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A CROSS-SECTIONAL ANALYSIS OF HEALTH-RELATED MISLEADING ADVERTISEMENTS REPORTED BY SIDDHA REGIONAL RESEARCH INSTITUTE, PUDUCHERRY

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ABSTRACT: Background: Misleading advertisements in the healthcare sector, particularly concerning Ayurveda, Siddha, Unani, and Homeopathy (ASU & H) products, pose significant risks to public health. Despite existing regulations, the prevalence of such advertisements remains a concern, necessitating comprehensive strategies for mitigation. **Methods:** This cross-sectional analysis examines misleading advertisements reported by the Siddha Regional Research Institute (SRRI), Puducherry, functioning as a Peripheral Pharmacovigilance Centre for Siddha. Data from August 2018 to October 2023 were analyzed, focusing on reported instances, categorization by disease system, prevalent advertising channels, and implications. **Results:** A total of 69 misleading advertisements were reported by SRRI during the study period. Analysis revealed a notable prevalence of Non-Communicable Diseases (NCD) in reported advertisements, with a significant focus on Diabetes Mellitus. Print media, electronic platforms, and other sources were identified as major channels for advertisement dissemination. **Discussion:** The findings underscore the urgent need for comprehensive measures to address misleading advertisements on ASU & H drugs. Regional variations in reporting patterns highlight the importance of localized approaches. Regulatory reforms heightened public awareness, media accountability, and technological interventions are recommended to mitigate the impact of misleading advertisements on public health. **Conclusion:** Addressing misleading advertisements in the Ayush sector requires a multifaceted approach encompassing regulatory reforms, public awareness campaigns, and collaboration with media outlets. By implementing targeted interventions and strengthening regulatory frameworks, the healthcare landscape can be safeguarded against the detrimental effects of deceptive advertising practices.

INTRODUCTION: Misleading advertisements and their role in backtracking the minds of the public are increasing day by day in present-day society. Today, pharmaceuticals and healthcare products, in particular, are widely tarnished, which should be the primary focus of action.

Since a vast public is using over the counter medicines, the chance of getting deluded is easier. To get rid of these, strong pharmacovigilance rules and regulations and stringent actions are necessary.

Advertising is a powerful marketing tool to promote the sale of medicine by propagating the action of a product or medicine. Misleading advertisements are those that depict contravening and false information about the product, or which ensure a complete cure against the diseases which are mentioned in the Drugs and Magical Remedies Act 1954, or which give false claims. The Indian Brand Equity Foundation (IBEF) has reported that

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the major sources of misleading advertising are print (41.2%) which is followed by Television (38.2%). Now this is also majorly accompanied by social media¹. The WHO published ethical criteria for medicinal drug promotion in the year 1988 which put forth the criteria for quality production of medicinal drugs through quality advertisements. The guidelines for advertisements include: the texts and pictures mentioned in the advertisements should be neat and legible and the concerned drug should mandatorily have scientifically proven data. It also strictly prohibits health based advertisements aimed at children^{2,3}. Though the guidelines were enforced a few decades ago, the prevalence of the publication of misleading advertisements is not significantly reduced. The awareness regarding the reality of such advertisements is very low in public. Usually, these advertisements are tactically targeted to various age groups in society in such a way that children are whipped up to use the products for better development and memory, adults for their nourishment and euphoric effect, women for their beauty and cosmetics especially for body weight management, geriatrics for their rejuvenating actions and so on. The Pharmacovigilance centres set up in different parts of the country for ASU & H drugs have reported 18,812 objectionable advertisements from 2018 to Dec 2021. From April 2014 to July 2021, the Grievance against Misleading Advertisement (GAMA) portal of the Department of Consumer Affairs has recorded 1,416 instances of misleading advertisements related to Ayush products and services⁴.

METHODOLOGY: The Ministry of Ayush has introduced a new Central Sector scheme for promoting Pharmacovigilance of Ayurveda, Siddha, Unani and Homoeopathy (ASU & H) Drugs named Ayush Oushadhi Gunavatta evam Utpadan Samvardhan Yojana (AOGUSY). It was implemented for safety monitoring of Ayurvedic, Siddha, Unani, and Homeopathy drugs under the pharmacovigilance initiative. The components of this scheme include strengthening the Ayush

Pharmacies, Pharmacovigilance and surveillance of Misleading Advertisements, upgradation of the regulatory side, and accreditation of Ayush products⁵. AOGUSY scheme mainly aims to increase both the manufacturing and exporting of Quality herbal products as well as to strengthen the regulations of Quality control of drugs and safety monitoring. The scheme also monitors misleading advertisements regarding the ASU & H drugs and treatment⁵. The surveillance of Ayush drugs' safety and monitoring of misleading advertisements are being carried out by the National Pharmacovigilance Co-ordination Centre (NPvCC), Intermediary Pharmacovigilance Centres (IPvCs) and Peripheral Pharmacovigilance Centres (PPvCs). Five intermediary and 99 peripheral centres are functioning as of date for the ASU & H drugs. The misleading advertisements and the adverse drug reactions are reported and documented by the Peripheral Pharmacovigilance Centres which works under the guidance of Intermediary Pharmacovigilance Centres. The misleading advertisements thus collected by the Peripheral Pharmacovigilance Centres are then reported to the State Drug Licensing Authorities to take further actions at their end⁵. The Siddha Regional Research Institute (SRRI), Puducherry, India which serves as one of the Peripheral Pharmacovigilance Centres (Siddha-002) periodically reports misleading advertisements gathered from various sources to the State Drug Licensing Authority and Director, ISM&H Puducherry and the same is being intimated to IPvC, NPvC, and Ministry of Ayush. An attempt has been undertaken to analyze the reported misleading advertisements by all the PPvC's of Siddha. The misleading advertisements identified by SRRI have been thoroughly analyzed and discussed in-depth in this article.

RESULTS: The following table presents the collective instances of deceptive advertisements reported by each Pharmacovigilance Centre in Siddha⁶:

TABLE 1: MISLEADING ADVERTISEMENTS REPORTED BY THE SIDDHA PHARMACOVIGILANCE CENTRES FROM 2018 TO 2021

State	Peripheral Pharmacovigilance Centres - Siddha	No. of reported MLA 2018-2019	No. of reported MLA 2019-2020	No. of reported MLA 2020-2021	No. of reported MLA {August 2018 to July 2021} - Total
Kerala	Siddha Regional Research Institute,	11	11	3	25

Thiruvananthapuram					
Tamil Nadu	National Institute of Siddha, Chennai (Intermediary Siddha Pharmacovigilance Centre).	22	34	8	64
Tamil Nadu	Siddha Central Research Institute, Chennai	19	10	26	55
Tamil Nadu	Govt. Siddha Medical College, Palayamkottai	27	77	40	144
Tamil Nadu	Govt. Siddha Medical College, Chennai	15	15	15	45
Tamil Nadu	Govt. District Hospital (Siddha Wing), Erode	63	94	27	184
Tamil Nadu	Govt. District HQ Hospital (Siddha Wing), Dindigul	80	99	14	193
Tamil Nadu	Govt. District HQ Hospital (Siddha Wing), Trichy	0	2	5	7
Tamil Nadu	Govt. District HQ Hospital (Siddha Wing), Chidambaram, Cuddalore	33	66	6	105
Tamil Nadu	Govt. District HQ Hospital (Siddha Wing), Villupuram	45	89	24	158
Tamil Nadu	Govt. Hospital (Siddha Wing), Kamuthi, Ramanathapuram District	0	80	32	112
Tamil Nadu	Govt. Theni Medical College Hospital (Siddha Wing), Madurai	0	13	4	17
Tamil Nadu	Govt. Hospital (Siddha Wing), Kuzhithurai, Kanyakumari	0	5	13	18
NCT of Delhi	Siddha Clinical Research Unit, Safdurjung Hospital, New Delhi (Delhi)	0	5	30	35
Puducherry	Siddha Regional Research Institute, Puducherry	20	14	4	38
Total		335	614	251	1200

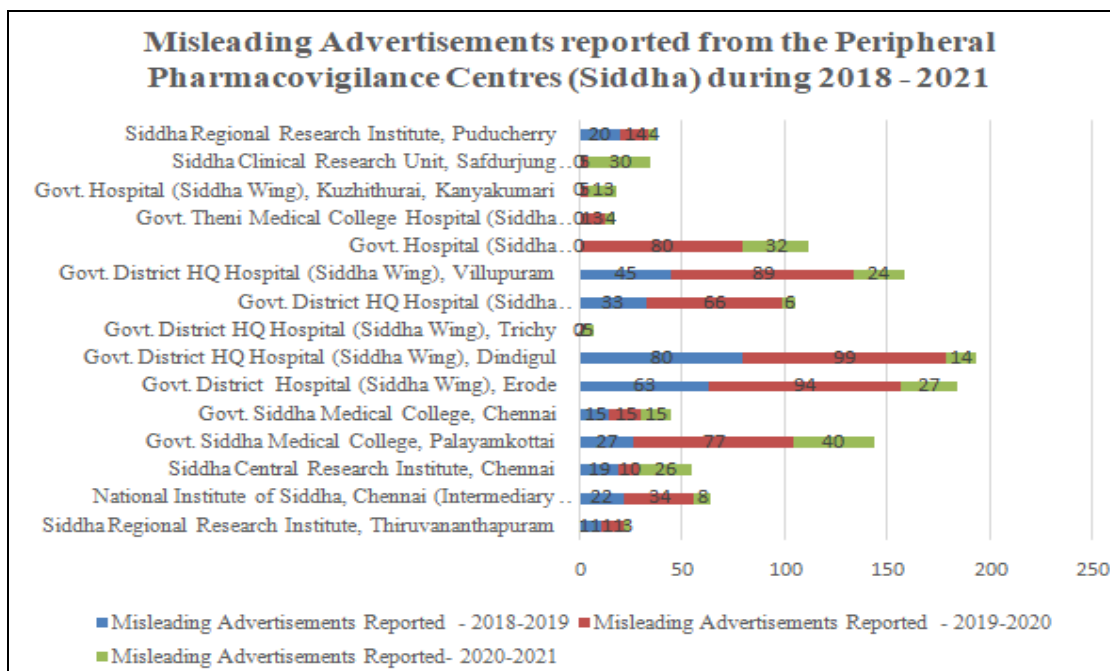


FIG. 1: GRAPHICAL REPRESENTATION OF THE REPORTED MISLEADING ADVERTISEMENTS FROM THE PERIPHERAL PHARMACOVIGILANCE CENTRES (SIDDHA) DURING 2018 - 2021

The Siddha Regional Research Institute, functioning as a Peripheral Pharmacovigilance Center, has documented and reported cases of misleading advertisements.

Up to October 2023, this center has reported 69 misleading advertisements spanning from September 2018. Among these, there were 45 advertisements related to a single disease, while 17

were associated with multiple diseases. The misleading advertisements were categorized

According to system wise systems and tabulated in Fig. 2.

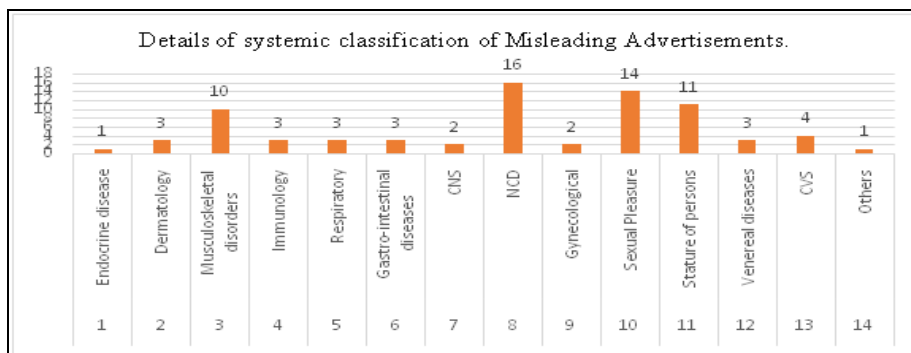


FIG. 2: GRAPHICAL REPRESENTATION OF THE SYSTEMIC CLASSIFICATION OF MISLEADING ADVERTISEMENTS

During the analysis of misleading advertisements within each system, a notable no of Non-Communicable Diseases (NCD) was observed. Subsequently, when conducting a subgroup analysis specifically focusing on NCD, the results were examined and given in Fig. 3.

DISCUSSION: This study on misleading advertisements of Ayush health products brings to light several critical aspects that demand attention and prompt action. The prevalence of misleading advertisements in the healthcare sector, particularly in the Ayush domain, poses significant risks to public health and necessitates comprehensive strategies for mitigation.

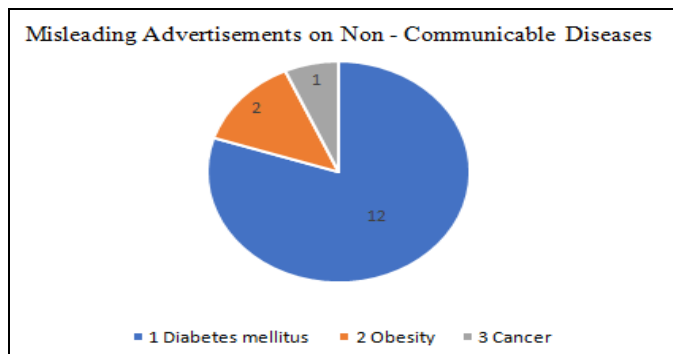


FIG. 3: MISLEADING ADVERTISEMENTS ON NON-COMMUNICABLE DISEASES

When analyzing the channels of distribution we found a wide spectrum of media outlets including newspapers, magazines, social media and many other sources were utilized for the dissemination of misleading advertisements, and it is given in Fig. 4.

The total number of reported MLAs from August 2018 to July 2021 across all Siddha centers is 1200. The data suggests variations in reporting patterns among Siddha Pharmacovigilance Centers, with some consistently reporting higher numbers compared to others. Tamil Nadu has several centers reporting varying numbers of MLAs, indicating the importance of regional differences in reporting.

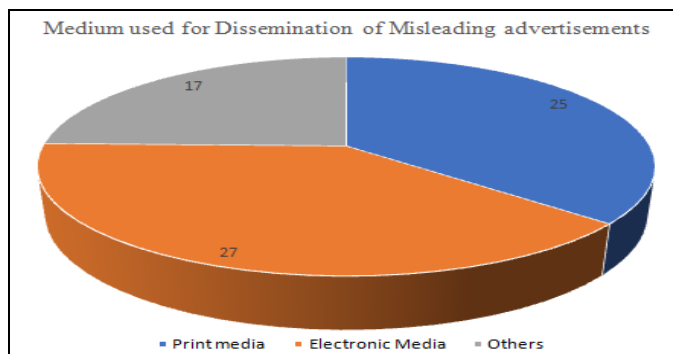


FIG. 4: MEDIUM USED FOR DISSEMINATION OF MISLEADING ADVERTISEMENTS

Govt. District HQ Hospital (Siddha Wing), Dindigul (Tamil Nadu) has consistently reported a high number of MLAs, with a total of 193 cases from August 2018 to July 2021. Another significant contributor is Govt. District Hospital (Siddha Wing), Erode (Tamil Nadu) with a total of 184 reported MLAs during the same period. NCT of Delhi Siddha Clinical Research Unit, Safdurjung Hospital, New Delhi has reported relatively fewer cases, with a total of 35 MLAs. Tamil Nadu Govt. District HQ Hospital (Siddha Wing), Trichy reported the lowest number of cases among the listed centers, with only 7 MLAs. Govt. Siddha Medical College, Palayamkottai (Tamil Nadu) center reported 144 MLAs, showing a substantial involvement in reporting. Subsequently, an extensive examination of data from the Siddha Regional Research Institute (SRI) was

undertaken, covering the period from September 2018 to October 2023, during which SRRI reported a total of 69 advertisements. In categorizing misleading advertisements, the reported ads were assigned to 14 specific categories, each corresponding to different systems within the body. Among these categories, the most prevalent sources of misleading information were for Non-Communicable Diseases (NCD) and Sexual Pleasure, with 16 and 14 advertisements respectively. Following closely was the category of Musculoskel *et al* disorders with 10 advertisements. On the other end of the spectrum, the categories of endocrine disease and others had only one reported misleading advertisement each.

Within the category of Non-Communicable Diseases (NCD), the reported advertisements were primarily centered around Diabetes Mellitus, accounting for 12 advertisements, while Obesity and Cancer were featured less prominently, with 2 and 1 advertisements, respectively. The reason behind this could be the high prevalence of Diabetes Mellitus and the general interest among the public in managing diabetes without the need for lifelong medication. This data suggests that individuals may be particularly susceptible to advertisements promising solutions for incurable diseases like diabetes, and furthermore, advertisers may be exploiting this vulnerability by offering false hope to attract people. Advertisers often use captivating phrases like "100% cure," "permanent remedy," "no side effects," and "fastest remedy guaranteed" to entice individuals.

Next comes the medium of dissemination where there were 25 reports from print media like newspapers, magazines 27 from electronic media encompassing social platforms, TV, and 17 from other sources like door-to-door pamphlets and notices on public transport vehicles. The nearly equal numbers of reports from these different sources indicate a relatively even distribution in the propagation of misleading advertisements. This balance suggests that no single medium dominates in terms of the prevalence of such content. The presence of 25 reports from print media, such as newspapers, and magazines demonstrates that traditional media outlets continue to be a source for misleading advertisements. The 27 reports from electronic media, especially social media platforms,

highlight the significant role that digital platforms play in the spread of misleading advertisements.

It underlines the need for monitoring and regulation in the online space. To curb misleading advertisements in society, a multifaceted approach is essential. The current judicial mechanism for dealing with advertising issues is insufficient in our country. Since it is concerned with people's health, necessary and timely action is crucial in overcoming and ameliorating the wide-ranging impacts due to misleading advertisements.

Advocacy for self-regulation by the Advertising Standards Council of India (ASCI) and potential government oversight can enhance enforcement effectiveness. Manufacturers need heightened awareness of legal provisions, to ensure compliance with patient safety and quality care. Targeted advertising in consumer hotspots, coupled with the development of user-friendly Android tools for reporting, aids in preventing deception. Disciplinary measures against doctors involved in misleading promotions and strict penalties for advertising fake products act as deterrents. Transparent regulations for Over-The-Counter medicines and the publication of caution notices in regional media may contribute to widespread public awareness. Media monitoring should be intensified with stricter regulations, while social media and AI can collaborate to identify and restrict misleading content, fostering a safer healthcare landscape through informed choices.

CONCLUSION: Analyzing these deceptive advertisements within the framework of the Pharmacovigilance Programme of ASU & H drugs reveals their significant impact on the Ayush sector. Established in 1954 the Drugs and Magical Remedies Act has not undergone the necessary updates to align with the evolving landscape of the health industry. The stagnant regulatory framework fails to address the proliferation of misleading advertisements in today's complex market environment. To effectively combat these misleading promotions, it is imperative to bolster the regulatory measures outlined in the Drugs and Magical Remedies Act. Strengthening enforcement mechanisms and imposing stricter penalties for violators are crucial steps in curbing deceptive advertising practices. Many individuals remain

unaware of the potential risks associated with consuming products or services promoted through deceptive means. Moreover, enhancing public awareness regarding the detrimental effects of misleading advertisements on health is paramount. In addition to regulatory reforms, there is a pressing need for media outlets and publishers to take on greater responsibility in vetting the content they disseminate. Upholding ethical standards in advertising and prioritizing the accuracy and legitimacy of health-related promotions can help mitigate the spread of misinformation and protect consumer well-being.

Collectively by updating regulatory frameworks, raising public awareness, and promoting media accountability, we can create a more transparent and trustworthy environment.

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