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Original article

Characteristics, Perspectives, and Experiences of Cyproheptadine Users at Community Pharmacies in the Context to Prescription Medication Misuse

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Corresponding Email. mus.alhudiri@sebhau.edu.ly	ABSTRACT
Received : 08-08-2024 Accepted : 25-10-2024	Some people abuse the antihistamine medication cyproheptadine in an attempt to reach their desired shape, weight, and appearance. This study aims to investigate the characteristics of cyproheptadine misusers as well as their behaviors, perceptions,
Published : 07-11-2024	experiences, and sources of information regarding using this medication. A descriptive cross-sectional study was carried out in Sebha City among customers of community pharmacies. Each customer who has taken cyproheptadine was invited to participate in this research. The data was collected from April 2022 until Soutember 2022. Almost all of the participatts ($\pi = 00$
Keywords . Cyproheptadine, Misuse Medications, Community Pharmacy.	September 2022. Almost all of the participants ($n=99$, 96.1%) reported they purchased cyproheptadine from community pharmacies and obtained the drug without a prescription $n=79$ (76.7%). Over half of the respondents ($n=53$, 51.5%) use this drug for increasing appetite, compared to ($n=25,24.3\%$) and ($n=19$, 18.4%) respondents who said they used it to improve their shape
Copyright : © 2024 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution International License (CC BY 4.0). <u>http://creativecommons.org/licenses/by/4.0/</u>	and lose weight, respectively. Most participants indicated they were unaware of other uses of a drug (n=72, 69.9%) or its side effects $(n=61, 59.2%)$. Furthermore, twenty participants (19.4%) denied receiving information concerning the precautions and contraindications of using cyproheptadine. The highest rate of source of drug information reported by participants was "friends or family member" $(n=34,33\%)$ followed by pharmacists $(n=29, 28.2\%)$. Community pharmacies must employ qualified
C ite this article. Alssageer M, Alsahref A, Abdelqader M. Characteris	pharmacists on staff to give customers trustworthy information regarding prescription pharmaceuticals such as cyproheptadine.

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INTRODUCTION

Prescription drugs may have undesirable harmful side effects on the body, even when their main purpose is to treat a specific illness or condition. Misuse of prescription drugs is defined as using a medication in a way that is different from how a doctor prescribed it. The availability of these pharmaceuticals has increased, which has led to a major increase in their misuse and non-medical use [1,2]. People's perceptions of their bodies and weight are influenced by social conventions and culture, and it is thought that these perceptions are important needs that people want to be fulfilled [3]. In many African and Arabic countries, heavier bodies represent wealth, health, and power and thus, become a symbol of beauty [4]. Conversely, thinness has become a symbol of poverty and illness and where women overfeed to induce body weight gain. [5]. As result, some people could turn to drugs and therapies to improve their physical size and



appearance[3]. The use of medications was an important option for gain weight and increase body size. The appetite and growth stimulating properties of cyproheptadine were first reported by Lavenstein et al in 1962.[6].

Cyproheptadine hydrochloride is a serotonin and histamine antagonist approved by the FDA for use in children for allergic rhinitis, allergic conjunctivitis, urticaria, dermatographism and mild angioedema. Unexplained weight gain has been observed in patients taking cyproheptadine [7]. Cyproheptadine as an appetite stimulant has been tried in patients with HIV infection with doses from 4 mg oral twice daily to four times daily [8].

Appetite-stimulant drugs are widely used without a prescription or medical supervision to gain body weight and improve the outlook. people seek community pharmacies to purchase these drugs such as cyproheptadine in order to improve their body weight a, body shape, and beautiful appearance. The study's objectives are to the characteristics of those who misuse cyproheptadine in Sebha City, assess its effects as perceived by users, the causes of this misuse, and the sources from which users learn about the drug's use. Thus, this research will provide a better understanding of the beliefs and behaviors of cyproheptadine users, which is essential for promoting rational drug use.

METHODS

Study design and setting

This was a cross-sectional study conducted among general population who visit community pharmacies in Sebha city different locations. All customers who have used cyproheptadine were asked to participate voluntarily in this study. Subjects were asked to complete a questionnaire. questionnaire was developed based on previous studies[9][10]. Most of the questions were closed-ended. The study period of collecting data was from April 2022 until September 2022.

Data collection

Participants were invited to voluntary participate in the anonymous survey and each survey from as accompanied by the cover letter, supplied with attached questionees. The objectives of study were also personally explained to all participants. If agreeable to participation, the persons were provided with the questionnaire to complete at a convenient time. After completion, the survey was handed for collection by the chief researcher. All adults who visit community pharmacy and who declared that they were currently using or who had ever used it within the past are targeted to participate in this study. The survey was offered to consumer of cyproheptadine while they were waiting to be seen at the community pharmacy.

Questionnaire development and content

The survey contained 24 item questions that required varied response types. Most questions required specific categorical answers but some questions included an "other" box to allow for more expressive answers. The questionnaire was translated to Arabic language form. The questionnaire was designed to incorporate four principal sections: The content of the first part of the questionnaire included socio-demographic variables (gender, age, education level, and marital status); while the other sections include inquires related to the information about how the participant using of cyproheptadine. duration and frequency of use; reasons of use, knowledge of participant about cyproheptadine, experience of participant from using the medicine, and participant opinion about using cyproheptadine.

The investigators requested costumer verbal consent and used an informative brochure to explain the purpose of the survey. They also explained that the questionnaire was anonymous and should be deposited in a box located outside the clinic in order to guarantee confidentiality.

Statistical analysis

Data were collected in an Excel database by the researchers and were analyzed using Statistical Packages for Social Sciences (SPSS), version 18. A SE β 95% and a lower level of significance α 0.05 were considered.

RESULTS

103 of the 125 surveys that were handed out in community pharmacies were completed and returned, yielding an 82.4% response rate. Based on data represented in table 1, participants in the age categories (18–29) represented by n=60(58%) and age group (30–39) accounted with n=29(28.1%) which made up the majority of those from young age groups under 40 (86%). The majority of respondents were females (n = 78, 75.7%) and singles (n = 66, 64%) with university level reported with (n=75, 72.8%). According to occupation categories, employee participants had the highest rate of user cyproheptadine (n=37.9, 39%), followed by students (n=25, 24.3%).



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	House wife	14	13.6					
	Unemployment	10	9.7					
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Table 1. Characteristic of participants

According to the data represented in figure 1a, more than half of the participants used the drug for the purpose of stimulating appetite 53(51.5%), followed for regain losing of weight 25(24.3%) and for shape improvement 19(18.4%). The lowest rate of participants reported they used it for health problems which accounted for with 6(5.8%). Almost of the participants declared they bought cyproheptadine from private (community) pharmacies which accounted for 99(96.1%) which is represented in figure 1b. The majority of participants stated obtained the drug without a prescription with represented 79(76.7%) compared with who took the medicines by prescription were represented 24(23.3%), as shown in figure 1c.

The data represented in the figure 1d showed that when the participants were asked about the source of their information about the drug, the highest rate of participants indicated that obtained it from a friend or family member n=34 (33%), followed by pharmacists with a percentage 29(28.2%) and doctors were 18(17.5%), while minorities were reported by participants claim that internet, their-self, paper advertisements which represented by 12(11.7%), 9(8.7%), and 1(1%) of respondents; respectively.

According to data in table 2, just over the half of participants 53(51.5%) claim they obtain information from the doctor or pharmacist before using the drug. The majority of participants indicated they do not know any other use of a drug which accounted with 72(69.9%), while 31(30.1%) of respondents reported they know the other uses of cyproheptadine. the majority of participants indicated they did not know what are the side effects of a drug and did not use any other appetite-stimulating drug with 61 (59.2\%) and of 69(67%) respectively.

The majority of participants disagreed using of the drug without a prescription by percentage 42(40.8%) compared with participants who agreed allowing costumer to have the drug without prescription which accounted with 35(34%). The majority of participants 88(85.4%) did not agree to sell the drug in places other than pharmacies. However, the majority of participants do not agree to the use of the drug for children without consulting a doctor with a percentage of n=84 (81.6\%) compared with 84(81.6%) of participants who disagreed.



The majority of participants prefer to use the drug preparation that bears images of fruits with a percentage of 64(62.1%), while those who prefer the type of manufacturer have a percentage of 27(26.2%). Minority of respondents 9(8.7%) preferred the content of packaging label of drug free from any picture. The majority of participants support printed advertising in pharmacies that promote this drug using fruit pictures, with a percentage of n=47 (45.6%) compared with n=20(19.4%) of respondents who disagreed (table 2).

Over one-third of participants, 36 (35%) indicated they used a drug for more than one month, followed by respondents who used the drug for a period ranging between 3 to 4 weeks which accounted for 32(31.1%) (Figure 2b). Nearly, half of participants were satisfied with the result of their using the drug which accounted for 47(45.6%) (Figure 2c). The majority of participants 88(68.22%) reported that they were feeling sleepy while they were using the medicine while 26(20.15%) of participants indicated they get an increase in their body weight.

A minority of participants declared they had experience headaches, anxiety, insomnia, or digestive problems concurrently using cyproheptadine according to data represented in figure 2d. When the participants were asked about advising others to use the drug, the nearly half of the participants were (yes) by percentage 47(45.6%). When the participants were asked about where they prefer to obtain information about the drug, the majority of the answers were from the doctor with percentage 50(48.5%) while they were taken from the pharmacist by percentage 32(31.1%) (Figure 2d). The majority of participants were not alerted about the risks of using the drug 46(44.7%), while the people who were often alerted were their percentage n=20 (19.4%) (Figure 2e).



Figure 1. a) Results of reason of using drug; b) place of acquiring drug; c) how to get drug; d) source of drug information

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Questions	Yes	No	I don't know	Total
Do you advise others to use the drug	47(45.6)	19(18.4)	37(35.9)	103(100)
Do you know any other use of drug	31(30.1)	72(69.9)	0	103(100)
Should you Asking and enquire information about the drug from pharmacist or physician before using drugs	53(51.5)	50(48.5)	0	103(100)
Did you know the side effect	42(40.8)	61(59.2)	0(0)	103(100)
Have you told your doctor about your medication use?	34(33)	69(67)	0(0)	103(00)
Do you agree to use the drug without a prescription	35(34)	42(40.8)	26(25.2)	103(100)
Do you agree allowing other pharmacies places to sell the drug	8(7.8)	88(85.4)	7(6.8)	103(100)
Do you agree use of Drug for children without doctor	9(8.7)	84(81.6)	10(9.7)	103(100)
Do you agree to printed advertisements in pharmacies for this drug	47(45.6)	20(19.4)	36(35)	103(100)

Table 2: Attitude and knowledge of participants

DISCUSSION

The high response rate (82.4 %) of this study could be related to some factors that address the questionnaire design and or targeted respondents. The factors related to the questionnaire could be clarity, short, relevant in-person survey while targeted respondents who already have experience with the topic considered the main respondent factors. Beebe et al indicated that addressing these multiple factors during the research design can increase the survey's response rate [11] The serious misuse of appetite-stimulating drugs is not the widespread use of these drugs by the populace in developing nations like Libya; rather, it is the complications of this misuse of prescribed drugs that are known to have side effects in the absence of a strong healthcare system that can encourage responsible drug use in society. In Libya, nothing is known about how people misuse prescription medications.

Therefore, it is important to assess the public knowledge and practice of the misuse of prescribed medications through cyproheptadine example. The present study found that the majority of participants (94.2%) who used cyproheptadine for off-label use including more than half of the participants used the drug for the purpose of stimulating appetite which accounted for n=53 (51.5%), followed to less extent for regain loss of weight and for shape improvement. Although the above reasons seem separate reasons, they can be considered one reason, which is the improvement of body image. Similar finding was reported in Saleh's study where found that participants who using cyproheptadine as appetite-stimulant for increasing body weight which accounted with 110 (48%), while (37%) of subjects used it to improve shape, and minority(15%) for health problems[9].According to Cash, physical appearance is not merely a fixed, unchanging attribute as a result, people can change their physical appearance in order to govern and control their self-and social-image[12].

Several studies have indicated that there is a strong association between self-perceived weight status and weight control behavior. The current study revealed that more female participants who enrolled in this study based on using cyproheptadine were more than males which represented by n=78 (75.7%) and n=25(24.7%) respectively which represented a ratio of 3:1. Similar trend was found in the study was conducted in Iraq which indicated the male respondents were 30% compared with 70% females [9]. This trend of the majority of respondents females could be related to expected cultural behavior in that females were more likely to improve their looks [9]. Drugs, overfeeding and restriction of physical activity were the ways used by women to achieve their goal (fattening) [5]. Therefore, social pressures exert a greater influence on women than men to maintain a slim figure because attractiveness of the image of the body and its sense of are strongly associated with self-esteem of the person.

In the same manner, regarding age groups, the majority of participants in this study from young age groups less than 40 years (86%) may represent those young females more likely to use cyproheptadine for improving their body shape compared with males and older ages. In concordant with our results, Studies[13][14] on body image satisfaction related to gender and age differences found that young females are more likely to be dissatisfied with their body image compared with old females or males. As for preferences for the ideal body shape for females, Musaiger et al study found that older women (40+ years) were more likely to select a thin body shape than younger women [15]. A longitudinal study found that females have higher body dissatisfaction than males as well as higher in younger than older participants [16]. Thus,

the present research has reinforced the link between age and gender variables' influence on using appetite stimulants in order to improve body shape.

The desirability of a particular body size is not simply personal opinion or independent choice, but is influenced by cultural factors. WHO/EMRO (1989) reported that the current cultural preference in the eastern mediterranean countries is for heavier women than is the case in the Western region.[17]. In many African and Arabic countries, being overweight has been associated with beauty, prosperity, health, and fertility [15][4]. Conversely, thinness has become a symbol of poverty and illness[18] and where women overfeed to induce body weight gain [5]. In the United States some black females living been dissatisfied with their weight, because they wish to be heavier than their current weigh [19]. A single women could be more likely to pay an effort to be attractive by seeking to be satisfied with their body image than married women. Ramshida and Manikandan found that Unmarried females like cosmetics to a greater extend in comparison to married females [20]. Consistency, the present study, showed that the majority of participants n=66(64%) who use cyproheptadine were single compared to just over one-third of participants n=37(36%) was married and predominantly of the married participants were women.

The present study found that although that less than half of participants (40.8%) disagreed use of the drug without a prescription, participants who took the medicines by prescription were represented n=24 (23.3%), meanwhile the majority of participants obtained the drug without a prescription with a percentage of n=79 (76.7%). Similar trend was reported in Iraq study which found that (32%) of subjects indicated the used appetite-stimulant drugs through physician prescribed or under medical supervision (68%) of subjective used these drugs without prescription[9]. However, a higher tendency was noted in a study on the population of Kinshasa, Congo, which revealed that the majority of users (92.6%) obtained cyproheptadine through self-request medication [10].

Dispensing prescribing drugs and selling over-the-counter medications are the important missions of community pharmacies. This study found that almost of the participants declared they bought cyproheptadine from private pharmacies which accounted for n=99 (96.1%). This finding in line with alssageer et al study which found that purchasing medications without prescription or over-the-counter medications the second reason of visiting community pharmacy in Sebha city[21]. Under health regulations and ethical practices of the pharmacy profession, pharmacists are not allowed to dispense such medicines without a valid written prescription by physicians.

Regarding the period of administration of cyproheptadine, over two-thirds of participants (66%) used a drug for at least three weeks. this long period of medicine administration which may continue over months could be related to the satisfaction with the result of this medicine use particularly when the user self-requested it without a prescription. The present study showed that nearly half of participants (45.6%) were satisfied with the result of their using the drug compared with those were unsatisfied (28.2%).

Irrational use of drugs or without professional guidance are a serious problem throughout the world. The World Health Organization notes that information about how to take a medication, potential adverse effects, monitoring, potential interactions, warnings, length of use, etc. must be provided with the medication for responsible self-medication to occur. [22]. The current study revealed that (45.6%) of participants took the drug once daily and similar rate eating twice daily (44.7%). The majority of participants take drugs before eating with a percentage of n=61 (59.2%) followed by over one-quarter of respondents=28 (27.2%) declared they take it after eating, while participants reported they took this medicine irregularly which were represented by n=14 (13.6%). This variation in cyproheptadine dosage administrations may imply that the instruction of such drug use from the community pharmacists was inadequate since such appetite stimulants were dispensed by them. Hamelr et al reported that a patient who medicated himself without a prescription has more incidence of having improper treatment than a patient who has been instructed or received guidance in drug use from physicians[23]. Improper use of prescribed drug such cyproheptadine could be cause serious health problems. From the Literature, Cyproheptadine can reportedly produce serious side effects especially when taken in overdose; that includes hallucinations, convulsions, central nervous system depression and sudden cardiac arrest[24].

Regarding to drug information source participants were asked about their source of information about the cyproheptadine, it became clear that A friend or family member was the highest rate source of information obtained which reported by (33%) followed by pharmacists with a percentage (28.2%) and doctors were (17.5%), similar trends was reported in Lulebo et al study [10].

These findings showed cyproheptadine use more likely recommended by non-professional persons which could undermine the rational use of drugs and leading to serious health consequences. Pharmacists, and community pharmacy staff, already play a essential role in supporting and providing drug informational rational drug use as well as offering warn them about the harmful and undesirable effects of some drugs. Although the present study found the majority of participants admitted they requested the cyproheptadine from community pharmacies and majority of them (85.4%) opposed to sell these products out of the community pharmacies, only (28.2%) of participants consider the pharmacist



as the main source of information about cyproheptadine. This finding on line with other Libyan study which conducted in Tripoli which found that only 8% of community pharmacy consumers relied on pharmacist's advice on purchasing of non-prescription medicines[25]. The present study found that the majority of participants do not adequate information regarding cyproheptadine about other uses, side effects and nearly half of participants (48.5%) denied the obtain information regarding this drug from the doctors or pharmacists. Meanwhile, when the participants were asked about where they prefer to obtain information about the drug, (48.5%) of the answers were from the doctor with and (31.1%) from pharmacist. WHO has recommended a distinctive role for pharmacists, particularly ensuring safety and effective administration of drugs[26].

Based on this result, people dealing with cyproheptadine as OTC product and they self-requested from community pharmacy and surprisingly, the majority of participants (85.4%) do not agree to sell the drug in places other than pharmacies. In Libya as many other countries, there is an acute shortage of pharmacists practicing in community settings including community pharmacies and some community staff were non-pharmacist. Furthermore, the public had a negative attitude toward pharmacists and low expectations of the pharmacy profession [25]. The present study found that the nearly a half of participants(44.7%), were not alerted about the precautions and contraindications of using the drug while only (19.5%) of respondents were often alerted. Therefore, the absence of qualified pharmacists in community pharmacies is important to provide reliable information to the consumer about medications especially for those self-requested drugs and prescribed drugs as cyproheptadine.

Images that are manipulated or idealized are often used for visual persuasion [27]. In marketing, images or sentimental language links the brand name to particular attributes, while the consumer can interpret and comprehend the message suggested or explained by the marketed product. This visual advertisement may exaggerate or provide false information regarding the effectiveness of the drug by evoking a positive attitude, evoking strong feelings, and reinforcing verbal text [28] [29]. In the current study, the majority of participants (62.1%) prefer to take the drug preparation that has pictures of fruits on it, and almost half of participants (45.6%) support pharmacy advertising leaflets that utilize pictures of fruits to market this drug. Nonetheless, a lot of people are worried about pharmaceutical corporations exploiting emotive and affective imagery to directly promote their products to customers. Consumers usually do not have adequate medical expertise and can't recognize the mysterious persuasion techniques used by pharmaceutical companies such as affective photography techniques but they rely on their general knowledge when assessing promoted product claims. Consequently, this interesting toward the product may leading them to overestimate drug benefits and underestimate drug risks.[30].

Despite the significant findings of the study, a few limitations should be noted, such as the small sample size and the fact that the research was restricted to consumers of community pharmacies in Sebha City. Consequently, the results of this study are specific to Sebha City and do not apply to the Libyan population as a whole. Furthermore, the topic of the misused prescription medication was limited to appetite stimulants because cyproheptadine is a widely used substance that is available to the general public and marketed at community pharmacies. As a result, in the future, an extensive investigation into the misuse of prescription medications across several categories will be necessary.

CONCLUSION

The results of this study demonstrate that cyproheptadine users considerably abused the medication by using it as an appetite suppressant without the guidance of medical practitioners and by recommending it by people who were not medical professionals. Non elderly women make up the majority of consumers. Almost half of the individuals denied receiving information about this medication from doctors or pharmacists. The improper use of prescription medication like cyproheptadine may result in major health issues. Since community pharmacies are the primary locations where this product is sold, staff members and pharmacists can play important roles in promoting and ensuring the rational use of such prescribed medications. In addition to offering to carry out their responsibilities for drug usage prevention and education initiatives, they should alert consumers of misused prescribed drugs about the dangerous consequences of irrational use of these drugs and their unfavorable impacts. The use of enticing visuals by pharmaceutical corporations to market their prescription drugs to consumers should be prohibited. All pharmacy employees should be provided with the knowledge and skills necessary to prevent or recognize potential drug misuse. In addition to being crucial in educating their patients on how to take their drugs, these pharmacy employees have the responsibility and opportunity to encourage the safe, proper, economical, and efficient use of all pharmaceuticals. Community pharmacists must use professional and ethical judgment to meet patients' needs without going against any health limits, whether they require prescription drugs or over-the-counter medications.



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Conflicts of Interest

The authors declare the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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خصائص ووجهات نظر وتجارب مستخدمي السيبرو هيبتادين في الصيدليات المجتمعية في سيائص ووجهات نظر وتجارب مستخدام الأدوية الموصوفة معيات الموصوفة محتار عبد القادر مصطفى الصغير *، علي الشارف، مختار عبد القادر قسم الرعاية الصيدلانية، كلية الصيدلة، جامعة سبها، سبها، ليبيا

المستخلص

يسيء بعض الأشخاص استخدام عقار السيبر وهيبتادين المضاد للهيستامين في محاولة للوصول إلى الشكل والوزن والمظهر المرغوبين. تهدف هذه الدراسة إلى التحقيق في خصائص مستخدمي السيبر وهيبتادين بالإضافة إلى سلوكياتهم وإدر اكاتهم وتجاربهم ومصادر المعلومات المتعلقة باستخدام هذا الدواء. أجريت دراسة مقطعية وصفية في مدينة سبها بين عملاء الصيدليات المجتمعية. تمت دعوة كل عميل تناول السيبر وهيبتادين للمشاركة في هذا البحث. تم جمع البيانات من أبريل 2022 حتى سبتمبر 2022. أفاد جميع المشاركين تقريبًا (ن = 99، 1.60٪) أنهم اشتر وا السيبر وهيبتادين من الصيدليات المجتمعية وحصلوا على الدواء بدون وصفة طبية ن = 79 (7.67٪). أكثر من نصف المشاركين (ن = 53، الصيدليات المجتمعية وحصلوا على الدواء بدون وصفة طبية ن = 97 (7.67٪). أكثر من نصف المشاركين (ن = 53، الصيدليات المجتمعية وحصلوا على الدواء بدون وصفة طبية ن = 79 (7.67٪). أكثر من نصف المشاركين (ن = 53، 5.51٪) يستخدمونه لتحسين شكلهم وفقدان الوزن، على التوالي. أشار معظم المشاركين إلى أنهم لم يكونوا على علم والوا إنهم يستخدمونه للدواء لزيادة الشهية، مقارنة بـ (ن = 25، 2.42٪) و (ن = 19، 1.84٪) من المشاركين الذين باستخدامات أخرى للدواء لزيادة الشهية، مقارنة بـ (ن = 25، 2.51٪). و علاوة على نلك، نفى عشر ون الدواء الذي أبلغ عنه المشاركون هو "الأره الجانبية (ن = 16، 2.55٪). وعلاوة على نلك، نفى عشر ون مشاركًا (19.4٪) تلقي معلومات تتعلق بالاحتياطات وموانع استخدام سيبر وهيبتادين. وكان أعلى معدل لمصدر معلومات الدواء الذي أبلغ عنه المشاركون هو "الأصـدقاء أو أدر الجانبية (ن = 16، 2.55٪). يلم غلي أنهم لم يكونوا على علم مثاركًا (19.4٪) يلقي معلومات تتعلق بالاحتياطات وموانع استخدام سيبر وهيبتادين. وكان أعلى معدل الصدر معلومات الدواء الذي أبلغ عنه المشاركون هو "الأصـدقاء أو أد أور الجانبية (ن = 25، 2.55٪). يوب أعلى معدل المصدر معلومات الكمات منها منه المشاركون هو الأصـدقاء أو أد أور الأسـرة" (ن = 21)، 2.55٪) يليه الصـيادلة (ن = 29، 2.55٪). يجب على المشـراكون هو "الأصـدقاء أو أد أور الأسـرة" (ن = 31، 2.55٪). يوب أعلى معدل لمصدر معلومات معار الدواء الذي أبلغ عنه المشـراكون هو "الأصـدقاء أو أد أور الأسـرة" (ن - 25، 2.55٪) يليه المـيادية (ن = 25، 2.55٪). ومار ميبولي معال معالي معال الموسـوفيان معلى المونييين الماميين