

# Can Scientific Submissions in National Conference of Indian Association of Preventive and Social Medicine (IAPSM) 2013 bring Evidence into Public Health of India?

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**Abstract-** Each year far more abstracts are submitted and limited slots are available for oral and poster presentation. Hence, we have carried out an appraisal of abstracts published in the souvenir of the National Conference of IAPSM held at Nagpur during January 2013. These abstracts are reviewed by two independent reviewers as per the guidelines provided by Indian journal of community Medicine (IJCM). Out of 555 abstracts; 374 were accepted (67.38% overall acceptance rate). Maternal and child health papers formed the greatest proportion of total accepted 82(21.93%), followed by non communicable and miscellaneous group; 53 (14.17%) and 50 (13.73%) respectively. Mean (SD) score of accepted abstract by one reviewer was 13.23 (1.74) with 95% confidence interval (CI) (13.05-13.4). Mean (SD) score of accepted abstract by another reviewer was 13.72 (2.18) with 95% confidence interval (CI) (13.5-13.9). Agreement analysis between two raters substantial agreement (Kappa=0.61) and it was found to be statistically significant P<0.001. Commonest type of submissions were cross sectional and descriptive 357 (95.45%) followed by retrospective study 12 (3.20%). Overall acceptance rate was (67.38%). Acceptance rate was significantly more in structured abstract, research results, clear objectives, case control and randomized control trials and conclusion supported with results (P<0.001). Major reasons for not acceptance like incomplete submission, non compliance for resubmission, study design not provided, no objectives and no results were submitted. The analysis of the contents of all these abstracts eventually would help IAPSM to design its future research policy and would give an interesting information to its members.

**Index Terms-** abstract, appraisal, publication, presentation, Conference

## I. INTRODUCTION

Association of Preventive and Social Medicine/Public Health Experts of India (IAPSM) is one of the most reputed scientific organizations. It provides a scientific forum for young professionals in public health, public health practicing physicians and other allied disciplines. Health information and statistics are important for planning, monitoring and improvement of services

for the health of populations [1]. These are essential for policymakers and program planners to inform their decisions about what actions to take and what services to provide in order to improve the health of the populations they serve [2]. The Government of India in its National Health Policy of 2002 acknowledged the absence of systematic and scientific population health statistics as a major deficiency in India [3]. Presentation of research work at scientific meetings and professional societies is an important first step toward effective scientific communication of research results. The ability to effectively identify high-quality abstracts worthy of acceptance, presentation, and possible publication, is based on the criteria used to rank submissions [7]. Now it is recognized as an important component of the grey literature. Overall review of these abstracts can also help to understand and track down the research priorities of the faculty members. Concern is that the small proportion of such research appearing in the scientific journals after peer-review. With this background we have carried out an appraisal of abstracts published in the souvenir of the National Conference of IAPSM held at Nagpur during January 2013.

## II. MATERIAL AND METHODS

A cross-sectional study was designed and conducted based on all abstracts published in the souvenir of National Conference of IAPSM held during January 2013 at Government Medical College, Nagpur, Maharashtra. In all 800 delegates were registered in this conference from all over India. Five hundred and Fifty six abstracts were submitted online in a structured (Background & Aims, Methods, Results, Conclusion) format. For the first time in the history of Annual National Conference of IAPSM online abstract submission has been introduced by the organizer of IAPSM Conference 2013 at Nagpur. Many of the researchers and students were generous enough to adopt the online method. It was heartening to receive positive feedback on suitability of the online submission. A separate committee with two reviewers reviewed all abstracts as per the Indian Journal of Community Medicine Article Review guideline (IJCM) (7). The current appraisal included all the 374 abstracts published in this conference souvenir [9]. As for 182 abstracts; only title and

author's names, results were not mentioned and other details were not stated, these were excluded from the final analysis. Abstracts were classified and analyzed according to States/Union Territories, characteristics of abstract like format (structured unstructured), type (research results / conceptual papers / research proposals) specification of objective / research question / hypothesis, study design (descriptive / analytical / experimental), study setting (community / institutional or hospital), use of statistics analysis and subject area of research. Statistical Analysis: The data were analyzed using the STATA (version 10.2) software packages. Descriptive statistics was used to determine mean, percentages and SD. Categorical data were analyzed using Chi-square test. Intra rater agreement was measured using agreement analysis (kappa test).

### III. RESULTS

Out of 556 abstracts; 374(67.27%) were accepted for presentation and publication in the souvenir. The mean (SD) age of first author was 32.4(8.25) years. Majority 218 (58.29%) of the first authors were post graduate students, followed by Assistant professor 77 (20.58%), Associate professor 51(13.63%) and least 28 (7.49%) were Professors and senior scientists. Scientific contribution made by young researchers was significant ( $P < 0.001$ ) when compared with Associate Professor and Professor/Senior scientist contribution.

Table 1 reveals that amongst accepted abstract Maharashtra tally most 99 (26.47%), Andhrapadesh 37 (9.89%) and 35 (9.35%) Madhya Pradesh (MP). Karnataka, Gujarat, Delhi and Kerala contributed approximately 6.00% abstracts each. Manipur, Punjab, Himachal Pradesh, Uttarakhand, Bihar and Zarkhand contributed less than one percent in scientific submissions. Overall scientific presentation rate was 91.97%.

Table 2 shows that, Maternal and child health papers formed the greatest proportion of total accepted 82(21.93%), followed by non communicable and miscellaneous group; 53 (14.17%) and 50 (13.73%) respectively. Other priority proportion themes were reproductive health 27(7.22%), nutrition 23 (6.15%) and adolescent health 25(6.68%), Another research priorities were immunization, HIV/AIDS, communicable diseases, adolescent health, vector born diseases, mental health illness, geriatric health, Tuberculosis and occupational Health (2.14-4.55%).

Table 3 reveals that the Characteristics of accepted and not accepted abstract. Mean (SD) score of accepted abstract by one reviewer was 13.23 (1.74) with 95% confidence interval (CI) (13.05-13.4). Mean (SD) score of accepted abstract by another reviewer was 13.72 (2.18) with 95% confidence interval (CI) (13.5-13.9). Agreement analysis between two raters substantial agreement ( $Kappa=0.61$ ) and it was found to be statistically significant  $P < 0.001$ . Among the accepted abstracts, 344 (91.98%) were structured abstracts. Objectives in abstract were clear in only 75 (20.05%), in 235 (62.83%) partly clear and in 64 (17.13%) were ambiguous or no objectives. Commonest type of submissions were cross sectional and descriptive 357 (95.45%) followed by retrospective study 12 (3.20%). Overall acceptance rate was (67.38%). Acceptance rate was significantly more in case control and randomized control trials as comparative to descriptive studies ( $P < 0.001$ ). Majority of the study sample was hospital, record or institutional (e.g. school) based. Major

reasons for not acceptance like incomplete submission, non compliance for resubmission, study design not provided, no objectives, no results were submitted and conclusion not supporting results. Differences were found to be statistically significant in accepted abstracts ( $P < 0.001$ ).

### IV. DISCUSSION

In the recently held National Conference of IAPSM 2013 has revealed major representation from Maharashtra tally most 99 (26.47%) and Andhra Pradesh 37 (9.89%) India. As the conference was held at Nagpur, Central India, it was expected that it would be attended by delegates across the country, considering its geographic location. However, this is not surprising that this meeting was heavily attended by delegates from Maharashtra, Andhra Pradesh and Madhya Pradesh. State of Maharashtra was host of this conference and Nagpur is adjacent to Andhra Pradesh and Madhya Pradesh and moreover Maharashtra chapter of IAPSM is active organization and number of medical colleges in Maharashtra is much more than any other state. These findings are consistent with the earlier study [8].

In this study 91.97% abstracts were formatted and structured as it was demanded; however, in another study, only 26.3% abstracts were formatted and structured [8]. Time to time it is emphasized that structured abstracts provide elaborate, systematic, classified and formatted information. For the first time in the history of Annual National Conference of IAPSM online abstract submission has been introduced. This kind of abstract preparation pattern has been accepted and practiced by indexed journals and proceedings of Global and National meetings of professional organizations [8]. This important issue was incorporated in the abstract call notice and conference circulars to bring out uniformity and highlight methodology in a more systematic way (10).

Matter of concern is that 64(17.11%) did not specify objectives of their study and 235(62.66%) studies objectives were partly clear. In another study 98 (43%) abstracts did not specify objective/research question/hypothesis of their study [8]. Specification of either of these can help reader to understand the purpose of study and its relevance to him/her. Structured formats can certainly help to resolve this issue; subheadings in the format demand researcher to specify this vital issue of research in this conference. Majority (95.45%) of studies were descriptive in their nature, which included large proportion of cross-sectional and KAP/opinion/ awareness studies. This finding is consistent with finding of Zodepy 1997 et al. when we compare our study finding with earlier study (8) findings; it indicate that public health expert are basically involved in descriptive research that is the basis of formulation of hypothesis. Although, the baseline research is very important, simply generating hypothesis is not enough evidence; it implies that lowest level of evidence generated by this type of primary research. This is high time to get evolve in extended research which helps in testing the hypothesis- analytical studies and study which generate high level of evidence- RCTs and meta-analysis. These appraisals also revealed non use of randomize controlled trials and qualitative studies.

Study sample one of the vital areas of concern. Majority 229 (59.46%) of the studies were conducted hospital/institution (schools). In earlier study, 91.5% studies being performed in community setting. However, comparatively less 37.43% of the studies were carried out in rural and tribal setting. This emphasizes the need community based research predominantly in rural and tribal areas. This is high time to address this issue. It can be possible community medicine professional to pick up research query which is able to address rural and tribal health issues and implement it through their postgraduate research activity.

Use of statistical technique for drawing valid conclusions and inferences from research results is important ingredient of any study. Only 22.46% studies used all required statistical test. In another study more than 1/4 abstracts did not use statistics in their appraisal. Moreover 72.36% studies which used some statistical test and have used it only for descriptive purpose. Moreover, very few abstracts used advanced statistical techniques (e.g. Survival analysis, logistic regression analysis etc.). Although from findings of this study, unnecessary use of statistics can not be recommended, appropriate use of analytical statistics whenever indicated should be performed. This appraisal also revealed subject areas of research by community medicine professionals. It is very logical that most of us are engaged in research related to maternal and child health, infectious diseases and non communicable diseases; However, there are few areas like occupational health, environmental health, methodological issues in epidemiology, health social sciences and health economics which are identified unexplored in this appraisal. To conclude, purpose of this study was not evaluation but was appraisal and introspection of our own research. Today with the increasing standards of research publications, an immediate application of our skills lies in the use of epidemiology, research methodology and biostatistics to improve the quality of our research and publications. We the community medicine professionals are looked as methodologists among medical fraternity, which call upon us to set standards in medical research. Another option open to us is to make sure that our own work and research interests address of practical problems relevance to the nation. Our research must reflect this priority and concern.

Ready availability of essential health information is imperative for the development of informed and effective systems for improving health of societies. This paper provides a broad overview of the data readily available in the public health conference related to essential health information in India. It highlights a number of issues that need to be addressed to improve the scope and characteristics of abstracts submitted in National conference of IAPSM. The analysis of the contents of all these abstracts eventually would help IAPSM to design its

future research policy and would give an interesting information to its members.

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Tables

<b>Table 1 State wise accepted abstracts</b>		
State	No	Percentage
Maharashtra	99	26.47
MP	31	8.29
Delhi	23	6.15
WB	9	2.41
Gujarat	26	6.95
Punjab	3	0.80
TN	7	1.87
Chandigarh	4	1.07
Haryana	16	4.28
UP	19	5.08
AP	35	9.36
Rajasthan	4	1.07
HP	3	0.80
Assam	9	2.41
Pondicherry	12	3.21
Chhattisgarh	7	1.87
Uttarakhand	2	0.53
Karnataka	25	6.68
Tripura	5	1.34
Orissa	4	1.07
Kerala	24	6.42
Jharkhand	3	0.80
Manipur	1	0.27
Bihar	3	0.80
	374	100

**Table 2. Classification of Abstracts According to Subject Area of Research**

<b>THEMES</b>	<b>NO</b>	<b>%</b>
Adolescent Health	25	6.68
Geriatric Health	9	2.41
Communicable Diseases	8	2.14
HIV	13	3.48
Immunization	13	3.48
Maternal and Child Health	82	21.93
Millennium Development Goals	16	4.28
Mental Health	15	4.01
Non Communicable Diseases	53	14.17
Nutrition	23	6.15
Occupational Health	12	3.21
Miscellaneous	50	13.37
Reproductive Health	27	7.22
TB	17	4.55
VBD	11	2.94
<b>TOTAL</b>	<b>374</b>	<b>100%</b>

**Table 3. Characteristics of accepted and not accepted Abstract**

<b>Characteristics</b>	<b>Accepted (n=374)</b>		<b>Not Accepted (n=182)</b>	
	<b>No</b>	<b>Percentage</b>	<b>No</b>	<b>Percentage</b>
<b>Format</b>				
Structured*	344	91.98	32	17.58
Unstructured	30	8.02	150	82.42
<b>Type</b>				
Research Results*	353	94.39	22	12.09
Conceptual Papers without results	21	5.61	160	87.91
<b>Specification of Objectives</b>				
Clear*	75	20.05	0	0.00
Partly Clear	235	62.83	3	1.65
Ambiguous	62	16.58	12	6.59
No objectives	2	0.53	167	91.76
<b>Study Design</b>				
Descriptive	357	95.45	149	81.87
<b>Analytical-</b>		0.00		
Analytical-Case Control Study*	12	3.21	0	0.00
Experimental Study/RCT*	3	0.80	0	0.00
Not mentioned	2	0.53	33	18.13
<b>Study Setting n=374</b>				

Urban*	234	62.57	80	43.96
Rural	134	35.83	102	56.04
Tribal	6	1.60	0	0.00
<b>Study Sample*</b>				
Community based	126	33.69	39	21.43
Hospital/institutional (Schools)	223	59.63	136	74.73
Hospital Records	25	6.68	7	3.85
<b>Sample size Estimated *</b>				
Yes	65	17.38	49	26.92
No	309	82.62	133	73.08
<b>Use of Statistical Analysis*</b>				
Not used	16	4.28	146	80.22
All required	84	22.46	0	0.00
Some	274	73.26	36	19.78
<b>Results*</b>				
Reported sufficient details	122	32.62	27	14.84
Reported partial	252	67.38	155	85.16
<b>Conclusion supported by the results*</b>				
Yes	46	12.30	0	0.00
Partially	174	46.52	20	10.99
NO	154	41.18	164	90.11

\* P>0.05 –statistically significant