



An Investigation and Discussion on Common Diseases in Field Geology Practice for College Students

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Abstract. To do well in the prevention and treatment of common diseases in field practice for college students, 1306 students from the Zigui Practice Base of China University of Geosciences (Wuhan) were selected as the research objects. The 27-day outpatient clinic visits were counted, including the daily number of patients, the total number of patients and the number of various diseases. Based on the statistics, we analyze the characteristics of the diseases, and present the corresponding prevention and control measures to ensure the smooth completion of the field practice. The results indicate that the first week for college students entering the Practice Base is a period of high disease incidence, and the fifth day reaches the peak of daily admissions. During the surveyed 27 days, 50.08% of the college students who participated in the field practice went to the doctor, with 43.05% of the males and 72.44% of the females. The top three outpatient diseases were respiratory tract infection, gastroenteritis and dermatitis, accounting for 42.20%, 19.57%, and 13.15%. It can be concluded that health education and safety training for college students and improvement of the living environment of the practice base can effectively reduce the incidence of diseases.

Keywords: field practice; common diseases; prevention and treatment

1 Introduction

The Zigui Practice Base of China University of Geosciences (Wuhan) is located on the northwest of Zigui County in Hubei Province. It has unique geological structures, rich geological phenomena, and abundant mineral and hydraulic resources. It is the main base for teachers and students to carry out field practice and scientific research.

Every year from July to September, many students from China University of Geosciences (Wuhan) will conduct the field geological practice in the Zigui Base to integrate the theoretical knowledge learned in the classroom with field practice. The geological survey activities are all carried out in the field. The long distances, many mountains, uneven roads, harsh conditions and hot summer weather makes it very easy for them to suffer from various diseases^[1]. Therefore, their health has become a key concern for their teachers and parents. We conducted an investigation on college students in the Zigui Base, studied the characteristics of diseases in field practice, analyzed the unfavorable factors, and present some targeted prevention and control

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measures which is helpful to reduce the incidence of diseases and accidental injuries in field practice.

2 Research Objectives and Methods

2.1 Object

The Zigui Base has been put into use in 2006, and it can accommodate about 1400 people at the same time. A dormitory can live six persons with an area of 5 m² per person. A total of 1306 students from 7 schools have participated in this investigation, 994 male and 312 female, with an average age between 18 and 21.

2.2 Content

This study is carried out by compiling the outpatient log records of the accompanying doctors during the period from July 9, 2022 to August 4, 2022. By investigating and analyzing the outpatient data during these 27 days, the daily number of patients, the total number of patients and the number of patients with various diseases were counted.

2.3 Methods

All data were entered into the computer to obtain the results by EXCEL software.

3 Results

3.1 Number of Outpatient Visits per Day

A total of 654 patients were received in the outpatient department, with an average daily reception of 24 patients. The trend of outpatient visits is shown in Fig. 1.

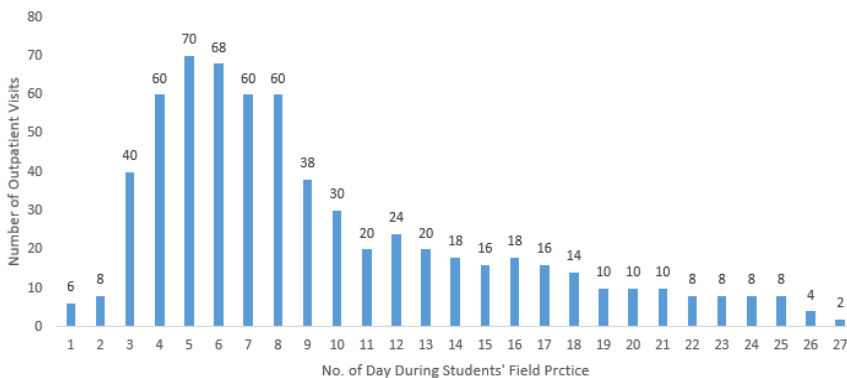


Fig. 1. The trend of daily medical visits of college students during field practice

It can be seen that the number of patients increased from the first day to the fifth day (July 9 to July 14), and the received patients reach the most on the fifth day. The period from the fourth to the eighth day is a high period for incidence of diseases.

3.2 Outpatient Attendance Rate

In the first batch in the summer of 2022, a total of 1306 students participated, and a total of 654 patients were received in the outpatient department, with an attendance rate of 50.08%. Among them, 428 male patients with an attendance rate of 43.05%, and 226 female patients with an attendance rate of 72.44%. It can be seen from Table 1 that the attendance rate of female students is much higher than that of male students.

Table 1. The number of male and female students visiting doctors during field practice

	Number of students	Number of patients	Attendance rate
Male	994	428	43.05%
Female	312	226	72.44%
Total	1306	654	50.08%

3.3 Composition of Outpatient Diseases

Among the patients, the top 10 diseases in descending order were upper respiratory tract infections, gastroenteritis, dermatitis (sunburn and insect bites), injuries, athlete's foot, constipation, urinary tract infections, conjunctivitis, paronychia, and oral ulcers. A total of 648 cases of the top 10 diseases accounted for 99.08% of all visits. Other visiting diseases included 3 cases of heat stroke, 2 cases of dysmenorrhea, and 1 case of dizziness. Among them, there were 276 cases of upper respiratory tract infections, with an attendance rate of 21.13% and accounting for 42.20%. Table 2 lists these results.

Table 2. Statistics on the incidence and composition of various diseases

No.	Disease Type	Number of patients	Attendance rate	Disease percentage
1	upper respiratory tract infections	276	21.13%	42.20%
2	gastroenteritis	128	9.80%	19.57%
3	dermatitis	86	6.58%	13.15%
4	injuries	56	4.29%	8.56%
5	athlete's foot	30	2.30%	4.59%
6	constipation	24	1.84%	3.67%

1856	Y. Jia et al.			
7	urinary tract infections	16	1.23%	2.45%
8	conjunctivitis	14	1.07%	2.14%
9	paronychia	10	0.77%	1.53%
10	oral ulcers	8	0.61%	1.22%

4 Discussion

(1) The results show that the first week entering the Zigui Base is the high disease incidence period and the attendance rate reached 50% during the 27-day period. This is related to students' inability to adapt to new environment [2]. Many university students lack exercise nowadays [3]. And their physical condition is poor. Environment changes can lead to students' changes in physiology and psychology [4] and a decrease in physical resistance. The attendance rate of female students is much higher than that of male students, indicating that female students have weaker physical fitness and physique due to congenital reasons.

(2) Upper respiratory tract infection is the most common disease among students. The students go out early and come back late, work in the field, and sweat a lot in the hot air, and their clothes cannot be changed in time, making them easy to catch a cold. In addition, some students immediately take a cold shower after returning to the base from outdoor, which can easily lead to upper respiratory tract infections due to sudden changes in temperature. Respiratory diseases are mostly spread by airborne droplets. Because students live in collective dormitories, once individual students suffer from respiratory diseases, cross-infection is easy to occur in dormitories [5]. This leads to a high incidence of upper respiratory tract infections and an attendance rate of nearly half in field practice for university students.

(3) Acute gastroenteritis, dermatitis and injuries are also common diseases among students. The symptoms and severity of acute gastroenteritis are closely related to the types of microorganisms and toxins ingested. At the same time, different people have different resistance, which can cause differences in symptoms. Infectious acute gastroenteritis is mainly manifested as diarrhea, abdominal pain, and vomiting. Diarrhea is the most common symptom. Many students take cold showers, like to eat outside and consume unclean food, resulting in the occurrence of acute gastroenteritis [6]. The bumpy mountain roads and dense weeds make it easy for students to encounter bumps, scratches, and soft tissue injuries in the new environment. In addition, high temperature and mosquitoes make dermatitis (sunburn and insect bites) prevalent [7].

(4) Athlete's foot, constipation and urinary tract infections are also common among students, which are always related to high-temperature fieldwork and insufficient drinking. Some students does not drink enough water during outdoor activities, and they sweat a lot in high temperatures, which leads to severe dehydration, concentrated urine, and urinary tract infections. In addition, insufficient drinking water or insufficient intake of dietary fiber in food can cause constipation. Students often walk out-

doors for a long time with a large amount of sweating at high temperatures. When their shoes and socks are not changed in time, their feet tends to have fungal infections, thus leading to a high attendance rate of athlete's foot. The results show that there were only three cases of heat stroke, and the incidence of heat stroke is significantly lower than that of other types of diseases. The main reason lies in that preparations for heat prevention and cooling were made in advance.

5 Preventive measures

(1) Emphasizing prevention. The accompanying doctors should conduct health education for the students [8]. After entering the base, a health education class should be conducted to popularize the knowledge of preventing respiratory, digestive, and skin diseases, and enhance students' self-protection awareness. Students should be encouraged to exercise more, improve their physical fitness, pay attention to personal hygiene, keep the windows open for ventilation, not pursue coolness, and pay attention to nutritional balance and food hygiene. When going out, students should be reminded to use sunscreen and wear clothing to prevent sunburn and bring mosquito repellent to reduce mosquito bites during outdoor practice. By enriching students' medical knowledge through health education, the incidence of diseases can be effectively reduced.

(2) Improving students' accommodation and food conditions. The Zigui Base has been in operation for more than ten years, and the overall environment and facilities are complete, with a significant improvement in overall per capita area and accommodation conditions. The university should pay attention to dormitory environmental hygiene, keep the windows open for ventilation [9], and carry out regular mosquito and pest control. The logistics catering department can appropriately increase the salt content in food and add various soup and beverage types to supplement the insufficient water after sweating. Attention should be given to the diversification of food, taste, and nutrition, improving students' meals and reducing the number of times they go out for eating.

(3) Pay attention to safety training. The relevant departments should provide safety training for students participating in field practice [10], pay attention to the safety of the environment of field practice, and remind students to wear comfortable sports shoes, long-sleeved pants and shirts to avoid injury.

(4) The accompanying doctors at the Zigui Base can increase the publicity and prevention of respiratory, digestive, and skin diseases based on the results of this survey. According to the incidence of each disease, appropriate medication can be provided to avoid wasting medical resources.

6 Conclusion

It is important to provide health education and safety training for university students participating in field practice and improve living conditions at the practice base, which can not only prevent diseases but also enhance students' self-protection awareness

during field practice. Moreover, it can effectively reduce the incidence of diseases and facilitate the smooth completion of field practice for university students.

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