

176. Coverage of Research News in Indian Newspapers

Umesh Kumar Arya

Department of Advertising Management & Public Relations
Guru Jambheshwar University of Science & Technology
Hisar 125 001, Haryana, India

umesharya1973@gmail.com; www.umesharya.blogspot.com, 0919416346589

Abstract. The present study has been undertaken with the objective of accessing the coverage of research news cum science communication in Indian print media. A content analysis of five English newspapers revealed that newspapers published research news items relating to medical sciences, physical sciences, social sciences, business & management & IT. Frequency of R.N. is negligible, 1.2 per day per newspaper. A strong positive relationship emerged between the newspapers' readership and frequency of research news appearance. Findings indicate that newspapers reported Indian R.N. in a big way followed by US and UK. Newspapers' own correspondents and news networks wrote maximum stories rather than news agencies. The news agencies reported R.N. from different countries without any preference for their native country. The study coined two hypotheses out of which one was rejected and alternative hypothesis was accepted. The study dwelt at length on various issues relating to R.N.

Keywords: Content analysis, Print media coverage, Research news

Introduction

Kerlinger (1986) defines scientific research as a systematic, controlled, empirical, and critical investigation of hypothetical propositions about the presumed relations among observed phenomenon. Research is the locomotive in which the development of society moves forward. It is the first pillar of scientific thinking. Creative ideas and innovations originate from research. 'Why' and 'how' are the most important words in research which demystify the secrets of a particular problem under study and leads to truth and knowledge.

Wimmer and Dominick (1994) mention four events or social forces which contributed to the growth of mass media research. First was world war 1 which prompted a need to further understand the propaganda. Second was the realization by the advertisers in 1950s and 1960s the research data were useful in devising ways to persuade potential customers to buy products and services. Third was the increasing interest of citizens in the effects of the media on public, especially on children. Fourth one was the increased competition among the media for advertising dollars.

A Registrar of Newspapers for India's 2006 report states that India has 62,483 registered newspapers having a combined circulation of 18,07,38,611. Out of 8512 newspapers, as many as 6686 were owned by Individuals, 1122 by Joint Stock Companies, 260 by Societies and Associations, 222 by Trusts and 150 by Firms and Partnerships. 41 newspapers were brought out by the Central and State Governments. Cooperative Societies, Educational Institutions and the like, owned the remaining 31 (RNI, 2006). According to National Readership Survey 2006, press reach has stabilized in urban India – at 45% with 110 million readers. Press reach in rural India has also stayed the same at 19% with a readership of 112 million. Indian reader spends 39 minutes daily on an average per day. But there has been increase in urban India (from 41 to 44 minutes daily) and decrease in rural India (from 36 to 35 minutes daily) (NRS 2006).

Literature Review

Various researchers have investigated research news (R.N.) from different perspectives. Dutt & Garg (2000) found that The Pioneer, The Hindu, and The Times of India together devoted about 23 percent of the total space to items on science and technology. The sources for most of the articles (97 percent) on policy issues originated from within India, while for other stories foreign sources, including those from the United States and the United Kingdom, also contributed. Indian newspapers devoted far less than one percent of the total printed space to articles and stories related to science and technology. Entwistle (1995) reported that in medical research, journalists were more likely to cover currently topical subjects; common and fatal diseases; rare but interesting or quirky diseases; those with a sexual connection; new or improved treatments; and controversial subject matter or results. The journalists stressed that medically worthy information is not necessarily newsworthy. Koren & Klein (1991) argued that the number, length, and quality of newspaper reports on the positive study were greater than news reports on the negative study, which suggests a bias against news reports of studies showing no effects or no adverse effects. Bartlett, Sterne & Egger (2002) found that Newspapers underreported randomised trials, emphasised bad news from observational studies, and

ignored research from developing countries. Good news and bad news were equally likely to be press released, but bad news was more likely to be reported in newspapers.

Objectives

1. What is the extent of research news in newspapers?
2. What are the various types of research news published?
3. What is the relative contribution of newspapers in publishing research news?
4. What kind of placement is accorded to the research news?
5. What are the different sources of research news?
6. Who are the countries whose research is reported?
7. What is the amount of space provided by newspapers to research news?
8. What is the relationship between the sources and inventing countries?
9. What is the relationship between newspapers and other variables?

Research Design

The researcher applied the quantitative content analysis technique to fulfill the objectives. Content analysis may be defined as a methodology by which the researcher seeks to determine the manifest content of written, spoken, or published communications by systematic, objective and quantitative analysis (Zito, 1975, p.27)

Newspaper selection: Three highest read English dailies (The Times of India, The Hindu and Hindustan Times), one regional daily (The Tribune) and one financial daily (The Economic Times) were taken in view of their high circulation and rainbow characteristics of regional and content diversity. TOI with circulation 11,02,521 and readership of 7.4 million, The Hindu with 11, 68,042 circulation and 4.05 million readership, HT having circulation of

113644 and a readership of 3.85 million are the three largest nationally circulated and read newspapers. The Tribune has the highest circulation with its regional flavour Haryana and Punjab regions. The ET has highest circulation among financial dailies and coverage of R.N. related to Business, management, finance etc. necessitated its inclusion.

Unit of analysis: The news headlines which consisted of words like 'study', 'research', 'report' and 'survey' were taken as unit of analysis.

Hypotheses: Types of R. N. is dominated by medical science to a large extent.

Findings and Discussions

Extent of research news

A sum total of 182 R.N. appeared in 150 editions of 5 newspapers (Table 1). The largest read Indian English daily TOI published maximum (34%) R. N. followed by The Hindu (23%), The Tribune (32), HT (14%) and ET (11%). There is an evidence that the newspapers with highest readership publish high number of R.N.

Types of R. N.

R. N. in newspapers were categorised as natural sciences, social sciences, business & mgt and IT. Natural sciences topped the chart with 67% score (Table 1). Hence the hypothesis of a big chunk of R.N. having medical science research is accepted. A random search on www.scholar.google.com and other search engines throw numerous studies on reporting of medical research whereas very little is available for other research types. Social science research came next (21%) with business & mgt. (7.7%) and IT (4.4%) categories.

In a newspaper wise analysis, The Hindu published maximum (50%) R. N. relating to IT among all newspapers. It had maximum (66%) natural sciences R.N. followed by social sciences (19%), business & mgt (5%) and IT (9.5%).

TOI put slightly more emphasis on natural sciences than social sciences followed by business & mgt and IT. It had 50% less coverage of IT R.N. as compared the The Hindu.

HT didn't publish any R.N. relating to IT and business & mgt. It only had social sciences (31%) and natural sciences (69%) R.N. ET, emerging true to its name, had maximum R.N. on natural sciences (60%) and business & mgt (20%). A clear slump was seen in case of social science R.N. HT and The Tribune didn't have any R.N. on IT.

Table 1. Types of research news

Newspaper Total					
Research categories type	The Hindu	Times of India	Hindustan Times	Economic Times	The Tribune
Natural sciences	28 (23)	42(34.42)	18 (14.75)		12 (9.83)
22(18.03)	12(67.03)	Social sciences	8(21.05)	14(36.84)	8
(31.05)	2 (5.26)		6(15.78)	38(20.87)	Business & management
2 (14.28)	4 (28.57)			4 (28.57)	4 (28.57)
14 (7.69) IT		4 (50)	2 (25)		
2 (25)			8 (4.39) Total		
42(23.07)	62(34.06)	26 (14.28)	20 (11)		32(17.58)
182(100)					

Placement of R.N. in pages

In order to ensure the meaningful categories of pages, the categorisation identified by Bansal (2002) was adopted with slight modifications (Table 2). Among all pages, it was found that maximum (25%) R.N. appeared on national pages of the newspapers. This is indicative of nationwide spread and reach of R.N. which was exposed to the maximum number of readers unlike other pages where regional customisation factor is at play. Business page had 2nd maximum (19%) R.N. followed by last page (17.5%), ‘other pages’ (13%) and front page (12%). The ‘other pages’ included regional news pages, special column pages etc. The editorial page and sports pages had equal share of R.N. (6.5%). The editorial columns mainly commented on the R.N. published mostly on the previous day and rarely on the same day.

Table 2. Placement of R.N. in pages

Newspaper Total					
Pages	The Hindu	Times of India	Hindustan Times	Economic Times	The Tribune
Editorial	2(16.66)		6 (50)		
2 (16.66)	2(16.66)	12(6.59) Front			
10 (45.45)	8 (36.36)		4 (18.18)		
22(12.08) Business			20 (58.82)	4 (11.76)	
4 (11.76)	6 (17.64)	34(18.68) Sports		10(83.33)	
2 (16.66)				12 (6.59) National	
2 (4.34)	28 (60.86)	4 (8.69)	2 (4.34)		
10(21.73)	46(25.27) Last		20(62.50)		
8 (25.00)	4(12.50)	32(17.58) Other pages	8 (33.33)		
4 (16.66)	2 (8.33)	4 (16.66)	6 (25)		
24(13.18) Total		42 (23.1)	62 (34.06)	26 (14.28)	
20 (11.00)	32(17.58)				182(100)

In newspaper wise interpretation of data, extreme distribution of R.N. spread across various pages was observed. It was revealed that The Hindu didn't have any R.N. on front page and business page and had a negligible (5%) R. N. on national page. It had maximum (24%) R.N. on sports page followed by last page, other pages and editorial page. It is evident that the newspaper selected premium pages to publish R.N.

Distribution skewness was slightly less in case of TOI which didn't have any R.N. on editorial page, sports page and last page. It published maximum (45%) R. N. on national page followed by business page (32%), front page (16%) and other pages (7%), all very important positions.

The distribution spread of R.N. in case of HT was equal across all the pages except last page which is sports page. HT had maximum editorial inclusions (50%) on R.N among all newspapers. followed by front page (31%), sports page (8%) and business page (15.4%). Editorial page is regarded as heart of newspaper and front page commands maximum OTS (opportunity to see). ET had maximum (40%) R. N. on last page. The R.N. spread across editorial, business and other pages was slightly more or less equal.

The Tribune had a symmetrical distribution of R.N. spread (none in case of sports page) vis a vis other newspapers. ‘National page’, business page had first and second place respectively, having highest

share whereas rest all of the pages had spread in equal amount.

News sources of R.N.

Correspondents & staff reporters were the biggest source having around half (44%) share of R.N. published in newspapers (Table 3). News services/news networks and news bureaus (Times news networks, 'by our news bureau', Tribune news service etc) occupied 2nd position with 16.5% share. Among foreign news agencies, British agency Reuters contributed maximum (10%) followed by French agency AFP (Agence France-Presse) having 7.7%, Associated Press (AP) of America (6.6%) and ANI (Asian News International) with 6.6%. Indian agency PTI (Press

Trust of India) had a commendable share (7.7%) at par with AFP and even more than ANI. Only two R. N. didn't have their source mentioned. This finding points towards the onus and indispensable role of journalists in promoting scientific thinking in masses by writing maximum possible R.N.

Table 3. News sources of R.N.

Source	Newspapers					Total
	The Hindu	Times of India	Hindustan Times	Economic Times	The Tribune	
PTI				6 (42.85)	2 (14.29)	
6(42.86)	14(7.69) Reuters			8(44.44)	10(55.55)	
18(9.89) Correspondents		16(20)	22 (27.50)	22 (27.50)		
14 (17.50)	6 (7.50)	80 (43.96) AFP			12(85.71)	
2(14.29)	14(7.69) AP			6 (50)	2 (16.66)	
4 (33.33)			12(6.59) News networks & bureaus			
20 (66.67)	2 (6.66)			8(26.66)		
30(16.48) Not mentioned						
2 (100)			2 (1.10) ANI			
2 (16.67)					10(83.33)	
12 (6.59) Total		42(23.08)	62 (34.07)		26 (14.29)	
20 (10.99)	32(17.58)	182(100)				

In cross sectional tabulation analysis between newspapers and sources, it emerged that The Hindu was frontrunner in publishing R.N. from correspondents followed by AFP, Reuters, AP and correspondents & staff. It didn't publish any R.N. from PTI and news networks & bureaus.

TOI, while respecting the trend, went further selective in utilizing agencies. It depended heavily on its own journalists (35%) and news network (TNN) to publish maximum R.N (32%). (rather TOI's dependence was highest (44%) among all newspapers). It also used Reuters and PTI to a great extent (16% & 9.5% respectively) and AP & ANI to the lesser extent.

HT relied heavily on its journalist for the R.N.(84%) They wrote maximum stories for the newspaper. It used negligible (7.7%) R. N. from PTI and news network & bureaus (7.7%). HT published 50% (maximum among all newspapers) of its R.N. in editorial columns which clearly reflects its editorial stance.

ET was the only newspaper which had not mentioned the source in two of its R.N. Perfectly towing the pattern line, its correspondents wrote down maximum R.N. followed by AP.

A very different scenario of pattern emerged in case of The Tribune, which contrary to the prevalent trend, had highest number (31%) of R.N. from ANI followed by PTI (19%). Its journalists wrote least number (7.5%) of R.N. among all newspapers.

Regions of Research

Asia region was ranked first with 42% share of R.N (Table 4). This region comprised India, Malaysia and Japan whose researches were reported. North American (27%) trailed the Asian region which included mainly US and Canada. Europe came 3rd (21%) in hierarchy with maximum entries from UK and one each from Germany, Switzerland, Sweden and France. Various agencies of United Nations mainly WHO (World Health Organisation) also came out with 6.6% of total R.N. An unhealthy trend of not mentioning the country was noticed in case of few R.N. The only region lagging far behind others was South America (.54%) where

Table 4. Regions of research

Total Regions	Newspaper				
	The Hindu	Times of India	Hindustan Times	Economic Times	The Tribune
The Tribune North America	13(26.53)	18 (50)	2 (4.08)		6
(12.24)	10(20.40)	49 (26.92) South America	1 (100)		
1 (0.54) Asia	12(15.78)	24 (31.57)	16 (21.05)		
10 (13.15)	4(18.42)	76 (41.75) Europe		14(36.84)	10
(26.31)	4 (10.52)	4 (10.52)	6 (15.78)		38 (20.87)
UN/WHO		8 (66.66)	2 (16.66)		
2 (16.66)	12 (6.59) not mentioned	2 (33.33)	2 (33.33)	2 (33.33)	
6 (3.29) Total	42(23.07)	62 (34.06)	26 (14.28)		20

(10.98) 32(17.58) 182 (100
only one R.N. from Chile could make it to the newspapers.

Inventing countries

In the list of inventing countries, Indian research studies were reported maximum (39.5%), see (Table 5). US research reporting came next (23%) trailed by UK (18.7%), UN/WHO (6.6%), Europe (2.2%), Malaysia (1.1%) and Japan (1.1%). United Kingdom has been separately shown from European owing to its 34 R.N. as compared to only 4 in case of other European countries. Worldwide, mostly US research is cited by researchers but the trend of rising dominance of regional research (Indian) instead of transnational one (US, UK etc) is certainly a welcome step.

Table 5. Inventing countries

Inventing countries Total	Newspaper					
	The Hindu	Times of India	Hindustan Times	Economic Times	The Tribune	
US		12(28.57)	14 (33.33)	2 (4.76)		4
(9.52)	10(23.81)		42(23.07) Canada			2(25)
4 (50)			2 (25)			
8 (4.39) Europe		4 (100)				
4 (2.19) UK			10(29.41)	10 (29.41)	4 (11.76)	
4 (11.76)	6 (17.55)		34(18.68) India			10(13.89)
24(33.33)	16 (22.22)	8 (11.11)		14(19.44)		72(39.56)
Malaysia		2 (100)				
2 (1.09) Japan						
2 (100)			2 (1.09) UN/WHO			
8 (66.67)	2 (16.67)				2 (16.67)	
12 (6.59) Not mentioned		2 (33.33)	2 (33.33)	2 (33.33)		
6 (3.29) Total		42(23.08)	62 (34.07)		26 (14.29)	
20 (10.99)	32(17.58)		182 (100)			

The inventing countries versus newspapers cross tabulation revealed that only ET had two R. N. from Japan and all of its research news had country mentioned like The Tribune. Only The Hindu published European research. ET and The Hindu didn't publish any research done by UN/WHO. Only US, UK and Indian research was covered by all newspapers whereas coverage pattern is not uniform for other countries' R.N.

The Hindu had more R.N. stories from US (28.5%) followed by UK (24%), India (24%) and Europe (9.5). The TOI turned out to be more patriotic by publishing highest Indian (38%) and US (22.6%) R.N. HT also trod on the dotted lines of TOI with highest Indian R.N. (62%) and exactly same pattern was noticed for ET and The Tribune. Every newspaper except The Hindu published highest Indian R.N. first and US research was accorded 2nd position except HT which gave 2nd place to UK R.N.

Space provided to R.N.

Table 6. Space provided to R.N.

	size in sq cms	
% The Times of India	9359	
30.0		
The Hindu	8542	
27.0		
The Tribune	5899	19.0
The Hindustan Times	3883	12.0
Economic Times	3570	12.0
Total		312534
100.0		

Table 7

Mean space		
The Times of India		167.1
The Hindu		203.4
The Tribune		173.5
The Hindustan Times		161.8

The Table 6 & 7 clearly show space provided by all five newspapers in square centimetres. The total space provided by all five newspapers was 31254 sq cms. TOI provided maximum space followed by The Hindu, The Tribune, HT and ET. Barring The Tribune, the quantum of space is in perfect accordance with the readership of all four newspapers. Also, the frequency of contribution of newspapers is in perfect sync with the space provided by each of them. However, irregular pattern was observed in case of mean space. The Hindu and ET had provided comparatively high mean space to R.N. (Table 7). In simpler terms, it means that despite having less numbers of R.N. these newspapers provided good space to them vis a vis others having more R.N. and less space.

Conclusions

A strong positive correlation was found between the amount of R.N. and readership of newspapers. Barring The Tribune, there exists a very strong positive correlation between the readership and space provided to R.N. hence a trilogy of correlations goes like this: higher readership is correlated to higher number of R.N. and higher space. However, in a contradictory scenario, Mean space given to R.N. was higher for small readership newspaper like ET and The Tribune vis a vis others which translates into less number of R.N. but higher high print space.

Finally, it can be concluded that although one R.N. on average was published daily but it is highly inadequate to educate masses about science. This needs to be increased. Moreover, big number of medical researches and other natural science researches were highlighted discriminating others. Other types of researches should also be highlighted so that a holistic scientific temperament can be nurtured. Mere appearance of R.N. will not suffice for development and sustaining of the science communication rather those R.N. should be encouraged more which audiences can use to scientifically solve their problems themselves. More such studies covering research from various perspectives and dimensions are needed to contribute more to this area.

References

- Bansal, K. (2002). International news coverage in four Indian newspapers: a content analysis study. *Media Asia*, 29(3), 31-40.
- Bartlett, C. Sterne, J. & Egger, M. (2002). What is newsworthy? longitudinal study of the reporting of medical research in two British newspapers. *BMJ*, 325, 81-84 retrieved from <http://www.bmj.com/cgi/content/abstract/325/7355/81>
- Dutt, B. Garg, K. (2000). An overview of science and technology coverage in Indian English-language dailies, *Public Understanding of Science*, 9(2), 123-140
- Entwistle, V. (1995). Reporting research in medical journals and newspapers. *BMJ*, 310, 920-923
- Kerlinger, F. N. (1986). *Foundations of behavioural research* (3rd ed.). New York: Holt, Rinehart & Winston.
- Koren, G. and Klein, N. (1991). Bias against negative studies in newspaper reports of medical research. *The Journal of American Medical Association*, 266(13) available online at <http://jama.ama-assn.org/cgi/content/abstract/266/13/1824>
- NRS 2006–Key Findings (2006, Aug. 29). Retrieved July 29, 2007, from <http://www.acnielsen.co.in/news/20060829.shtml>
- RNI, (2006, Oct. 12). Retrieved July 23, 2007, from <https://rni.nic.in/pii.asp>
- Wimmer R.D. (1994). *Mass media research: an introduction*. Belmont: Wadsworth Publishing Company.
- Zito, G.V. (1975). *Methodology and meanings: Varieties of sociological inquiry*. New York: Praeger.