How to Cite:
Kumary, D. I., Jayakumari, S., Priya, E. P., & Jacob, J. A. J. (2022). A study on knowledge, attitude, practice of community pharmacist in dispensing OTC drugs for acute pain management: A cross sectional study. *International Journal of Health Sciences*, *6*(S2), 9549–9559. https://doi.org/10.53730/ijhs.v6nS2.7505

A study on knowledge, attitude, practice of community pharmacist in dispensing OTC drugs for acute pain management: A cross sectional study

D. Indra Kumary
Head of Department, Department of Pharmacognosy, School of Pharmaceutical Sciences, Vels Institute of Science, Technology and Advanced Studies(VISTAS), Pallavaram, Chennai, Tamil Nadu, India

S. Jayakumari
Head of Department, Department of Pharmacognosy, School of Pharmaceutical Sciences, Vels Institute of Science, Technology and Advanced Studies(VISTAS), Pallavaram, Chennai, Tamil Nadu, India
Corresponding author email: hodpcognosy@velsuniv.ac.in

E. Padhma Priya
Head of Department, Department of Pharmacognosy, School of Pharmaceutical Sciences, Vels Institute of Science, Technology and Advanced Studies(VISTAS), Pallavaram, Chennai, Tamil Nadu, India

J. Abel Joe Jacob
Pharm.D Intern, School of Pharmaceutical Sciences, Vels Institute of Science, Technology and Advanced Studies(VISTAS), Pallavaram, Chennai, Tamil Nadu, India.

***Abstract*---**Aim – The study aim is to show the knowledge, attitude and practice of community pharmacist in dispensing OTC drugs for acute pain management. Material and Methods- The study is carried out with a sample size of 233 participants. The study was carried out using questionnaire and google forms. Before conducting the study, ethical approval was obtained from the Institutional Ethical committee (IEC). The data were collected by questionnaire of 20 questions into 4 domains, where demographic details and questions regarding knowledge, attitude and practice of community pharmacist in dispensing OTC drugs for acute pain management. where asked among community pharmacist in Chennai. Result and Discussion- In our study questionnaire was circulated to 233 community pharmacist totally, but only 189 community pharmacist' have responded giving

Manuscript submitted: 27 March 2022, Manuscript revised: 18 April 2022, Accepted for publication: 9 May 2022

response rate of (81.1%) who is working as community pharmacies in Chennai. Majority of community pharmacist responded from the age group above 18-28 years 132(69.8), Most of response were from male participants 106 (56.08) and education qualification were 118(62.4). The study result shows that community pharmacist 72% knowledge regarding OTC drugs for acute pain management. Most of the community pharmacist prescribe Paracetamol (70.8%) for acute pain management. And NSAIDs like Ibuprofen (29.2%).Conclusion- The present study concluded that community pharmacist has good knowledge, attitude and practice about dispensing the OTC drugs regarding acute pain management.

***Keywords*---**community pharmacist, acute pain management, paracetamol.

Introduction

The non-prescriptive medicine or over-the-counter medication (OTCs) are the medicine that are purchased while not prescription. There are presently quite 300000 completely different over-the-counter medicine offered solely in US. [1,2] The list of over-the-counter medicine within the fashionable society is over increasing with the inclusion of latest formulations and prescription to over-the-counter switches. [3,4] because the general rule over-the-counter medicine got to be primarily accustomed treat a condition that doesn't need the direct oversight of a doctor and should be verified to be moderately safe and well tolerated. there's no regulation for the utilization of over-the-counter medicine in Asian nation. any within the absence of strategic thought for the utilization of over-the-counter medicine, chaos prevails and therefore the reasons for these sinister things are manifold. Perhaps, the poor economic standing and busy style of a personal makes him have faith in the over-the-counter medicine. In Asian nation (1995), it's been shown that literate folks were seventy-six additional doubtless to self-medicate than illiterate folks. [5] it's evident with analysis that self-care improves the health care awareness and reduces the economy associated with health care. [6,7] though over-the-counter medicine are believed to be safe and effective, so they're not. They mask the underlying illness and will cause many adverse effects. [8]

Today, we are able to observe a continuing growth of the self-medication development among patients, that might be related to the augmented range of medicine that are offered while not a prescription. beyond question, self-medication will have some blessings, like obtaining patients additional concerned in their treatment, that ends up in a rise within the correct use of medicines. On the opposite hand, self-medication will result in adverse events, exacerbate symptoms, and, consequently, worsen prognoses, notably among inveterately sick patients and therefore the senior. Moreover, the overuse of over-the-counter medicine is harmful, particularly once these products are distributed while not skilled recommendation and once there are some doubts related to the conditions during which the medicine were hold on. [9] It ought to be highlighted that the shortage of skilled recommendation and uncertain storage conditions are

additional common in non-pharmacy retailers. Pharmacist' might play a very important role in preventing drug-related issues related to over-the-counter medicine and In recent years there has been Associate in Nursing increasing trend in self-medication with non-prescription medicine [sometimes noted as over-the-counter (OTC) medicines] offered in pharmacies and in stores. In parallel, additional product is deregulated for purchase while not a prescription. [10] The release method has been championed by the pharmaceutical business, the pharmacy profession and government health policy manufacturers and is supported by the read that patients would like to own a bigger role in their treatment decisions. [11]

Self-medication conjointly has blessings for care systems because it facilitates higher use of clinical skills of pharmacist', will increase access to medication and will contribute to reducing prescribed drug prices related to in public funded health programmes.[12] but, increasing accessibility of non-prescription medicines might encourage patients to believe that there's a drug treatment for each upset. what is more, the utilization of such product might delay/mask the identification of significant unhealthiest, [13] with augmented risks of interactions and adverse reactions and of self-treatment being undertaken once treatment ought to be wanted. [14,15] there's conjointly the potential for misuse and abuse of such product. [16]

Objectives

1. To examine the knowledge, attitude, practice of community pharmacist' in dispensing OTC drugs for acute pain management.
2. To determine the knowledge, attitude, practice of community pharmacist' in dispensing OTC drugs for acute pain management.

Materials and Methods

The study is carried out with a sample size of 233 community pharmacist in Pallavaram, Chennai. The sample size is calculated according to the formula. The study was carried out via questionnaires and google forms. The study is a cross – sectional study using E- Questionnaires. Before conducting the study, ethical approval was obtained from the Institutional Ethical committee (IEC).

Data collection and procedures

A physician validated Questionnaire containing 20 questions is made and students to evaluate knowledge, attitude and practice of community pharmacist in dispensing OTC drugs for acute pain management in pallavaram, Chennai self-administered questionnaires. The Questionnaires which is distributed among community pharmacist. The survey consists of demographic characteristics such as age, gender, education qualification, experience and 3 sections contain question regarding knowledge, attitude, and practice of dispensing of OTC drugs used for acute pain management. The filled online questionnaires will be submitted to investigators. The inclusion criteria for selecting the participants in this study is only community Pharmacist are included in the study and other than community pharmacist and hospital pharmacist are excluded. The

statistical analysis was calculated based on review performed on Questionnaire, where the values were expressed as percentage or as mean and which is obtained by using MS- excel sheet.

Results

All the questions from the questionnaire provided the information needed to frame the result and helps to assess the knowledge, attitude and practice of dispensing OTC drugs used for acute pain management. The data were collected by questionnaire of 20 questions into 4 domains, where demographic details and questions regarding knowledge, attitude and practice of dispensing OTC drugs used for acute pain management where asked. In our study questionnaire was circulated to 233 community pharmacist' totally, but only 189 community pharmacist' have responded giving response rate of (81.1%) who is working as community pharmacist Chennai.

Table 1 shows the demography details of the respondents which are obtained from the individual self-report from the questionnaire

Characteristics	No (%)
Gender	
Male	106 (56.08)
Female	83 (43.9)
Age	
18 – 28	132 (69.8)
29 – 38	48 (25.4)
39 – 48	9 (4.8)
Education Qualification	
Illiterate	7 (3.7)
High school	19 (10.05)
Diploma	45 (23.8)
Graduation	118 (62.4)
Experience	
1-2	57 (30.2)
2-4	109 (57.7)
4-6	13 (6.9)
>6	10 (5.3)

The data were collected by self-administered questionnaire of 20 items into 4 domains. The majority of the respondents were Male (56.08%) Female (43.9%). The majority of the respondents were belonging to the age group of 18-28 (69.8%) 29-38 (25.4%) and the lowest respondents were 39-48 (4.8%). The majority of the respondent's education qualification were Graduation (62.4%) Diploma (23.8%) High School (10.05%) and the lowest respondents were Illiterate (3.7%). The majority of the respondent's years of experience were 2-4 (57.7%) 1-2 (30.2%) 4-6 (6.9%)and the lowest respondents were >6 (5.3%).

Table – 2 shows the attitude towards OTC drugs used for acute pain management which is obtained from the individual's self-report from the second section of the questionnaire

S.No	Questions	Numbers	Percentage
1.	Attitude towards patient expectation a) Paracetamol b) NSAIDs	 128 61	 67.7% 32.2%
2.	Attitude towards the drugs prescribed by most pharmacist' a) Paracetamol b) NSAIDs	 134 55	 70.8% 29.1%
3.	What is the experience of cure from the drugs? a) Completely b) Somewhat reduced c) Feeling better	 65 15 109	 34.3% 7.9% 57.6%
4.	Do you think where the drugs cause any side effects? a) Yes b) No c) Maybe d) Sometimes	 12 121 12 44	 6.3% 64% 6.3% 23.2%
5.	Do you ask the cause of the pain to the patients? a) Yes b) No c) Sometimes	 79 33 77	 41.7% 17.4% 40.7%
6.	Do you ask the symptoms of the pain like numbness, tingling, burning sensation to the patient? a) Yes b) No c) Sometimes	 133 6 50	 70.3% 3.1% 26.4%

The data were collected by self-administered questionnaire of 20 items into 4 domains. The majority of the respondent's attitude towards patient expectation

were Paracetamol (67.75%) and NSAIDs (32.2%). The majority of the respondent's attitude towards the drugs prescribed by the most pharmacist were Paracetamol (70.8%) and NSAIDs were (29.2%). The majority of the respondents the experience of cure from the drugs were Feeling Better (57.6%) Completely (34.3%) and the lowest response were Somewhat reduced (7.95%). The majority of the respondents where the drugs cause any side effects were No (64%) Sometimes (23.2%) and the lowest responses were Yes (6.3%) Maybe (6.3%). The majority of the respondents for do you ask the cause of the pain to the patients were Yes (41.7%) Sometimes (40.7%) and the lowest response were No (17.4%). The majority of the respondents for do you ask the symptoms of the pain like numbness, tingling, burning sensation to the patient were Yes (70.3%) Sometimes (26.4%) and the lowest response were No (3.1%).

Table – 3 shows the knowledge towards OTC drugs used for acute pain management which is obtained from the individual's self-report from the third section of the questionnaire.

S.No	Questions	Numbers	Percentage
7.	Do you prescribe medications without asking any questions about previous medication? a) Yes b) No c) Maybe d) Sometimes	 9 113 27 20	 4.7% 59.7% 14.2% 10.5%
8.	Which formulation do you prefer for acute pain management? a) Tablet b) ointment c) Gel d) Spray	 163 15 5 6	 86.2% 7.9% 2.6% 3.1%
9.	Do you suggest non drugs treatment to the patients? a) Yes b) No c) Maybe d) Sometimes	 24 122 20 23	 12.6% 64.5% 10.5% 12.2%
10.	Do you think whether OTC drugs encourage self-medications among patients for acute pain management? a) Yes b) No c) Maybe d) Sometimes	 13 40 77 59	 6.8% 21.1% 40.7% 31.2%
11	Do you update your knowledge regarding OTC drugs acute pain management?		

	a) Yes b) No c) Maybe d) Sometimes	155 4 10 20	82% 2.1% 5.2% 10.5%

The data were collected by self-administered questionnaire of 20 items into 4 domains. The majority of the respondents for whether you prescribe medication without asking any question about previous medication were No (59.7%) Maybe (14.2%) Sometimes (10.5%) and the lowest were Yes (4.7%). The majority of the respondents for which formulation do you prefer for acute pain management were Tablet (86.2%) Ointment (7.9%) Spray (3.1%) and the lowest were Gel (2.6%). The majority of the respondent for suggestion for non-drug treatment to the patient were No (64.5%) Yes (12.6%) Sometimes (12.2%) and the lowest were Maybe (10.5%). The majority of the respondents for whether OTC drugs encourage self-medication among patients for acute pain management were Maybe (40.7%) Sometimes (31.2%) No (21.1%) and lowest respondents were (6.8%). The majority of the respondents for update your knowledge regarding OTC drugs acute pain management were Yes (82%) Sometimes (10.5%) Maybe (5.2%) and the lowest response were No (2.1%).

Table – 4 shows the practice towards OTC drugs used for acute pain management which is obtained from the individual's self-report from the third section of the questionnaire

S.No	Questions	Numbers	Percentage
12.	Do you advice patients to consult a doctor? a) Yes b) No c) Maybe d) Sometimes	 54 10 30 95	 28.5% 5.2% 15.8% 50.2%
13.	Whether you provide information to customers on the use of medication? a) Yes b) No c) Maybe d) Sometimes	 133 12 14 30	 70.3% 6.3% 7.4% 15.8%
14.	Whether you provide oral / written instruction to patients about the drugs, a) Yes b) No c) Maybe d) Sometimes	 149 7 10 23	 78.8% 3.7% 5.2% 12.1%
15.	Do you council patient before dispensing drug for acute pain management? a) Yes	 150	 79.3%

	b) No c) Maybe d) Sometimes	9 10 20	4.7% 5.2% 10.5%
16.	Can you ask the patient about the experience of the medications? a) Yes b) No c) Maybe d) Sometimes	 10 95 29 55	 5.2% 50.2 15.3% 29.1%
17.	Do you ask the patient whether the patient having any other health problems? a) Yes b) No c) Maybe d) Sometimes	 165 4 10 10	 87.3% 2.1% 5.2% 5.2%
18.	Do you ask whether the patient has desired effects on the drugs? a) Yes b) No c) Maybe d) Sometimes	 133 16 17 23	 70.3% 8.4% 8.9% 12.1%
19.	Do you suggest any lifestyle modification to the patient for acute pain management? a) Yes b) No c) Maybe d) Sometimes	 48 15 35 91	 25.3% 7.9% 71.4% 48.1%
20.	On which basis you select drug for acute pain management? a) Effectiveness b) Cost c) Both	 152 0 37	 80.4% 0% 19.5%

The data were collected by self-administered questionnaire of 20 items into 4 domains. The majority of the respondents for whether you advice patient to consult a doctor were Sometimes (56.2%) Yes (28.1%) Maybe (15.8%) and the lower respondents were No (5.2%). The majority of the respondents for whether you provide information to patients on the use of medication were Yes (70.3%) Sometimes (15.8%) Maybe (7.4%) and the lowest response were No (6.3%). The majority of the respondents for whether you provide oral/ written instruction to patients about the drugs were Yes (78.8%) Sometimes (12.1%) Maybe (5.2%) and the lowest respondents were No (3.7%). The majority of the respondents for whether you council patient before dispensing drugs for acute pain management

were Yes (79.3%) Sometimes (10.5%) Maybe (5.2%) and the lowest respondents were No (4.7%). The majority of the respondents for can you ask the patient about the experience of the medication were No (50.2%) Sometimes (29.1%) Maybe (15.3%) and the lowest response were Yes (5.2%). The majority of the respondents for whether you ask patient whether the patient having any other health problems were Yes (87.3%) Maybe (8.4%) Sometimes (8.9%) and the lowest respondents were No (2.1%), The majority of the respondents for whether the patient has desired effects on the drugs were Yes (70.3%) Sometimes (12.1%) Maybe (8.9%) and the lowest respondents were No (8.4%). The majority of the respondents whether you suggest any lifestyle modification to the patient for acute pain management were Sometimes (48.1%) Yes (25.3%) Maybe (18.5%) and the lowest respondents were No (7.9%). The majority of the respondents for basis for selection of drugs for acute pain management were Effectiveness (80.4) Cost (0%) Both (19.5%).

Discussion

Many previous studies were conducted regarding usage and dispensing of OTC drugs in general public and community pharmacist. Currently the present study shows about knowledge, attitude and practice of community pharmacist in dispensing of OTC drugs for acute pain management. As per my knowledge this was the first study conducted for community pharmacist in Chennai to evaluate the knowledge, attitude and perception in dispensing OTC drugs for acute pain management. The study results show the community pharmacist have 72% knowledge regarding OTC drugs for acute pain management. Most of the community pharmacist prescribe Paracetamol (70.8%) for acute pain management. And NSAIDs like Ibuprofen (29. 2%).From the result it shows that most of the pharmacist prefer Tablet formulation for Acute pain management. And the pharmacist update their knowledge regarding OTC drugs were GOOD (82%).

Conclusion

The results of this study shows that knowledge, attitude, and performance of community pharmacist' in prescribing OTC medicines in the field of acute pain management were GOOD. And also these study concludes that there is enough knowledge regarding the application of OTC drugs used for the treatment of acute pain. Therefore, Training programs such as educational pamphlets and continuing educational seminars may play important roles in increasing pharmacist" knowledge and therefore improving their performance in prescribing OTC medicines**.**

References

1. Parikh D, Sattigeri BM, Kumar A, Brahmbhatt S. A survey study on use of over the counter (OTC) drugs among medical students, nursing and clerical staff of a tertiary care teaching rural hospital. Int J Res Med Sci. 2013 Apr;1(2):83-6.
2. Hughes CM, McElnay JC, Fleming GF. Benefits and risks of self-medication. Drug safety. 2001 Dec;24(14):1027-37.

3. ira IJ. Present condition of self-medication among general population of Comilla district, Bangladesh. The Pharma Innovation. 2015 Mar 1;4(1, Part B):87.
4. Dineshkumar B, Raghuram TC, Radhaiah G, Krishnaswamy K. Profile of drug use in urban and rural India. Pharmacoeconomics. 1995 Apr;7(4):332-46.
5. Lau JT, Yu A, Cheung JC, Leung SS. Studies on common illnesses and medical care utilization patterns of adolescents in Hong Kong. Journal of adolescent health. 2000 Dec 1;27(6):443-52.
6. Shankar PR, Partha P, Shenoy N. Self-medication and non-doctor prescription practices in Pokhara valley, Western Nepal: a questionnaire-based study. BMC family practice. 2002 Dec;3(1):1-7.
7. Sleath B, Rubin RH, Campbell W, Gwyther L, Clark T. Physician–patient communication about over-the-counter medications. Social science & medicine. 2001 Aug 1;53(3):357-69.
8. Hardon A, Geest SV. Hazards of self-medication. InWorld health forum 1987; 8 (4): 469-471 1987.
9. Bond CM. POM to P-implications for practice pharmacist'. Primary Care Pharmacy. 2001; 2:5-7.
10. Yousef AM, Al-Bakri AG, Bustanji Y, Wazaify M. Self-medication patterns in Amman, Jordan. Pharmacy World & Science. 2008 Jan 1;30(1):24-30.
11. Bradley CP, Bond C. Increasing the number of drugs available over the counter: arguments for and against. British Journal of General Practice. 1995 Oct 1;45(399):553-6.
12. Pronk MC, Blom AT, Jonkers R, Bakker A. Evaluation of patient opinions in a pharmacy-level intervention study. International Journal of Pharmacy Practice. 2003 Sep;11(3):143-51.
13. Honig PK, Gillespie BK. Drug interactions between prescribed and over-the-counter medication. Drug Safety. 1995 Nov;13(5):296-303.
14. Ratassepp T, Shagandina A, Turunen J, Ahonen R, Heinämäki J, Volmer D. Counseling in the use of personal medical devices and drug-delivery products—A traditional or extended community pharmacy service. Farmacia. 2015 May 1; 63:388-93.
15. Akram G. Over-the-counter medication: an emerging and neglected drug abuse? Journal of Substance Use. 2000 Jan 1;5(2):136-42.
16. Wazaify M, Shields E, Hughes CM, McElnay JC. Societal perspectives on over-the-counter (OTC) medicines. Family practice. 2005 Apr 1;22(2):170-6.
17. De Almeida Neto AC, Benrimoj SI, Gomel M, Fois R. Innappropriate Self-Medication Practices: A Pharmacy-Based Intervention. Journal of Social and Administrative Pharmacy. 1996; 13:131-8.
18. Paxton R, Chapple P. Misuse of over-the-counter medicines: a survey in one English county. Pharmaceutical journal. 1996;256(6881):313-5.
19. MacFadyen L, Eadie D, McGowan T. Community pharmacist" experience of over-the-counter medicine misuse in Scotland. The journal of the Royal Society for the Promotion of Health. 2001 Sep;121(3):185-92.
20. Erwin J, Britten N, Jones R. General practitioners' views on over the counter sales by community pharmacist'. BMJ. 1996 Mar 9;312(7031):617-8.
21. Hughes GF, Bell HM, McElnay JC. General practitioners' awareness of the appropriate and inappropriate use of over-the-counter products. Pharmaceutical Journal. 1999;263: R29-.

22. McElnay JC, Nicholl AJ, Grainger-Rousseau TJ. The role of the community pharmacist—a survey of public opinion in Northern Ireland. International Journal of Pharmacy Practice. 1993 Jul;2(2):95-100.
23. Bell HM, McElnay JC, Hughes CM. Societal perspectives on the role of the community pharmacist and community-based pharmaceutical services. Journal of Social and Administrative Pharmacy. 2000;17(2):119-27.
24. McElnay JC, Nicholl AJ, Grainger-Rousseau TJ. The role of the community pharmacist—a survey of public opinion in Northern Ireland. International Journal of Pharmacy Practice. 1993 Jul;2(2):95-100.
25. Bell HM, McElnay JC, Hughes CM. Societal perspectives on the role of the community pharmacist and community-based pharmaceutical services. Journal of Social and Administrative Pharmacy. 2000;17(2):119-27.