

Journal Citation Studies. IX. Highly Cited Pediatric Journals and Articles

July 17, 1974

Number 29

A significant number of *Current Contents*® readers are interested in pediatrics and related disciplines. Recently we analyzed ISI®'s *Journal Citation Reports*¹ and picked all pediatric journals from among the 1000 most cited journals. The thirteen journals selected are listed below.

Figure 1. Pediatric Journals among the 1000 Most-Cited Journals.

	Times Cited 1969	Impact Factor	Journal Title
1.	1256	0.678	Acta Paediat. Scand.
2.	4508	1.257	Amer. J. Dis. Children
3.	2376	1.383	Arch. Dis. Childhood
4.	452	0.162	Arch. Franc. Pediat.
5.	372	0.884	Biol. Neonat.
6.	372	0.236	Dev. Med. & Child Neur.
7.	556	1.128	Helv. Paediat. Acta
8.	392	0.539	J. Pediat. Surg.
9.	4916	1.459	J. Pediatrics
10.	524	0.548	Pediat. Clin. N. Amer.
11.	808	0.680	Pediatric Res.
12.	5528	1.417	Pediatrics
13.	492	0.480	Zschr. Kinderheilk

The list shows, for each journal, the number of times it was cited by all other journals during 1969, and the impact factor for each. Impact factor indicates the number of times the 'average' article in the journal was cited.² Impact, to some extent, removes the bias in total-citation ranking enjoyed by larger journals. For example, although *Arch. Dis. Childhood* was cited less than half as often as *J. Pediatrics*, its impact is almost the same.

In Figure 2, we show the 100 journals most cited by these thirteen pediatric journals. One might expect that these same journals would rank highest in such a list, but only seven out of thirteen appear among the first 25, if one includes self-citation. If one excludes the self-citations, only nine will appear among the 100, while four others drop from the 100 most-cited list altogether. One of the latter is French, one German, and two are sub-specialty journals in pediatric surgery and neonatal physiology.

If one excludes the thirteen pediatric journals from the list altogether, one is left with a list of cited journals that seems to verify Garfield's law of concentration.³ For the list will then include those journals most cited in common by *Journal of the American Medical Association*, *New England Journal of Medicine*, *Journal of Clinical Investigation*, etc.⁴⁻⁵ I suspect that this same pattern will emerge as we study other specialties.

Finally, in Figure 3, we give a list of 45 most-cited articles published in pediatric journals. The articles were cited 75 times or more during the years 1961-1972 by journals covered by the *Science Citation Index*® (SCI®). The first sixteen were published before 1960, the remaining 29 thereafter. Nothing yet from the 70s. By far the greater number of the articles deals

Figure 2
Journals Most Cited by Highly Cited Pediatric Journals

The journals listed below are the 100 most cited during 1969 by the pediatric journals listed above. The pediatric journal title abbreviations on which this cumulation is based appear twice, once in bold type and once in italic. The bold-type entry indicates the total citations of that journal; the italic-type entry indicates the journal's rank and total citations by the other pediatric journals when self-citation counts are subtracted.

Times Cited			
Rank	1969	Journal Title	
			44. 112 Amer. J. Cardiology
1.	2088	Pediatrics	45. 112 Arch. Franc. Pediat.
2.	1768	J. Pediatrics	46. 112 Canad. Med. Assoc. J.
—	1616	<i>Pediatrics</i>	47. 108 Ann. New York Acad. Sci.
3.	1412	Amer. J. Dis. Children	48. 108 Deut. Med. Wschr.
4.	1412	Lancet	49. 108 Dev. Med. Child Neurol.
—	1172	<i>Amer. J. Dis. Children</i>	50. 108 J. Physiol. (London)
5.	1164	New Engl. J. Med.	51. 104 Develop. Biology
—	1080	<i>J. Pediatrics</i>	52. 100 Amer. Heart J.
6.	872	Arch. Dis. Childhood	53. 100 J. Appl. Physiol.
7.	776	J. Amer. Med. Assoc.	54. 100 Med. J. Australia
—	716	<i>Arch. Dis. Childhood</i>	55. 100 Neurology
8.	604	Brit. Med. J.	56. 92 Acta Endocrin.
9.	428	J. Clin. Invest.	57. 92 Amer. J. Physiol.
10.	412	J. Biol. Chem.	58. 92 Blood
11.	396	J. Clin. Endocrin. & Metab.	59. 92 Helv. Pediat. Acta
12.	380	Acta Paediat. Scand.	60. 88 Zschr. Kinderheilk.
13.	364	J. Urology	61. 84 Arch. Neurology
14.	324	Science	62. 84 Clin. Pediat.
15.	304	Surgery	63. 84 J. Exp. Zoology
16.	300	Nature	64. 80 Brit. J. Surgery
—	272	<i>Acta Paediat. Scand.</i>	65. 80 J. Med. Microbiol.
17.	260	Amer. J. Med.	66. 76 Amer. J. Clin. Pathol.
18.	256	Ann. Surgery	67. 76 Cancer
19.	244	Amer. J. Obst. Gyn.	68. 76 J. Neuropath. Exp. Neur.
20.	224	Pediatric Res.	— 76 <i>Pediatric Res.</i>
21.	204	J. Lab. Clin. Med.	69. 72 Brit. Heart J.
22.	200	Proc. Soc. Exp. Biol. Med.	— 72 <i>Dev. Med. Child Neurol.</i>
23.	192	Ann. Internal Med.	70. 72 Federation Proc.
24.	180	Circulation	71. 72 J. Endocrinology
25.	180	J. Pediat. Surg.	72. 64 Amer. J. Human Genet.
26.	176	Arch. Surgery	73. 64 Brain
27.	172	J. Immunology	74. 64 Brit. J. Urology
28.	172	Radiology	75. 64 <i>Pediatric</i>
29.	172	Amer. J. Roentgenol.	76. 60 Biochim. Biophys. Acta
30.	168	J. Thor. Cardiovasc. Surg.	— 60 <i>Helv. Paediat. Acta</i>
31.	164	Surg. Gynecol. Obst.	77. 56 Chest
32.	164	Biochem. J.	78. 56 Lab. Invest.
33.	156	Pediat. Clin. N. Amer.	79. 56 Medicine
—	156	<i>Pediat. Clin. N. Amer.</i>	80. 56 Monatschr. Kinderheilk.
34.	152	Arch. Pathology	81. 56 Proc. Roy. Soc. Med.
35.	148	Amer. J. Pathology	82. 52 Amer. J. Mental Defic.
36.	144	J. Cell Biol.	83. 52 Clin. Sci.
37.	132	Biol. Neonat.	84. 52 Exp. Cell Res.
38.	132	J. Exp. Med.	85. 52 Gastroenterology
39.	124	Amer. J. Surgery	86. 52 J. Clin. Pathology
40.	120	Proc. Nat. Acad. Sci. US	87. 52 J. Neurosurg.
41.	120	Arch. Internal Med.	88. 52 Presse Med.
42.	112	Amer. J. Med. Sci.	89. 48 Amer. J. Pub. Health
43.	112	Amer. Rev. Resp. Dis.	

90.	48	Anat. Record
91.	48	Brit. J. Prev. Soc. Med.
92.	48	Electroencephal. Clin. Neurophys.
93.	48	Endocrinology
94.	48	Klin. Wschr.
95.	48	Metabolism
96.	48	Surg. Clin. N. Amer.

97.	44	Arch. Gen. Psychiat.
98.	44	Biochemistry
99.	44	Birth Defects Origin
100.	44	South. Med. J.
—	40	Arch. Franc. Pediat.
—	36	Biol. Nechr.
—	32	J. Pediat. Surg.
—	12	Zschr. Kinderheilk.

with recognized states of fetal and neonatal distress, and with newly recognized metabolic and genetic defects. The 45 articles appeared in seven journals: *Pediatrics* (19), *Amer. J. Dis. Children* (9), *J. Pediatrics* (8), *Arch. Dis. Childhood* (5), *Biol. Neonat.* (2), *Acta Paediat. Scand.* (1), and *Pediatric Res.* (1). The order just given, based on each journal's share of the 45 most-cited articles, is almost the same as their ranked order by total citation and by impact. *Helv. Paediat. Acta* constitutes an interesting exception.

Among the titles tentatively selected for this study from the 1000 most cited journals were *Child Development* and *Growth*. However, in preparing this report, it became clear that neither is 'pediatric'. The first is psychological and educational; the second is mainly biochemical and physiological. Neither journal was cited significantly by any of the thirteen pediatric journals in this study. Nor did either of them cite the pediatric literature significantly.

On the other hand, the list of journals most cited by the thirteen pediatric journals includes three pediatric

journals not among the 1000 most cited journals of science, *Clinical Pediatrics*, *Pediatric*, and *Monatschrift für Kinderheilkunde*. These three journals, all covered by the *Science Citation Index*, owe from one half to one third of all their citations to three or four of the thirteen pediatric journals listed in Figure 1.

The high rank of *Lancet* in Figure 2, I believe, is attributable in part to its heavy interest in human genetics. In contrast, I find it remarkable that the *Amer. J. Human Genetics* ranks only 72nd, while there is otherwise a noteworthy absence of purely genetic journals overall. The relatively new journal *Clinical Genetics* seems to have appeared in response to a real need. In my opinion, a majority of the highly cited articles listed in Figure 3 would have appeared in that journal, or one like it, had it existed when they were written.

On the basis of this study, and of 1972 data which confirm its results, a few journals now covered by both *Current Contents/Life Sciences* and *CC*[®]/*Clinical Practice* will continue to be covered in the latter only.

1. Garfield E. The new *ISI Journal Citation Reports* should significantly affect the future course of scientific publication. *Current Contents (CC)* No. 33, 15 August 1973, p. 5-6.
 2. ———. Citation analysis as a tool in journal evaluation. *Science* 178:471-79, 1972. (Reprinted in: *CC* No. 6, 7 February 1973.)—This paper describes how data given in Figure 1 were compiled for the *ISI Journal Citation Reports*.

3. ———. The mystery of the transposed journal lists; wherein Bradford's law of scattering is generalized according to Garfield's law of concentration. *CC* No. 31, 4 August 1974, p. 5-6.
 4. ———. *Journal Citation Studies*. VI. *Journal of Clinical Investigation*; how much 'clinical' and how much 'investigation'? *CC* No. 4, 23 January 1974, p. 5-8.
 5. ———. *Journal Citation Studies*. VII. *Journal of the American Medical Association vs New England Journal of Medicine*. *CC* No. 5, 30 January 1974, p. 5-8.

Figure 3

Highly Cited Articles from Highly Cited Pediatric Journals, 1961-1972

Item	1961-1972	Times Cited	Bibliographical Data
1.	85	Andersen D H. Cystic fibrosis of the pancreas and its relation to celiac disease. <i>Amer. J. Dis. Children</i> 56:344-99, 1938.	
2.	78	Fraser F C & Fainstat T D. Production of congenital defects in the offspring of pregnant mice treated with cortisone. <i>Pediatrics</i> 8:527-33, 1951.	
3.	202	Bruton O C. Agammaglobulinemia. <i>Pediatrics</i> 9:722-27, 1952.	
4.	89	Crigler J F & Najjar V A. Congenital familia nonhemolytic jaundice with kernicterus. <i>Pediatrics</i> 10:169-79, 1952.	
5.	76	Lowe C U, Terrey M & MacLachlan E A. Organic-aciduria, decreased renal ammonia production, hydrophthalmos, and mental retardation. <i>Amer. J. Dis. Children</i> 83:164-84, 1952.	
6.	85	McIntosh R, Merritt K K, Richards M R, Samuels M H & Bellows M T. The incidence of congenital malformations; a study of 5,964 pregnancies. <i>Pediatrics</i> 14:505-21, 1954.	
7.	101	Menkes J H, Hurst P L & Craig J M. A new syndrome: progressive familia infantile cerebral dysfunction associated with an unusual urinary substance. <i>Pediatrics</i> 14:462-66, 1954.	
8.	88	Gitlin D & Craig J M. The nature of the hyaline membrane in asphyxia of the newborn. <i>Pediatrics</i> 17:64-71, 1956.	
9.	84	Good R A & Zak S J. Disturbances in gamma globulin synthesis as "experiments of nature." <i>Pediatrics</i> 18:109-49, 1956.	
10.	143	Silverman W A, Andersen D H, Blanc W A & Crozier D N. A difference in mortality rate and incidence of kernicterus among premature infants allotted to two prophylactic antibacterial regimens. <i>Pediatrics</i> 18:614-24, 1956.	
11.	233	Avery M E & Mead J. Surface properties in relation to atelectasis and hyaline membrane disease. <i>Amer. J. Dis. Children</i> 97:517-23, 1959.	
12.	135	Gibson L E & Cooke R E. A test for concentration of electrolytes in sweat in cystic fibrosis of the pancreas utilizing pilocarpine by iontophoresis. <i>Pediatrics</i> 23:545-49, 1959.	
13.	102	Haddad H M & Wilkins C. Congenital anomalies associated with gonadal aplasia. <i>Pediatrics</i> 23:885-902, 1959.	
14.	152	Odell G B. The dissociation of bilirubin from albumin, and its clinical implications. <i>J. Pediat.</i> 55:268-79, 1959.	
15.	134	Zinkham W H. An in-vitro abnormality of glutathione metabolism in erythrocytes from normal newborns; mechanism and clinical significance. <i>Pediatrics</i> 23:18-32, 1959.	
16.	140	Zinkham W H & Lenhard R E. Metabolic abnormalities of erythrocytes from patients with congenital nonspherocytic hemolytic anemia. <i>J. Pediat.</i> 55:319-36, 1959.	
17.	103	Kempe C H. Studies on smallpox and complications of smallpox vaccination. <i>Pediatrics</i> 26:176-89, 1960.	
18.	122	Smith D W, Patau K, Therman E & Inhorn S L. A new autosomal trisomy syndrome; multiple congenital anomalies caused by an extra chromosome. <i>J. Pediat.</i> 57:338-45, 1960.	
19.	133	Bruck K. Temperature regulation in the new born infant. <i>Biol. Neonat.</i> 3:65-119, 1961.	
20.	181	Rudolph A M, Drorbaugh J E, Auld P A M, Rudolph A J, Nadas A S, Smith C A & Hubbell J P. Studies on the circulation in the neonatal period; the circulation in the respiratory distress syndrome. <i>Pediatrics</i> 27:551-66, 1961.	
21.	106	Warkany J, Monroe B B & Sutherland B S. Intrauterine growth retardation. <i>Amer. J. Dis. Children</i> 102:249-79, 1961.	
22.	144	Weijers H A, Van de Kamer J H, Dicke W K & Ijsseling J. Diarrhoea caused by deficiency of sugar splitting enzymes. <i>Acta Paediat. Scand.</i> 50:55-71, 1961.	
23.	75	Carson N A J & Neill D W. Metabolic abnormalities detected in a survey of mentally backward individuals in Northern Ireland. <i>Arch. Dis. Childhood</i> 37:505-13, 1962.	

24. 84 Smith D W, Patau, K, Therman E & Inhorn, S L. The No. 18 trisomy syndrome. *J. Pediat.* 60:513-27, 1962.
25. 84 Carson N A J, Cusworth D C, Dent C E, Field C M B, Neill D W & Westall R G. Homocystinuria; a new inborn error of metabolism associated with mental deficiency. *Arch. Dis. Childhood* 38:425-36, 1963.
26. 91. Cohlan S Q, Beuelander G & Tiamsic T. Growth inhibition of prematures receiving tetracycline. *Amer. J. Dis. Children* 105:453-61, 1963.
27. 157 Gruenwald P. Chronic fetal distress and placental insufficiency. *Biol. Neonat.* 5:215-65, 1963.
28. 222 Lubchenco L O, Hansman C, Dressler M & Boyd E. Intrauterine growth as estimated from liveborn birth-weight data at 24 to 42 weeks of gestation. *Pediatrics* 32:793-800, 1963.
29. 87 Smith D W, Patau K, Therman E, Inhorn S L & Demars R I. The D₁ trisomy syndrome. *J. Pediat.* 62:326-41, 1963.
30. 86 Stoch M B & Smythe P M. Does undernutrition during infancy inhibit brain growth and subsequent intellectual development? *Arch. Dis. Childhood* 38:546-52, 1963.
31. 90 Landing B H, Silverman F N, Craig J M, Jacoby M D, Lahey M E & Chadwick D L. Familial neurovisceral lipidosis. *Amer. J. Dis. Children* 108:503-22, 1964.
32. 96 Smith R T, Eitzman D V, Catlin M E, Wirtz E O & Miller B E. The development of the immune response; characterization of the response of the human infant and adult to immunization with Salmonella vaccines. *Pediatrics* 33:163-183, 1964.
33. 75 Alford C A. Studies on antibody in congenital rubella infections. *Amer. J. Dis. Children* 110:455-63, 1965.
34. 88 Bellanti J A, Artenstein M S, Olson L C, Buescher E L, Luhrs C E & Milstead K L. Congenital rubella; clinicopathologic, virologic and immunologic studies. *Amer. J. Dis. Children* 110:464-72, 1965.
35. 155 Chu J, Clements J A, Cotton E, Klaus M H, Sweet A Y, Thomas M A & Tooley W H. The pulmonary hypoperfusion syndrome. *Pediatrics* 35:733-42, 1965.
36. 79 Dickinson J C, Rosenblum H & Hamilton P B. Ion exchange chromatography of the free amino acids in the plasma of the newborn infant. *Pediatrics* 36:2-13, 1965.
37. 86 O'Brien J S, Stern M B, Landing B H, O'Brien J K & Donnell G N. Generalized gangliosidosis; another inborn error of ganglioside metabolism? *Amer. J. Dis. Children* 109:338-46, 1965.
38. 93 West C D, McAdams A J, McConville J M, Davis N C & Holland N H. Hypocomplementemic and normocomplementemic persistent (chronic) glomerulonephritis; clinical and pathologic characteristics. *J. Pediat.* 67:1089-1122, 1965.
39. 95 Cravioto J, DeLicardie E R & Birch H G. Nutrition, growth and neuro-integrative development; an experimental and ecologic study. *Pediatrics* 38:319-72, 1966.
40. 223 Stiehm E R & Fudenberg H H. Serum levels of immune globulins in health and disease. *Pediatrics* 37:715-27, 1966.
41. 106 Tanner J M, Whitehouse R H & Takaishi M. Standards from birth to maturity for height, weight, height velocity and weight velocity; British children, 1965. I. *Arch. Dis. Childhood* 41:454-71, 1966.
42. 88 Tanner J M, Whitehouse R H & Takaishi M. Standards from birth to maturity for height weight, height velocity and weight velocity: British children, 1965. II. *Arch. Dis. Childhood* 41:613-35, 1966.
43. 82 Allansmith M, McClellan B H, Butterworth M & Maloney J R. The development of immunoglobulin levels in man. *J. Pediat.* 72:276-90, 1968.
44. 78 Kaplan S L, Abrams C A L, Bell J J, Conte F A & Grumbach M M. Growth and growth hormone. *Pediat. Res.* 2:43-63, 1968.
45. 76 Nadler H L. Prenatal detection of genetic defects. *J. Pediat.* 74:132-43, 1969.