2005). A value of 10 means, that the distribution contains at least 10 publications, which have been cited 10 times or more. The h-index of the articles from the most productive countries ranges from 8 (Italy) to 27 (USA).

In terms of total citation rate, Canadian *IJBD* contributions are at the top of the list. With only a small lead, these are followed by articles originating from Germany, the UK, and the USA. *IJBD* articles from Sweden, China, and the Netherlands have medium total citation rates; those from Australia, Israel, and Italy have the lowest citation rates within the group of the 10 most *IJBD*-contributing countries.

Finally it is examined, where the citations come from (for the top 10 productive countries). Besides the high number of citations coming from the USA, the results show a rather strong dominance of within-country mutual citations, which is an indicator for the national vs. international orientation of a given national scientific community, with some marked variations between the countries: On average, US authors' citations of fellow US colleagues make up 64% of their total citations, while only 32% of Israelis cite fellow authors from their domestic scientific community, followed by the Dutch (31%), Germans (29%), Canadians (28%), the Australians and Swedes (27% each), Italians (25%), British (23%), and the Chinese (14%).

Discussion

At first, the results from the present bibliometric analysis confirm Schoepflin and Müller-Brettel's (1990) former results from the 12-year time span from 1978 to 1989: The scope of *IJBD* is distinctly developmental, and has remained so for the entire 30 years since its inception in 1978. However, there are strong hints at significant cross-referencing of *IJBD* contributions to the APA classification codes (Tuleya, 2007) 'social processes and social issues', 'educational psychology', and 'clinical psychology'.

Moreover, in contrast to Schoepflin and Müller-Brettel (1990), some significant shifts in the contents of *IJBD* articles were detected. There is a strong decrease of articles on 'cognitive development and processes', while there are increases of contributions on 'mother-child relations', 'childhood development', and 'cross-cultural differences'. These research areas are also more frequent in *IJBD* than the PsycINFO average for developmental psychology.

While most *IJBD* articles continuously refer to preschool and school-age children, research on adolescents and adults has increased, while articles on infancy are published less frequently. Also observed is a trend of publishing markedly fewer results of cross-sectional designed studies in favor of results of longitudinal analyses.

The successful international orientation of the *IJBD* is empirically bolstered by a steadily increasing amount of contributors from many countries. Special emphasis in this regard is – in addition to the top authorship rates from the USA – on Canada, Germany, the UK, and the Netherlands. Also notable is the increasing number of contributions from the Peoples Republic of China. International cooperation is emphasized by an increasing number of international co-authorships.

The citation analysis of *IJBD* articles from the 10 most important contributing countries shows the dominance of the US authors, whose influence on *IJBD* is clearly visible. It is however, not as

strong as in other developmental and psychological journals (see e.g., Arnett, 2008). *De facto IJBD* contributes a great deal to the visibility and reception of developmental psychology researchers not originating from the USA. Recently Arnett (2008), in a contribution to the *American Psychologist*, analyzed and sharply criticized the strong US bias of the journals of the American Psychological Association (APA), which dominate the 'rest of the world' and bias psychological research results (with reference to samples, value orientations, norms, methodology, and so on) by the American way of life (or research). This conforms to former bibliometrical results on the large underrepresentation of research from non-English-speaking countries in databases like PsycINFO and the Web of Science in favor of those from the Anglo-American countries (with the USA at the top of the list; see Krampen, 2009; Krampen & Schui, 2008). In closing, it should be added that, overall, citation success of *IJBD* articles shows major variations between the countries: Canada is the most successful, followed by Germany, UK, USA, Sweden and – with some slight differences – China, the Netherlands, Australia, Israel, and Italy.

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