

# Publication Trends in The SA Journal of Physiotherapy for the Decade 1985 – 1994

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## Introduction

The South African Journal of Physiotherapy is a forum for South African physiotherapists to share their research findings, advances in clinical practice and education, new techniques and

approaches with their colleagues. The Journal therefore should reflect the standard of physiotherapy education, research and practice, in this country. Concern has been expressed by members of the profession about contributions made to the Journal by physiotherapists<sup>1</sup> and that the contents of the Journal does not really reflect the standards of physiotherapy in South Africa. However, since the Journal is the only form of communication between the profession and the outside world, it is imperative that a critical review of publication trends within the Journal forms one starting point of assessing the growth of the profession.

Since the growth of any profession depends on the ability of the profession to validate clinical practice and educational methods through objective scientific research, the contents of the Journal should provide valuable clues about the direction in which the profession is moving. Previous research by Mitchell<sup>2,3</sup> suggests that the majority (69% - 75%) of the papers published between 1984-1988, and 1980-1989 were descriptive in nature. Mitchell<sup>2</sup> classified an article as descriptive if it was principally a description of a technique, case study or basic principles. Since a case study is a form of qualitative research method, Mitchell's<sup>2,3</sup> findings do not really provide any information about the types of articles i.e. qualitative<sup>4,5</sup> (survey, case study etc.) vs. quantitative<sup>4,5</sup> (experimental, clinical) vs. non-research articles appearing in the South African Journal of Physiotherapy.

Mitchell's studies also categorised the authors of the articles in the South African Journal of Physiotherapy. It is clear in her studies that the majority of the articles in the South African Journal of Physiotherapy for the decade 1980-1989 were authored by physiotherapy academicians. However, it is not known whether this trend continued beyond 1989.

The primary purpose of the present study was to critically categorise the articles appearing in the South African Journal of Physiotherapy in terms of qualitative, quantitative and non-research articles in order to determine trends in publication of the decade 1985-1994. Secondly to determine who the first authors of the publications were in order to determine whether publication in the Journal is supported and sustained by members of the profession.

## Materials and Methods

### Sample

The sample consisted of all articles (n = 140) appearing in the South African Journal of Physiotherapy for the decade 1985-1994. All reports of special interest groups or meetings were excluded from the analysis.

### Methods

Articles were classified initially as research or non-research. Research articles were those articles that used some kind of research methodology, qualitative or quantitative<sup>4,5</sup>. Non-research articles were those articles that gave a description of a technique, approach, or gave more information about a subject, including review papers. Research articles were further classified as qualitative (survey or case study) or quantitative (experimental or

## ABSTRACT

The primary purpose of this study was to determine trends in the types and first authorship of articles that appeared in the South African Journal of Physiotherapy for the decade, 1985-1994. All 140 articles in the 40 issues of the South African Journal of Physiotherapy for the decade were classified as either research or non-research articles. Research articles using qualitative methodologies were distinguished from those with quantitative ones. First authors of the articles were classified as either physiotherapy academics, physiotherapy students, clinicians or non-physiotherapists. The results show no significant difference in the number of research vs. non-research articles published for the decade. More non-research articles were published in the first five year period while research articles predominated in the second five year period. Quantitative studies using the experimental method appeared significantly more often in the first five years compared to the second five year period. The majority of the papers were first authored by physiotherapists especially academics. Methodologies and first authorship of papers published in the South African Journal of Physiotherapy revealed an interesting trend, thereby providing clues to growth points and deficits within the profession.

## ABSTRAK

Die vernaamste doel van hierdie studie was om die neiging in die tipe en eerste outeurskap van die artikels wat in die Suid Afrikaanse Tydskrif van Fisioterapie vir die dekade 1985-1994, verskyn het, te bepaal. Al 140 artikels in die 40 uitgawes van die tydskrif vir die dekade was as navorsing of nie-navorsing artikels geklassifiseer. Navorsing artikels wat kwaliteit-metodiek gebruik het was onderskei van dié wat hoeveelheid-metodiek gebruik het. Eerste skrywers van die artikels was as fisioterapie akademikus, fisioterapie student, kliniese fisioterapeut of nie-fisioterapeut geklassifiseer. Die uitslag bewys geen belangrike verskil in die nommer van navorsing teen nie-navorsing artikels gepubliseer vir die dekade nie. Meer nie-navorsing artikels was in die eerste vyf-jaar periode gepubliseer terwyl navorsing artikels in die meerderheid was in die tweede vyf-jaar periode. Hoeveelheid-studies wat die eksperimentele-metodiek gebruik het, het meer in die eerste vyf jaar verskyn as vergelyk word met die tweede vyf-jaar periode. Die meeste van die artikels was eerste deur 'n fisioterapie akademikus geskryf. Metodiek en eerste outeurskap het 'n interessante neiging getoon, en daardeur leidrade vir verbouingspunte en tekorte in die beroep verskaf.

clinical studies)<sup>4,5</sup>. First authors of papers were categorised as academicians, clinicians, physiotherapy students and others (those who were not physiotherapists). Only first authors were included in the analysis because presumably this author motivated the publication in the first instance.

### Data Analysis

The data about type of article and first author were tabulated for each year and means calculated for each five year period, (1985-1989) and (1990-1994) and for the decade 1985-1994. Means were used to determine whether any differences in publication trends or first authorship existed between the earlier and later five year periods compared to the ten year period. Independent two tailed T-tests were used to determine significant differences between the numbers of research and non-research articles, qualitative vs. quantitative research and first author physiotherapy academicians vs. first author non-physiotherapists. Probability was set at 0.05.

### Results

Year	Research		Non-research		Total	
	n	%	n	%	n	%
1985	10	53	9	47	19	
1986	7	47	8	53	15	
1987	4	25	12	75	16	
1988	5	29	12	70	17	
1989	5	42	7	58	12	
1990	9	64	5	36	14	
1991	7	70	3	30	10	
1992	8	80	2	20	10	
1993	10	83	2	17	12	
1994	10	67	5	33	15	
Total	75	53	65	47	140	100
1985 - 1989	31	39*	48	61	79	100
1990 - 1994	44	72**	17	28	61	100

\* Number of research articles significantly less than non-research articles  
 \*\* Number of research articles significantly greater than non-research articles  
 p < 0.05

As shown in Table I a total of 140 articles were published in the 40 issues of the South African Journal of Physiotherapy for the decade 1985-1994. Numbers of research vs. non-research articles fluctuated per year. Over the 10 year period, 1985-1994, the numbers of research articles published was not significantly different from that of non-research articles. However, for the first five year period (1985-1989), a significantly greater number of non-research articles appeared in the Journal. This trend was reversed in the second five year period when significantly more research articles were published compared to that of non-research papers.

A breakdown of research articles into qualitative and quantitative methodologies as demonstrated in Table II shows that for the decade under study, the number of papers with quantitative methodologies was not significantly different from those papers which utilised qualitative methodologies. However, in the first five year period (1985-1989) significantly more quantitative papers were published compared to qualitative papers. The majority of quantitative papers were experimental in nature. In the second five year period (1990-1994) equal numbers of qualitative and

quantitative papers were published in the Journal. The majority of the qualitative papers utilised the survey method to collect data while the experimental methodology dominated the quantitative papers.

Year	Qualitative				Quantitative				Total n
	Survey		Case study		Clinical		Experimental &		
	n	%	n	%	n	%	n	%	
1985	4	40	1	10	0	0	5	50	10
1986	2	29	0	0	1	14	4	57	7
1987	1	25	0	0	2	50	1	25	4
1988	1	20	1	20	0	0	3	60	5
1989	2	40	0	0	0	0	3	60	5
1990	4	44	0	0	2	27	3	33	9
1991	4	57	1	14	0	0	2	29	7
1992	1	12.5	0	0	0	0	7	87.5	8
1993	6	60	1	10	0	0	3	30	10
1994	5	50	0	0	0	0	5	50	10
Total	30	40	4	5	5	7	36	48	75
1985-1989	10	32	2	6	3	10	16	52	31
1990-1994	20	45.5	2	4.5	2	4.5	20	45	44
1985-1989	12 (39%)*				19 (61%)				31
1990-1994	22 (50)				22 (50%)				44
1985-1994	34 (45%)				41 (55%)				75

\* Number of qualitative articles significantly less than quantitative research articles  
 p < 0.05

Year	Academic		Student		Clinician		Other		Total n
	n	%	n	%	n	%	n	%	
1985	9	47	1	5	3	16	6	32	19
1986	5	33	0	0	4	27	6	40	15
1987	2	13	1	6	5	31	8	50	16
1988	3	18	2	12	5	29	7	41	17
1989	9	76	1	8	1	8	1	8	12
1990	5	36	2	14	4	29	3	21	14
1991	7	70	1	10	1	10	1	10	10
1992	4	40	1	10	2	20	3	30	10
1993	6	50	2	17	0	0	4	33	12
1994	8	53	1	7	1	7	5	33	15
Total	58	41	12	8.5	26	18.5	44	32	140
1985-1989	28	35.5	5	6.5	18	23.5	28	35.5	79
1990-1994	30	49*	7	12	8	13	16	26	61
1985-1994	96 (68%)**				44 32				140
1985-1989	51 (64.5%)**				28 35.5				79
1990-1994	45 (7%)**				16 26				61

\* Articles by academics significantly greater than by non-physiotherapists  
 \*\* Significant difference between articles by physiotherapists vs. non-physiotherapists  
 p < 0.05

Table III shows that the majority of the papers published per year for the decade 1985-1994 were authored either by physiotherapy academicians or non-physiotherapists. However, for the entire decade and the second five year period, a significantly greater number of papers were authored by physiotherapy academicians compared to any other category of author. The first five year period saw an equal number of papers authored by physio-

therapy academicians and non-physiotherapists. A collapse of author categories into physiotherapists compared with non-physiotherapy authors showed significantly more papers authored by members of the host profession.

## Discussion

The number of articles published over each five year period and the decade compares favourably with that of other physiotherapy periodicals in the rest of the world<sup>6</sup>.

Publications in the South African Journal of Physiotherapy showed a tendency to include more research articles compared to non-research articles in the second five year period under study. This trend is a clear indication of an evolving and growing profession. Robertson<sup>6</sup> found a similar trend in the American Journal of Physical Therapy, but the evolution in Physical Therapy occurred many decades earlier. Although quantitative methodologies predominated in the first five year period, qualitative papers appeared more frequently in the second five year period. The majority of the papers were authored by physiotherapists with physiotherapy academicians carrying the larger load.

The results of this study cannot be directly compared to those published by Mitchell<sup>2,3</sup> because her categorisation of articles was different from the present study. These findings add to Mitchell's results which reveals some very important aspects of the publications which appear in the South African Journal of Physiotherapy. The categorisation of articles in the present study was focused on determining the status of research in this country which is reflected to some extent in the publications which appear in the

Journal of Physiotherapy. Trends in the methodologies used will help to focus both the profession and educational institutions towards goals set in terms of growth of the profession. Does the profession want to see more qualitative research which has its merits and place in physiotherapy research and in the national health plan or does it want to see more quantitative research which will help the profession validate clinical practice and build a solid foundation for the profession. A balance between the two types of research together with some informational papers which are more of the review type rather than personal opinions about subject matter is likely to strengthen the professional base of knowledge<sup>6</sup>.

Beenhakker indicated a need for more experimental and clinical trials in physiotherapy in South Africa<sup>1</sup>. Our findings of a significantly greater number of research articles (qualitative and quantitative) over that of non-research articles shows that this change is taking place. The fluctuation between qualitative and quantitative papers between the first and second five year periods and the ten year period may indicate that the profession is still trying to address its shortfalls probably in post-graduation education.

As far as first authorship of articles are concerned our results show a trend which is not similar to that of Mitchell. The earlier five year period (1985-1989) which is almost the same as that studied by Mitchell saw no difference in the numbers of papers authored by physiotherapy academicians compared to non-physiotherapists. The subsequent five year period and the decade saw physiotherapy academicians responsible for the majority of the publications. This study showed that physiotherapists including students, academicians and clinicians are making a significant contribution to the Journal of Physiotherapy in this country.

## Conclusion

The findings of this study confirm a trend in type and authorship of articles that appear in the South African Journal of Physiotherapy for the decade 1985-1994. These findings can be used as a starting point to address the scientific growth of the profession. The period under review is the period when almost all training centres in this country had replaced the diploma in physiotherapy with a Bachelors degree. One of the prerequisites for graduation is a research project. Is the profession reaping the benefits of an improved curriculum in the Bachelors degree programme? As in the United States<sup>7</sup>, a growth in quality graduate programmes with strong research emphasis is likely to be reflected in the publication trends in the South African Journal of Physiotherapy. Further research is needed, to look into the effects of strategies implemented by the profession and education centres on trends in the Journal of Physiotherapy.

## References

1. Beenhakker J. Editorial. *SA Journal of Physiotherapy* 1991;47(4):62.
2. Mitchell J. Trends in Physiotherapy research in South Africa 1980-1989. *SA Journal of Physiotherapy* 1990;46(4):17-20.
3. Mitchell J. A Survey of Research Publications in the South African Journal of Physiotherapy. *SA Journal of Physiotherapy* 1990;46(3):7-10.
4. Polgar S, Thomas SA. Introduction to Research in the Health Sciences. 3rd edition. London: Churchill Livingstone, 1995:12.
5. Slater SB. The Design of Clinical Research. *Phys Ther* 1966;46(3):265-273.
6. Robertson VJ. A Quantitative Analysis of Research in Physical Therapy. *Phys Ther* 1995;75(4):313-327.
7. Robertson VJ. Research and Cumulation of Knowledge in Physical Therapy. *Phys Ther* 1995;75(3):223-236.

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Contributions to the *South African Journal of Physiotherapy* are invited on any topic related to physiotherapy or rehabilitation.

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- a report on research
- a description of an approach
- a literature review
- a presentation of a theory.

### A short report may be

- a case report
- a clinical report
- a treatment technique or suggestion.

## Legal Considerations

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- they have not been published previously.
- they have not been submitted for publication elsewhere.
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## Acceptance

Articles are accepted on the understanding that they are subject to editorial revision.

## Presentation

### Articles

- articles should be restricted to between 2,000 and 2,500 words.
- the three copies submitted should be typewritten with double spacing and wide margins.
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- a title page should be supplied as a separate sheet and include the name(s), qualifications and affiliation(s) of the author(s), together with addresses and telephone numbers (at home and at work).
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- if a letter is intended for the correspondence column it should be marked "for publication".
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- all references should be typed on a separate sheet.
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1. Ellison P, Browning C, Larson B *et al.* A scoring system for the Milani-Comparetti and Gidoni method of neurologic assessment in infancy. *Phys Ther* 1983;63:1414-142.
2. Pryor JA and Webber BA. An evaluation of the forced expiration technique as an adjunct to postural drainage. *Physiotherapy* 1979;65(10):304-307.

### Books:

1. Maitland G D. *Vertebral Manipulation*. 4th ed. London: Butterworths, 1977: 24.
2. Lipow HW and McQuitty JC. Cystic Fibrosis. In: Rudolf AM, ed. *Pediatrics*. Norwalk, Connecticut: Appleton-Century-Crofts, 1982:1433-1440.

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