

# ORIGINAL ARTICLE

## AN ASSESSMENT OF ACTIVITIES OF PHARMACISTS' WORKING IN THE GOVERNMENT SECTOR IN GANJAM DISTRICT, ODISHA

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**ABSTRACT: INTRODUCTION:** Pharmacist also known as chemist or drugist is the health care professional who practice in pharmacy, the field of health science focusing on safe and effective medication use. Every day millions of people across the world visit community pharmacists for their health care needs. The aim of the present study was to assess the working of pharmacists in the government sector of Ganjam District in the state of Odisha and difficulties arising out of their diverse role play. **METHODS AND MATERIAL:** It was a cross-sectional study carried out in the drug depot centre in the office of Chief District Medical Officer (CDMO), Ganjam, Odisha between November 2013 to April 2014. A pretested scientifically designed questionnaire was used for collection of data. Data was collected in first ten days of every month at CDMO office drug depot. The data was analysed using both descriptive and inferential statistics data in SPSS version 16.0. **RESULTS:** Data were collected from 114 pharmacists among them 85 pharmacists were only from PHC (n). It was found that 49% had experience >20yrs followed by experience 10-20yrs (32%) and less than 10yrs was 19%. 48% had taken training for various programmes among them majority (23%) had taken training on RNTCP followed by NVBDCP. Only 17% had any training on supply chain management during the last 3 years. Regarding drug disposal 44% opined that they burned the expiry drugs and 22% returned them to suppliers. **CONCLUSIONS:** Pharmacist has significant impact on public health and improving patients quality of life in rural area, but in current scenario the activities of pharmacists need improvement.

**KEYWORDS:** Pharmacists, Drug, Training, Adverse drug reaction.

**INTRODUCTION:** A pharmacist, also known as chemist or druggist is a health care professional who practices pharmacy, an area of health science focusing on safe and effective medication use.<sup>1,2</sup> Every day millions of people across the world visit community pharmacists for their health care needs.<sup>3</sup> Pharmacist play a crucial role in our health system as they are responsible for the providing solutions related to medication, especially in rural areas where the doctor are not available and also play major role in public health.<sup>4</sup> Due to easy accessibility and friendly approach, pharmacists are conveniently placed at the first point of contact in the health care system.<sup>5,6</sup> Wherever there is a severe shortage of medical services there is also a corresponding shortage of pharmacists and pharmaceutical services and most of the people have no access to basic life-saving drugs. The accreditation of pharmacies falls under the responsibility of the National Accreditation Council which sets the required standards based on Good Pharmacy Practice (GPP) guideline issued by WHO which lead to positive development in community

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pharmacy.<sup>7,8</sup> In the state of Odisha, in many places in the government sector, pharmacist act as the only primary health care provider in the absence of the medical officer. This jeopardizes the fundamental role of the pharmacist as a vital stake holder in drug supply chain management giving raise to many public health issues due to the quality compromise in drug distribution. With this background, this study was done to assess the working of pharmacists in government sector of Ganjam District in the state of Odisha and difficulties arising out of their diverse role play.

### MATERIAL AND METHODS:

**Study Design & Study Setting:** It was a cross-sectional study carried out in the central drug depot attached to the office of Chief District Medical Officer (CDMO), Ganjam, Odisha between November 2013 to April 2014. The study population included all pharmacists coming to the central drug depot to collect various drugs for use in their respective place of work.

**Sample Size and Sampling Technique:** There are 124 government pharmacists working in Ganjam district at various levels of the health care like Sub Divisional Hospital, Community Health Centre and Primary Health Centre. Convenient sampling method was adopted and 114 pharmacists could be included in the study. 10 pharmacists could not be included as they had not visited to the central drug store during the study period. Only designated pharmacists were included in the study. Data was collected during the first ten days of every month during the study period as it is the most common time during which pharmacists visit the central drug depot.

**Study Instrument:** A pre-tested, pre-designed questionnaire was used for collection of data. It consisted of two parts. First part contained the personal information of the pharmacist like name, years of experience, place of posting and training programme attended. Second part contained the questionnaire on the activities of the pharmacist like role in supply chain management, treatment, managing emergency and allied activities. Verbal consent was obtained prior to in the designed questionnaire. Data was analysed in SPSS version 16.0 using both descriptive and inferential statistics.

**RESULTS:** In this study majority of the pharmacists' (85) were from Primary Health Centre level.(Table 1) It was found that 49% had experience of more than 20 years, 32% had an experience of 10-20years and 19% were experienced less than 10 years. 48% were trained for various programmes. A majority (23%) had been trained in public health programmes like, RNTCP, followed by NVBDCP (17%). Only 17% had any training on supply chain management during the last 3 years. (Table 2) Along with their routine work in supply chain management, 56% agreed that they get adequate time for counselling the patient on various aspects of drug dosage, possible adverse drug reactions and follow up visits during drug dispensing. Majority (54%) of the participants also agreed that they treat the patients as and when required, 44% were also engaged in official work. (Figure-1) All the participants knew about the occurrence of adverse drug reactions in medical practice, whereas only 74% kept life-saving drugs to manage adverse drug reactions. Burning of the expired drugs was the most common method (44%) of disposal of the expired drugs followed by returning to the supplier (22%). (Table 3) There was a

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statistically significant association between the years of experience and different activities like treatment, patient counseling, drug disposal, keeping life-saving drugs and training in various health programmes. (Table 4)

**DISCUSSION:** Primary Health Centre which is the heart of peripheral health care system. In our study most of the participants were working in this level of health care where the pharmacist has an important role in providing comprehensive health care including treatment. In this study majority participants (49%) had more than 20 years of work experience which is in contrast to a similar study by Rayes et al<sup>9</sup> where majority participant had more than 30 years of experience. In this study 83% did not have any training on supply chain management during the last 3 years. The low level of training in their fundamental activity may be due to the lack of interest, inadequate sensitization and immense work pressure. In contrast 48% were trained in various public health programmes like RNTCP, EMCP, NACO etc. Ganjam is an endemic district in the state of Odisha for vector borne disease like malaria<sup>10</sup> but only 3% had been trained on Extended Malaria Control Programme. Even though, Ganjam district has a high prevalence HIV infection among all the districts in the state of Odisha,<sup>11</sup> only 5% had undergone NACO training. Majority was agreed that they faced problems due to non-prescription of government supplied drug even though there was an adequate availability of government supplied drug leading to supply chain management problems like expiry, disposal etc. In this study it was found that the commonest drug disposal method adopted by the pharmacists was burning in the open. Burning drugs openly because release of toxic pollutants into the air hence avoided but if small quantity of expired drugs than burning can be used.<sup>12</sup> According W.H.O widely used methods adopted for drug disposal were incineration, secure landfill. It was found that, the pharmacist had to play a major role in treatment and official activities like sending weekly report, maintenance of OPD register etc. This may effect on quality achieved in drug dispensing. In this study 54% of the participants agreed that they were involved in treatment and prescription writing which was higher than in a study conducted by Arijana et al<sup>13</sup> where only 25.6% took notes of prescriptions. The statistically significant association between the duration of experience of the pharmacist and activities like counseling the patient, keeping life-saving drugs indicates that the more experienced were better capable of providing better health care. In this study it was observed that 56% of the participants counseled the patient about drug safely and 77% successfully observed adverse drug reactions, which was comparable to a study Henafi et al<sup>14</sup> where 61% pharmacists safely evaluated the prescriptions and 60% explained adverse drug reactions to the patients. In another study by Palain et al,<sup>15</sup> 70% pharmacist were involved in identifying adverse drug reactions and 68% had an active role in preventing its occurrence which is similar to the findings of our study where 77% actively observed adverse drug reactions and 74% kept life-saving drugs to manage an emergency.

**CONCLUSION:** Pharmacists' play an important role in the health care delivery system. They have a wide range of activities ranging from the supply chain management to patient care. In spite of the high work pressure, experienced pharmacists' manage their activities better than the less experienced. Frequent training, sensitization will improve the efficiency. Focus on their core

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area of activity like supply chain management rather than multiple allied activities is essential to make the pharmacist have significant impact on public health and improve the health related quality of life in rural areas.

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Level of health care	Number of pharmacists posts sanctioned	Number of pharmacists participated
District Headquarter Hospital	1	1
Sub divisional Hospital	2	1
Area Hospital	9	7
Community Health Centre	11	9
Upgrade Primary Health Centre	5	4
Primary Health Centre (New)	87	85
Primary Health Centre	9	7

Table 1: Participation of pharmacists from different levels of health care

Name of Training Programme	Number of Pharmacists Trained	Percentage
Revised National Tuberculosis Control Programme	26	23%
Emergency Management Continuity Planning	3	3%
Public health logistic training	4	3%
National Vector Borne Disease Control Programme	19	17%
National Leprosy Eradication Programme	15	13%
National AIDS Control Organisation	6	5%
Supply chain management	19	17%

Table 2: Training of pharmacists on different health care programmes

Methods for Disposal of Expired Drugs	Number	Percentage (%)
Burning	50	44
Bury under soil	18	16
Return to supplier	25	22
No expiry as limited supply	4	3
Left as such	7	6
No response	10	9

Table 3: Methods adopted for disposal of expired drugs

Years of experience	Attend the patient		Counsel the patient		Keep life-saving drug		Training	
	Yes	No	Yes	No	Yes	No	Yes	No
< 10yrs	15(13%)	9(8%)	8(7%)	16(14%)	13(11%)	11(10%)	7(6%)	20(18%)

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10-20yrs	10(9%)	26(23%)	24(21%)	12(11%)	25(22%)	9(8%)	15(13%)	17(15%)
>20yrs	20(17%)	34(30%)	32(28%)	22(19%)	46(40%)	10(9%)	33(29%)	22(19%)
Chi-square value	7.52		6.90		6.78		8.45	
p value	0.02		0.03		0.03		0.01	

Table 4: Association between years of Experience and Role of Pharmacists'

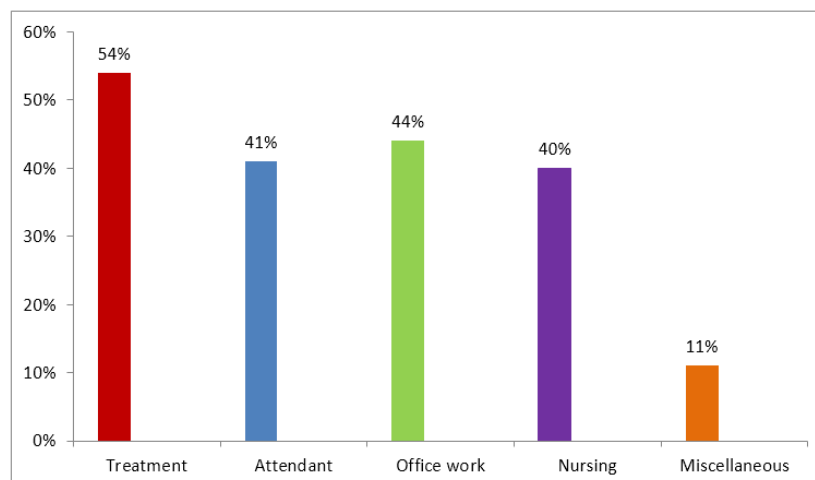


Figure 1: Role played by pharmacists' other than supply chain management (multiple response)

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