

# Investigation and Analysis of Public Drug Use Behavior in Chongqing Residents

Jiangxia Yu<sup>1,a,\*</sup>, Xiaojiang Tian<sup>2,b</sup>

<sup>1</sup>Chongqing Chemical Industry Vocational College, Chongqing 400020, China

<sup>2</sup>Chongqing Health Center for Women and Children 400021, China

<sup>a,\*</sup>6735892@qq.com, <sup>b</sup>640990876@qq.com

**Abstract.** A national sample survey shows that the knowledge of rational drug use among residents in China is generally lacking. As the only municipality in the central and western regions, Chongqing has a diverse population and is located in a mountainous area. There are many rural residents. At present, there are few public reports on the current status of public drug use in Chongqing. Therefore, in this study, the author conducted a questionnaire survey and analysis of Chongqing's public drug use behaviors to promote safe drug use by the public and provide reference materials for other professionals to carry out community pharmaceutical services.

**Keywords:** Drug safety, Residents of Chongqing China, Questionnaire.

## 1. Introduction

With the rapid development of modern medical disciplines and the Internet, the public's concept of drug use and the way to purchase drugs have changed accordingly. But as we all know, unsafe medication behaviors and habits will increase the risk of adverse drug events. According to statistics, between 1999 and 2017, there were a total of 12.182 million reports of adverse drug events in China. The public's knowledge of drugs and unreasonable drug use are important reasons for the occurrence of adverse drug events [1]. Drug safety risks not only involve medical and health institutions, but may also exist in social pharmacies or even residents' homes [2]. A national sample survey shows that the knowledge of rational drug use in our country is generally lacking, and the phenomenon of irregular drug use is widespread [3]. Chongqing has a diverse population and is located in a mountainous area. There are many rural residents. At present, there are few public reports on the current status of public drug use in Chongqing. Therefore, in this study, the author conducted a questionnaire survey and analysis of Chongqing's public drug use behaviors to promote safe drug use by the public and provide reference materials for other professionals to carry out community pharmaceutical services.

## 2. Object and Method

### 2.1 Respondents

Taking the general public in Chongqing as the survey object, 574 questionnaires were distributed, 556 of which were effectively recovered, with a recovery rate of 96.86%.

### 2.2 Investigation Methods

By means of questionnaire, online questionnaires are distributed to the whole city through questionnaire stars. The questionnaire template selected in this study is the questionnaire on drug use behavior risk of Chinese residents provided by the science and technology development center of China Pharmaceutical Association "2017 key project of science and technology communication innovation project of national pharmaceutical economic information network". The questionnaire is the research and development achievement of the national science and technology support program "safe and rational drug use evaluation and intervention technology research and application" during the 12th Five Year Plan, and has good reliability and validity through strict evaluation [4-5]. The questionnaire is divided into four parts: (1) basic information of residents; (2) knowledge and attitude of drug safety; (3) behavior related to drug safety; (4) knowledge of popular science of drug

use, the option setting of item answer refers to the frequency of this phenomenon [6]. In the Q & A of safety medication knowledge, the summary level is "very against, right, no against, agree with, very agree with". The more later it is explained that the interviewees have a better understanding of safety medication; the safety medication behavior level is "never, occasionally, abnormally, often, always, unclear"; the science popularization education reception level is "extremely unnecessary, unnecessary, general, necessary, extremely necessary Not clear ". The investigation lasted for 7 months. After the data collection and sorting, the data were collected and analyzed.

### **2.3 Investigation Quality Control**

In this study, only one questionnaire can be submitted to the same IP address through system setting, and after the respondents submit the questionnaire, the system will filter through the logical relationship between the questions and answers, and eliminate the questionnaires with contradictory answers, so as to avoid the situation that the respondents do not carefully and objectively fill in the questionnaire.

### **2.4 Statistical Methods**

In this study, excel 2010 software was used for data entry, SPSS 15.0 statistical software was used for data statistics and analysis. Qualitative data are described by percentage.

## **3. Results**

### **3.1 Basic Information**

The questionnaire with incomplete general information in the valid questionnaire was excluded. Among them, respondents aged under 20 accounted for 34.5%, 21-34 accounted for 31.9%, 35-49 accounted for 21%, 50-64 accounted for 8.8%, 65 years and above accounted for 3.8%; in terms of education, junior high school and below accounted for 4.3%, senior high school and secondary school accounted for 7.2%, junior college and undergraduate accounted for 69.4%, postgraduate and above accounted for 19.1%; in terms of residence, 62.05% lived in big cities, 37.95% of them live in rural areas, 87% of them are employees and students of enterprises and institutions, and 13% of them are other occupations. A total of 556 valid questionnaires were obtained.

### **3.2 Safety Medication Knowledge**

There are 20 questions about safety medication knowledge in the questionnaire. Mainly from the understanding of antibiotics, health products, as well as the choice of drugs and other aspects of the design. The results showed that 11% of the residents thought that injection and infusion should be done when they were ill, and infusion and injection were safer than oral drugs; 11.2% of the residents thought that the more expensive the drugs were, the better, and 35% of the residents thought that when they bought the drugs, the price didn't matter, and the key was the good curative effect.

### **3.3 Drug Use Behavior**

The investigation of drug use behavior in this study is mainly focused on the storage, usage and adverse reactions monitoring of drugs. The results showed that: 17.7% of the population never "hold the doctor's prescription to the drugstore to buy prescription drugs"; 14.4% of the population did not "carry out regular inspection on the drugs stored at home"; 24.7% of the population "take the drugs that have exceeded the validity period"; 35.2% of the population increased the dosage without authorization in order to increase the efficacy or symptoms; 36.8% of the population to increase the efficacy of the capsule Take the medicine or tablet after breaking or crushing.

### **3.4 Popular Science Education**

In addition, this study also aimed at the public's understanding of the popular science of medicine and the way to receive it. The results show that 48.6% of the public think it is necessary to hold "lectures on community rational drug use knowledge", and 51.3% of the public think it is necessary to carry out science popularization through "publicity materials on display of rational drug use knowledge in street windows".

## **4. Discussion**

### **4.1 Residents Lack of Knowledge about Safe and Rational Drug Use**

There are 20 questions about rational drug use in this questionnaire. Mainly from the understanding of infusion treatment, antibiotics, health products, as well as drug selection and other aspects of the design. The results showed that 11% of the residents believed that injection and infusion should be done when they were ill, and infusion and injection were safer than oral drugs; according to Peng Jia [7], the investigation on the current situation and influencing factors of community residents' active infusion showed that 43.0% of the patients required infusion, suggesting that Chinese residents had insufficient understanding of infusion and should strengthen propaganda and education. In addition, 11.2% of the residents think that the more expensive the drug is, the better the drug is, and 35% of the residents think that the price does not matter when purchasing the drug, the key is the good effect, suggesting that the residents should improve the drug knowledge, purchase the drug scientifically and rationally, and it is necessary to carry out community pharmaceutical care[8]; in terms of drug storage, 16.6% of the residents support that "the drugs that can not be used should be stored in the refrigerator as much as possible", and this survey suggests that there are still some problems. There are misunderstandings in the storage of drugs by different groups, so it is necessary to focus on such groups and strengthen the publicity of relevant knowledge to community groups, especially the elderly and other special groups [9].

### **4.2 There is Randomness in Drug Use among Residents, and Drug Compliance Needs to be Improved**

The investigation of drug use behavior in this study mainly focuses on the purchase way, storage, usage and adverse reaction monitoring of drugs. The results showed that 17.7% of the population never "hold a doctor's prescription to buy prescription drugs"; according to research report [10], residents have poor understanding of the meaning and classification of OTC identification, which is consistent with the results of this study; in addition, 14.4% of the population did not "regularly check the drugs stored at home"; 24.7% of the population "take drugs beyond the expiration date", which indicates that the residents have a very poor sense of maintaining the expiration date of the drugs. Now the recovery system of the expired drugs in the family is blank, and the management of the expired drugs in the family needs to be solved urgently [11-13]. The use of the expired drugs will cause great hidden danger to the residents; 41.3% of the residents will take the drugs together with milk, tea or coffee, In order to increase the curative effect or symptoms, 35.2% of the population increased the dosage without authorization, 36.8% of the population took the capsule and tablet after breaking or crushing in order to increase the curative effect, which indicated that the residents' drug compliance was not ideal. Drug compliance is affected by multiple factors: ① social and economic factors, such as language ability, education level, etc.; ② doctor-patient factors, such as doctor-patient relationship, effectiveness of drug guidance, etc.; ③ disease status, such as chronic disease, depression, etc.; ④ treatment factors, such as: complexity of drug treatment, drug treatment needs to master injection and other specific technologies; ⑤ patients Factors, such as: physical disorders, cognitive errors of diseases and drugs, etc[14]. Therefore, the improvement of patients' medication compliance also needs the intervention and guidance of medical staff.

### 4.3 The Public has a Strong Demand for Rational Drug Use Knowledge

According to the survey of the public's understanding of the popular science of medicine and the way of receiving the popular science, the data shows that 48.6% of the public think it is necessary to give lectures on the knowledge of rational medicine, and the research shows that 71.6% of the families consult the most doctors [15] when they encounter the problems of medicine use, which reflects that the social public reliability of pharmacists and pharmaceutical services needs to be improved. It also supports the distribution of rational drug use publicity materials in hospitals and community health service centers, which indicates that the public has a strong demand for rational drug use knowledge and an urgent need to strengthen medical knowledge.

## 5. Conclusion

In short, through this questionnaire survey, it is preliminarily understood that the residents in Chongqing still need to improve in the aspects of lack of knowledge related to rational drug use, drug use habits, drug compliance, etc. Residents' awareness of safe drug use is still weak, and community pharmaceutical care needs to be improved. Therefore, as the promoter of rational drug use, pharmacists should actively carry out the popular science education of safe drug use, make full use of professional knowledge to spread the correct concept of drug use, at the same time, pay more attention to the improvement of their professional ability and expand the connotation of community pharmaceutical service.

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