

ANALYSIS OF THE PREVALENCE RATE OF CHRONIC DISEASES AND ITS INFLUENCE ON THE HEALTH PUBLIC SECURITY PHYSICAL EXAMINATION PERSONNEL

BO ZHANG^{1,2}, LANG WANG^{1,*}

¹Clinical Nursing Teaching and Research Section, The Second Xiangya Hospital, Central South University, Changsha, PR China -

²Health Management Center, The Second Xiangya Hospital, Central South University, Changsha, PR China

ABSTRACT

Objective: To analyse the prevalence rate of chronic diseases and its influence on health public security physical examination personnel.

Methods: From January 2017 to January 2019, 300 policemen who had received physical examinations were selected as cases for study and analysis. The subjects' clinical data were analysed retrospectively. Before the survey, uniform training was provided to medical staff, and uniform questionnaires and physical examination methods were used to ensure the integrity and accuracy of all recovered data. To summarise the prevalence rate of chronic diseases and its influence on health public security physical examination personnel.

Result: Of the 300 subjects, 168 suffered from chronic diseases, representing a 56% proportion. Hypertension (69 cases), diabetes (31 cases) and hyperlipidemia (35 cases) were the principal diseases. Following these were cardiovascular diseases (21 cases), cerebrovascular diseases (10 cases) and other chronic diseases (2 cases). In the single factor analysis, the proportion of the patients in the disease group who were over 50 years old, divorced or widowed, and had irregular lifestyles was significantly higher than that in the healthy group, and the data difference was prominent. The comparison results were applicable to the statistical significance standard ($P < 0.05$). An age of combination of over 50 years old, divorce or bereavement, and irregular lifestyles were taken as independent variables. The presence of chronic diseases served as dependent variables for the multivariate regression analysis. The results show that the independent variables were all influencing factors of peritoneal dialysis-related peritonitis, meeting the applicable statistical standards ($P < 0.05$).

Conclusion: The prevalence rate of chronic diseases in health public security physical examination personnel is high. Old age and an unhealthy lifestyle are the key factors leading to chronic diseases. In the future, improving the lifestyle choices of members of the police force should be promoted to ensure their physical health.

Keywords: Health public security, physical examination personnel, chronic disease prevalence, influencing factors.

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Introduction

As the mean age of the population has risen in recent years, the incidence of chronic diseases has also increased, leading to a corresponding increase in the number of patients. Among these patients, few with chronic diseases are effectively cured. Most need long-term or lifelong treatment, which imposes severe economic pressure on patients and their families⁽¹⁾. For the public security department,

good physical condition is key to guaranteeing the team's combat effectiveness⁽²⁻³⁾. In recent years, several special reports have found that the physical condition of the police force is gradually declining, especially for personnel over 40 years old. Among this age group, the incidence of chronic diseases is steadily increasing, becoming one of the most important issues in public security work⁽⁴⁾. In this regard, to improve the physical condition of the police, this paper analyses and summarises the

prevalence of chronic diseases and their influencing factors on the health of public security physical examination personnel.

Materials and methods

General information

From January 2017 to January 2019, 300 policemen who had received physical examinations were selected as cases for study and analysis. This sample was composed of 211 males and 89 females. The average age was (43.56±5.6) years.

Method

The clinical data of the subjects were analysed retrospectively.

The survey includes:

- Demographic characteristics, such as gender, age, nationality, marital status, education, occupation, residence, etc.;
- Health status and behaviour, including height, weight, waist circumference, hip circumference, smoking, drinking, diet, physical condition and weight control;
- Chronic diseases, such as hypertension, diabetes, cerebrovascular disease, chronic obstructive pulmonary disease, chronic gastroenteritis, arthritis and others.

Quality control

Before the survey, uniform training was provided to medical staff, and uniform questionnaires and physical examination methods were used to ensure the integrity and accuracy of all recovered data. To summarise the prevalence rate of chronic diseases and its influencing factors of health public security physical examination personnel.

Statistical methods

The patients' basic data and observation indexes in this study were analysed by SPSS software.

After data entry, quantitative or qualitative processing was carried out, and a discrete or continuous type method was adopted to perform data entry. For qualitative data, classification processing was not applied.

P-value<0.05 was used as the standard for statistical significance judgment in the data processing. The percentage data were tested with X^2 , and the mean data were tested with t-value data.

Results

Occurrence of peritonitis related to peritoneal dialysis

Of the 300 subjects, 168 suffered from chronic diseases, representing a 56% proportion. Hypertension (69 cases), diabetes (31 cases) and hyperlipidemia (35 cases) were the principal diseases. Following these were cardiovascular diseases (21 cases), cerebrovascular diseases (10 cases) and other chronic diseases (2 cases).

Single factor analysis

In the single factor analysis, the proportion of the patients in the disease group who were over 50 years old, divorced or widowed, and had an irregular lifestyle was significantly higher than in the healthy group, and the data difference was significant. The comparison results were applicable to the statistical significance standard ($P<0.05$). See Table 1 for specific data.

Related factors		Disease group (n=168)	Healthy group (n=132)	P value
Age	20-	5 (2.98%)	23 (17.42%)	<0.05
	30-	11 (6.55%)	59 (44.70%)	<0.05
	40-	31 (18.45%)	28 (21.21%)	<0.05
	50-	41 (24.40%)	16 (12.12%)	<0.05
	60-	80 (47.62%)	6 (4.55%)	<0.05
Nationality	Han nationality	61 (36.31%)	49 (37.12)	>0.05
	Other	107 (63.69%)	83 (62.88%)	>0.05
Marital status	Unmarried	4 (2.38%)	89 (67.42%)	>0.05
	Married	46 (27.38%)	23 (17.42%)	>0.05
	Divorced or widowed	118 (70.24%)	20 (15.15%)	<0.05
Educational level	Below junior high school	45 (26.79%)	39 (29.55%)	>0.05
	High school and secondary school	50 (29.76%)	47 (35.61%)	>0.05
	High school or above	73 (43.45%)	46 (34.85%)	>0.05
Living habits	Yes	16 (9.52%)	112 (84.85%)	>0.05
	No	152 (90.48%)	20 (15.15%)	<0.05

Table 1: Single factor analysis results.

Multi factor analysis

An age of combination of over 50 years old, divorce or bereavement, and having an irregular lifestyle were used as independent variables. The presence of chronic diseases served as dependent variables for the multivariate regression analysis. The results showed that the independent variables were

all influencing factors of peritoneal dialysis-related peritonitis, which met the applicable statistical standards ($P < 0.05$). See Table 2 for detailed data.

Factor	B	SE	Wald- χ^2	P	OR	95% CI
Over 50 years old	1.028	0.321	10.598	0.001	2.798	1.416,5.213
Divorced or widowed	0.910	0.279	9.689	0.002	2.489	1.399,4.351
Irregular lifestyle	1.258	0.297	21.213	0.000	3.564	2.016,6.244

Table 2: Multifactor analysis.

Discussion

There is a close relationship between chronic diseases and people's lifestyles. Common chronic diseases include hypertension, diabetes, blood lipid, cardiovascular and cerebrovascular diseases, etc. Lifestyle and healthy behaviour are the key factors leading to human endocrine and metabolic disorders, which can induce chronic diseases⁽⁴⁾. At present, the impact of lifestyle factors on chronic diseases has been relatively well researched. It is clear that smoking, obesity, drinking and lack of exercise are the key factors leading to chronic diseases⁽⁵⁻⁶⁾.

The results of this study show that 168 of the 300 subjects had chronic diseases, representing 56%. Hypertension, diabetes and hyperlipidemia were the most common diseases. Among the subjects, 69 had hypertension, 31 had diabetes, 35 had hyperlipidemia, 21 had cardiovascular diseases, ten had cerebrovascular diseases, and two had other chronic diseases. In the single factor analysis, the proportion of the patients in the disease group who were over 50 years old, divorced or widowed, and had irregular lifestyles was significantly higher than in the healthy group, and the data difference was significant. The comparison results were applicable to the statistical significance standard ($P < 0.05$). An age of combination of over 50 years old, divorce or bereavement, and having an irregular lifestyle were used as independent variables. The presence of chronic diseases served as dependent variables for the multivariate regression analysis. The results show that the independent variables were all influencing factors in peritoneal dialysis-related peritonitis, which met the applicable statistical standards ($P < 0.05$). This result shows that the incidence of chronic diseases is relatively high in the physical examination personnel of the public security department, among whom unhealthy lifestyles and ageing are the key factors⁽⁷⁻⁸⁾. Some studies have shown that marital status is an

important factor affecting chronic diseases. Elderly people who are widowed and whose children are not around are prone to anxiety and depression. In addition to work and life pressures, the incidence of chronic diseases is relatively high. Divorce or bereavement are also important chronic disease factors in this study⁽⁹⁾. In this regard, regardless of family, society or organisation, we should attach great importance to the elderly and independent living groups. In addition, unhealthy lifestyle habits, especially smoking and drinking, unhealthy diets and irregular meals, and other phenomena are the key factors to address with regard to reducing chronic diseases⁽¹⁰⁾. Given the current situation of chronic diseases in health public security physical examination personnel, the following suggestions are put forward.

Strengthen basic lifestyle guidance

For different age groups, we need to do active exercise according to personal situations and take measures to consciously control body weight. Efforts should be made to improve the working and living environment of swallowing mistakes and to reduce smoking as much as possible. To encourage healthy eating, we should minimise drinking and overeating, develop healthy lifestyle habits, and scientifically adjust diet structure⁽¹¹⁾.

Reduce work pressure

In recent years, work pressure in the public security department has increased, leading to the weakening of the physical condition of some police officers. At this time, it also indirectly improves the incidence of chronic diseases. First of all, we need to provide support in the form of extra personnel. At present, many public security departments do not have a lot of experience in staffing, and the key reason the number of personnel cannot continue to increase is a lack of funds. To reduce financial expenditure, the staffing department needs to control the number of recruits in a planned way every year to reduce the number of recruits.

Therefore, different management departments need to actively build the recruitment model with planning and health as the guiding ideology. The change of employment mode and the principle of total amount of control can better maintain the physical condition of police officers, reducing the occurrence of chronic diseases only when the personnel are fully equipped. Secondly, it is necessary to prevent the police from participating in non-police-related

activities as much as possible. Participation in non-police activities will not only increase the work pressure on officers but also involves the opposite issues, which will affect the image of the public security department⁽¹²⁾. To this end, we should adhere to the basic principle of limiting police work to activities that involve upholding the law. At the same time, some recreational activities can be appropriately increased in officers' leisure time. The political and industrial departments should take the lead to carry out regular police sports activities and competitions, mountain climbing and calligraphy, photography or singing competitions. The police at all levels should be physically and mentally healthy when they are in high school. However, it should be noted that all activities should be carried out voluntarily. Physical and mental pressure of police⁽¹³⁾. Finally, the police force should have its resources allocated properly. In recent years, public security organs at all levels have been simplified and improved.

However, there are still unreasonable institutional settings. The function cross performance between departments is more prominent, and the problem of an unscientific head image of the police force and uneven busy and idle of police is more prominent. In this regard, we need to focus on reducing management as much as possible, combining and reasonably classifying the role of command decision-making, personnel management, logistics support and supervision. With the basic principle of rigid positioning and determining responsibilities, it is crucial to clarify the division of labour and ensure that the police force is reasonably allocated so that adequate personnel is available for each department post. The application value of police resources.

Strictly implement the physical examination system

Every year, different departments need to excel in the physical examination management of the police in strict accordance with the regulations. Working years and joint tasks of the departments are added to formulate a work plan that incorporates annual leave so that mandatory leave is taken to alleviate work pressure as much as possible. Regular inspections of the physical condition of the police should be carried out every year to provide timely treatment for chronic diseases. Corresponding post adjustments should be undertaken at this time according to the physical condition of personnel⁽¹⁴⁻¹⁵⁾. In addition, we need

to build the corresponding medical and health care security system. According to the current physical condition of the police, a system for public security medical treatment can be built in time so that the medical expenses of the police can be reimbursed effectively. At the same time, the corresponding system and system can be built. Every year, lectures are given by famous doctors or health experts, and health education is carried out in combination with a physical examination. The officers with serious illnesses should be forced to undergo treatment. Liaoyang and recreational activities were organised to relieve the psychological pressure on the police as much as possible, and green channels were set up to provide a priority rescue service system for local hospitals⁽¹⁶⁾.

Strengthen chronic disease management

With the continual development of information technology, health information infrastructure in China is constantly improving. At present, most hospitals have achieved the development of information technology. In this environment, we can also build an information system with the physical and mental health of police forces at its core. The concept of InternetPlus is currently sweeping the world, permeating the medical and health industry⁽¹⁷⁾. In some countries, the health department cooperates with the network operators to regularly distribute the corresponding health knowledge to citizens via text messages or app notifications.

The content mainly focuses on the key management of chronic diseases and provides personalised healthcare, medication and healthy behaviour guidance. Meanwhile, the health department can regularly prompt the relevant information according to the needs. In this regard, the application of mobile information technology in chronic disease management is also growing in popularity. The police officers suffering from chronic disease can use the WeChat applet, mobile app and other ways to record blood pressure, blood sugar and heart rate to track their personal health situation. When their symptoms change, they can also directly ask for help from medical staff via mobile platforms. The first is data collection and feedback⁽¹⁸⁾. Taking the intelligent terminal as an example, we can collect the 24-hour data of the police with the help of the sign sensor and upload the data in real-time with wireless network technology. The service provider can give timely feedback, tell the police to change the trend of their health indicators and supply the

necessary health guidance. Combined with the information-sharing platform in the chronic disease management area, medical staff can also manage the health situation of the police more comprehensively and make corresponding diagnoses and treatment and lifestyle plans according to the actual condition of each police officer.

Conclusion

The incidence of chronic diseases among public security personnel is relatively high. Advancing years and unhealthy lifestyle habits are the key factors leading to chronic diseases. In the future, we need to pay better attention to the lifestyle habits of police officers to ensure the excellent physical condition of the police. This conditioning will allow police forces to better perform their public duties.

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Corresponding Author:

LANG WANG
Email: wanglang@csu.edu.cn
(China)