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Pediatric Journals' Contribution to Evidence-Based Pediatrics and Child Health: A Special Perspective

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Abstract

This article aimed to provide a special perspective on role of pediatric journals in evidence-based pediatrics and child health through a preliminary search of PubMed for articles that analyzed pediatric journals. There were studies on analyses of pediatric subspecialty-specific journals such as orthopedics, surgery, dentistry, dermatology, and nursing. The various pediatric journals analyzed for their contribution to evidence-based pediatrics and child health were Journal of Pediatric Orthopaedics-A (JPO-A), Journal of Pediatric Orthopaedics-B (JPO-B) and Journal of Children's Orthopaedics (JCO); Journal of Pediatric Surgery, Pediatric Surgery International and European Journal of Pediatric Surgery; six pediatric dentistry journals; four pediatric nursing journals; Journal of Pediatric Psychology, Journal of Clinical Child and Adolescent Psychology, Journal of Abnormal Child Psychology, and Child Development. The topics researched in analyses of pediatric journals were levels of evidence, citation analysis, traumatic dental injuries, instructions to authors and editorial policies, referencing accuracy, and reporting rates of demographic, methodological and ethical information, and methodological standards.

Keywords: Evidence-based pediatrics; Journal evidence; Publication analysis; Scientific trend.

Pediatric journals provide online access to table of contents, abstracts and full article text for free or for subscription. Most of the pediatric journals offer easy search and navigational options, but only a few allow electronic submission of manuscripts.[1] With an ensuing open-access paradigm shift in evidence-based medicine,[2] pediatric journals need to buck up their scientific process and publication policies to improve their role in evidence-based pediatrics.[3]

This article aimed to provide a special perspective on role of pediatric journals in evidence-based pediatrics and child health through a preliminary search of PubMed for articles that analyzed pediatric journals.

Cashin *et al*[4] identified 750 articles from Journal of Pediatric Orthopaedics-A (JPO-A), Journal of Pediatric Orthopaedics-B (JPO-B) and Journal of Children's Orthopaedics (JCO) and graded them according to levels of evidence. There were more prevalence of level-IV evidence articles (58%), followed by level-III (24.1%), level-II (5%) and level-I (3%). The JPO (B) published the greatest number of level-I studies at 4.3%, followed by JPO (A) at 2.6%, and JCO at 1.2%. The study or levels of evidence were not different between articles published before and after 2003 for all the three journals.

Celayir *et al*[5] performed a citation analysis of articles published in three pediatric surgical journals (Journal of Pediatric Surgery, Pediatric Surgery International and European Journal of Pediatric Surgery) and found 20,271 citations in 600 articles (200 for each journal).

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The overall mean number of citations per article was 33.78, and the articles originated from 39 countries and 256 institutions. United States, Germany and Japan were the commonest countries of origin, and the leading topics researched in the articles were gastro-intestinal, respiratory and urological systems. JPS predominated with the greatest number of cited articles.

Feldens *et al*[6] performed a bibliometric analysis of articles on traumatic dental injuries (TDI)published in six pediatric dental journals and found 119 out of total 3720 TDI articles (3.2%), which were mostly from India (19.3%), followed by the USA (15.1%), Brazil (13.4%), and Italy (11.8%). More than half of the articles were case reports and case series, and 63% of articles addressed treatment and 68% described permanent teeth injuries such as avulsion and crown fractures.

Hayden[7] reviewed 2,010 articles published in pediatric and dermatologic journals, and found that 4% of articles in pediatric journals had primary dermatologic focus and 6% had a secondary focus, and 65% of those articles were case reports, with lesser research reports and review articles. Whilst articles on cutaneous manifestations of systemic disease, hereditary skin disorders, and bacterial skin infections were more frequent, prospective studies on natural course of pediatric skin diseases or the effects of various therapies upon these diseases were scarce.

Meerpohl *et al*[8] investigated the extent of endorsement of Uniform Requirements for Manuscripts of the International Committee of Medical Journal Editors (ICMJE) by the 41 pediatric open-access journals by analyzing 'instructions to authors' and found that 27 mentioned the uniform requirements, 13 required trial registration, 25 stated conflicts of interest policies, 12 endorsed CONSORT, 8 endorsed MOOSE, PRISMA or STARD, and 3 journals endorsed STROBE. The study findings suggested a moderate level of endorsement by the journals, which indicate further improvement.

Meerpohl *et al*[9] identified 69 pediatric journals and studied their online author instructions for endorsement of Uniform Requirements for Manuscripts (URM) of the International Committee of Medical Journal Editors and of 5 major reporting guidelines, disclosure of conflicts of interest, and trial registration. Only 38 mentioned URM in author instructions, 14 endorsed CONSORT, 54 journals required explicit statement of conflicts of interest, and 16 recommended trial registration.

Oermann *et al*[10] examined 190 references and found 79 had errors at a rate of 41.6%, with major errors in 28.9% and minor errors in 13.7%. The common referencing errors occurred in four pediatric nursing journals were in the titles of articles, chapters, and books, followed by errors in author's name.

Sifers *et al*[11] examined the reporting of 18 important demographic, methodological, and ethical information variables, such as participants' gender, socioeconomic status, ethnicity, inclusion/exclusion criteria, and consent and assent procedures in four pediatric and child health journals. High rate of reporting was observed for participant's age, gender, and ethnicity, with lesser reporting of socioeconomic status. Inadequate reporting of study setting and location, the participation/ consent rates, or attrition rates, consent and assent procedures was found.

Raad *et al*[12] examined reporting rates of demographic, methodological, and ethical information in articles from four journals (Journal of Pediatric Psychology, Journal of Clinical Child and Adolescent Psychology, Journal of Abnormal Child Psychology, and Child Development) and compared them between the years 2005 and 1997. The authors found an increasing trend in reporting ethnicity, attrition, child assent procedures, socioeconomic status, reliability, and reward/ incentive offered to participants.

Thakur *et al*[13] analyzed 111 clinical studies out of total published 642 articles in Journal of Pediatric Surgery (JPS) and Pediatric Surgery International (PSI) in 1998 to evaluate the frequency of reporting of 11 basic elements of design and analysis was evaluated in randomized clinical trials (RCT),

nonrandomized clinical trials (NRCT), and retrospective cohorts (RC). 48 RC, 12 NRCT and 3 RCT were found among 63 comparative studies, and 431 articles were case reports or case series. JPS had a better quality of reporting with more than 66% of all RCT reporting on eligibility criteria, admission before allocation, random allocation, method of randomization, patient's blindness to treatment, treatment complications, statistical analyses, statistical methods, loss to follow-up and statistical methods, with poor reporting of blinded assessment of outcome and statistical power.

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Clinicians and researchers in the field of pediatrics and child health need to keep abreast with updated evidence in order to inform decisions for current practice, education, research and administration. With relatively lesser reporting of pediatric articles in other specialty journals,[14,15] there is demand on the pediatric journals to provide updated scientific information in evidence-based pediatrics and child health.

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