

A survey of psychological responses during the Coronavirus Disease 2019 (COVID-19) epidemic among Chinese police officers in Wuhu

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Research

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Abstract

Background

The outbreak of Coronavirus Disease 2019 (COVID-19) has caused serious threats to people's health and lives. The police officers are bravely fighting on the front lines of the epidemic. Our study is the first survey of psychological response in the police officers of China during the tumultuous time of the COVID - 19 outbreak.

Methods

A cross-sectional online questionnaire was conducted to the police officers from 5 districts (Yijiang, Sanshan, Jiujiang, jinghu and Jingkai) and 4 counties (Wuhu, Nanling, Fanchang and Wuwei) of Wuhu City through Wechat, and the data were collected between 10 and 26 March 2020. A total of 3561 questionnaires were received in the study, of which 3517 were considered valid. The questionnaires included the demographic information and psychological survey. The depression scale of the patient health questionnaire (PHQ-9) and generalized anxiety disorder 7-item scale (GAD-7) were employed to assess depression and anxiety, respectively.

Results

The mean depression score of the participants was 4.10 ± 4.87 (0 ~ 27). 12.17% of the police officers had moderate to severe depression. The mean anxiety score of the participants was 3.59 ± 4.228 (0 ~ 21). 8.79% the police officers had moderate to severe anxiety. The participants of senior high school or below and academy had lower depression and anxiety scores than these of bachelor or above, respectively. The police officers Unmarried had lower anxiety scores than married. The different location and police classification were associated with the different degree of depression and anxiety. The participants who did not take sleeping pills had lower depression and anxiety scores than those who took sleeping pills. The depression scores of the police officers were strongly correlated with their anxiety scores of the police officers.

Conclusion

The police officers have different levels of anxiety and depression during the COVID-19 epidemic in Wuhu. We should call for attention to the psychological response of police officers during the epidemic, and provide them with corresponding help and follow-up.

1. Background

The Coronavirus Disease 2019 (COVID-19) has been declared as global pandemic¹. In China, COVID-19 was first identified in Wuhan in December 2019, and spread to all 34 regions of China by 30 January 2020. The outbreak of COVID-19 has caused serious threats to people's health and lives. Therefore, the Chinese government has imposed unprecedented strict quarantine measures that has put large numbers of people in isolation and disrupted their previous way of life. This public health emergency has put people's physical and mental health under unprecedented threat^{2,3}.

The increasing numbers of patients and suspected cases have caused public worry about becoming infected. In addition to health care workers⁴, police officers are also bravely fighting on the front lines of the epidemic⁵. These police officers not only face the same risk of infection as the general public, but also suffer from fatigue caused by overtime working and the pressure of responsibility. It leads to a wide variety of psychological problems, such as anxiety and depression, among police officers. The main purpose of the study is to measure the prevalence and severity of the psychological response among police officers during the COVID-19 epidemic, and therefore offer a concrete basis for implementing relevant mental health intervention measures to deal with the challenge effectively.

The study is the first survey of psychological response in the police officers of China during the tumultuous time of the COVID – 19 outbreak. The police officers are divided into different categories: criminal police, security police, regimental police, traffic police, police of command center and logistics support, police who engaged in organs, internal and political security, prison guards, and auxiliary police. A self-report questionnaire in online form was used to investigate the anxiety and depression among the police officers including criminal police, security police, special police, traffic police, police of command center and logistics support, police who engaged in organs, internal and political security, prison guards, and auxiliary police in Wuhu between 10 and 26 March 2020.

2. Methods

Participants

A cross-sectional online questionnaire was conducted to the police officers from 5 districts (Yijiang, Sanshan, Jiujiang, jinghu and Jingkai) and 4 counties (Wuhu, Nanling, Fanchang and Wuwei) of Wuhu through Wechat, and the data collection began on 10 March 2020 when the WHO announced the threat of COVID – 19 becoming a pandemic may be a reality on 9 March 2020. All participants were told that the information they would provide would not be disclosed. When the police officer completed the self-reported questionnaire, the results of psychological status would be automatically displayed on their mobile phones. Our institution would provide psychological intervention services to the police officer in need of psychological support. These participants voluntarily took part in the survey with online informed consent, which was approved by the ethics committee of the First Affiliated Hospital of Wannan Medical College. The inclusion criteria were: (1) police officer, including criminal police, security police, regimental police, traffic police, police of command center and logistics support, police who engaged in organs, internal and political security, prison guards, and auxiliary police in Wuhu; (2) between 18 and 60 years

old; (3) understanding the questionnaire literally; (4) no diagnosed neuropsychiatric disorders. A total of 3561 questionnaires were received in the study, of which 3517 were considered valid. The valid rate was 98.76%.

Questionnaires

Demographic characteristics

The demographic data was collected by filling out their personal information online. These personal information included age, gender, education background, marital status, current location, position, telephone, and use of sleeping pills in the last month.

Psychological survey

The patient health questionnaire 9-item scale (PHQ-9) and generalized anxiety disorder 7-item scale (GAD-7) were employed to assess depression and anxiety, respectively. The participants completed the question through Wechat according to their own psychological status.

The PHQ-9 was a widely used self-report tool for measuring depression during the previous 2 weeks. The total score was divided into 5 categories from 0 to 27: minimal (0 ~ 4), mild (5 ~ 9), moderate (10 ~ 14), moderate-severe (15 ~ 19), and severe (20 ~ 27). The GAD-7 was proved to be an effective tool for assessing anxiety in the last 2 weeks. The total score was divided into 4 categories from 0 to 21: minimal (0 ~ 4), mild (5 ~ 9), moderate (10 ~ 14), and severe (15 ~ 21). The reliability and validity of the PHQ-9 and GAD-7 in Chinese version were confirmed in previous study^{6,7}.

Statistical analysis

Statistical analysis was carried out using SPSS statistics software (version 22.0). The quantitative data were expressed as mean \pm standard deviation, and the counting data were described as percentage. One-way anova and rank sum test were used in the univariate analysis. The risk factors were analyzed using ordered multivariate logistic regression, and odds ratios (OR) and 95% confidence intervals (CI) were estimated. All statistical tests were two-sided with $\alpha = 0.05$.

3. Results

Description of sample

The demographics data of 3517 police officers recruited were showed in Table 1. There were 557 females (15.8%) and 2960 males (84.2) in our study. The average age was 36.20 ± 9.32 and bachelor or above accounted for the largest proportion (44.1%), indicating the police officers investigated were mainly from the middle-age group with good education. Most police officers were married (78.7%), and their families were stable. According to location or police classification, Jinghu district (18.3%) and security police (26.8%) account for the highest proportion, respectively.

Prevalence of depression and risk factors in police officers

The survey data from the PHQ - 9 were showed in Table 2. The mean PHQ-9 score of the participants was 4.10 ± 4.87 (0 ~ 27). 12.17% of the police officers had moderate to severe depression. From Table 2, we could see the distribution of the depression degree (PHQ - 9 scores) in the police officers. The age, education, marital status, location, police classification and use of sleeping pills were significantly associated with the degree of depression ($p = 0.001$, $p < 0.001$, $p = 0.002$, $p < 0.001$, $p < 0.001$, $p < 0.001$, respectively). Further, the ordered multivariate logistic regression results revealed that the participants of senior high school or below and academy had lower PHQ-9 scores than these of bachelor or above, respectively (OR = 0.260, $p < 0.001$; OR = 0.481, $p < 0.001$). The police officers in Yijiang district and Jinghu district had higher PHQ-9 scores than those in Wuwei county, respectively (OR = 1.426, $p = 0.013$; OR = 1.354, $p = 0.013$). The police officers in Wuhu county had lower PHQ-9 scores than those in Wuwei county (OR = 0.664, $p = 0.004$). The criminal police, security police, police who engaged in organs, internal and political security and prison guards had higher PHQ-9 scores than the auxiliary police, respectively (OR = 1.581, $p = 0.001$; OR = 1.887, $p < 0.001$; OR = 1.401, $p = 0.047$; OR = 1.704, $p = 0.017$). The participants who did not take sleeping pills had lower PHQ-9 scores than those who took sleeping pills (OR = 0.150, $p < 0.001$). (Table 3)

Prevalence of anxiety and risk factors in police officers

The survey data from the GAD-7 were showed in Table 4. The mean GAD-7 score of the participants was 3.59 ± 4.228 (0 ~ 21). 8.79% the police officers had moderate to severe anxiety. From Table 4, we could see the distribution of the anxiety degree (GAD-7 scores) in the police officers. The age, gender, education, marital status, location, police classification and use of sleeping pills were significantly associated with the degree of anxiety ($p < 0.001$, $p = 0.018$, $p < 0.001$, respectively). Further, the ordered multivariate logistic regression results revealed that the risk for higher anxiety scores increased with age (OR = 1.010, $p = 0.044$). The participants of senior high school or below and academy had lower GAD-7 scores than those of bachelor or above, respectively (OR = 0.194, $p < 0.001$; OR = 0.407, $p < 0.001$). The police officers Unmarried had lower GAD-7 scores than married (OR = 0.614, $p < 0.001$). The police officers in Wuhu county had lower GAD-7 scores than those in Wuwei county (OR = 0.605, $p = 0.001$). The security police and prison guards had higher GAD-7 scores than the auxiliary police, respectively (OR = 1.822, $p < 0.001$; OR = 1.634, $p = 0.032$). The participants who did not take sleeping pills had lower GAD - 7 scores than those who took sleeping pills (OR = 0.186, $p < 0.001$).

Relationships between PHO-9 and GAD-7 scores in the police officers

The PHQ-9 scores of the police officers were strongly correlated with their GAD-7 scores of the police officers ($r = 0.863, p < 0.001$, Figure 1).

4. Discussion

The COVID – 19 has been a worldwide epidemic now. The police officers participate in the fight against the epidemic, which increases the risk of contacting COVID – 19 and aggravates their mental problems^{8,9}. Our study found 12.17% of the police officers had moderate to severe depression, and 8.79% the police officers had moderate to severe anxiety in Wuhu City. Wuhu is the second largest city in Anhui Province with a population of about 400 millions, located in the middle and lower reaches of the Yangtze River. There are five districts and four counties in Wuhu City, namely Jinghu District, Yijiang District, Jiujiang District, Sanshan District, Jingkai District, Wuwei County, Wuhu County, Nanling County and Fanchang County. During our investigation, a total of 34 cases have been confirmed in Wuhu city, including 14 cases in Wuwei County, 6 cases in Jinghu District, 3 cases in Nanling County, 3 cases in Yijiang District, 2 cases in Wuhu County, 2 cases in Jingkai District, 1 case in Jiujiang District and 3 cases of hubei crew members passing through Wuhu.

The current study, which focused on psychological responses during the COVID-19 epidemic among the police officers in Wuhu, reported the education, location, police classification and use of sleeping pills were risk factors for depression, and the age, education, marital status, location, police classification and use of sleeping pills were risk factors for anxiety. Higher education might increase the risk of depression and anxiety. Age might aggravate the effect of anxiety, and the risk for higher anxiety scores increased with age. However, Moustafa et al.'s research showed that the levels of anxiety decrease with age in the general population¹⁰. Although Wuwei County had the largest number of confirmed cases, the results indicated that the depression and anxiety scores of the police officers in Wuwei County were only significantly higher than those in Wuhu County. The police officers in Yijiang district and Jinghu district had higher depression scores than those in Wuwei County, and the reason might be that the locations of the two districts were closer to the city center and the police officers in the two districts have greater work insensity. The security police and prison guards had higher depression and anxiety scores than the anxiliary police, and the criminal police and police who engaged in organs, internal and political security and prison guards had higher depression scores than the anxiliary police. The result indicated that different working positions had certain influence on the psychological state of the police officers.

Our survey on the psychological responses of police officers during the COVID-19 epidemic is an investigation in a special period. Inevitably, the current study has some drawbacks. First, our study only investigated the public security officers in Wuhu City, and the epidemic in the area was not particularly serious. Up to now, there are 34 confirmed cases, and a total of 435 people in close contact with medical observation. Moreover, the time of our investigation is from March 10 to March 28. During this period, the epidemic in China has slightly eased compared to February. It is undeniable that the police officers make great contributions to society and the people during the epidemic. We should call for attention to the

psychological response of police officers during the epidemic, and provide them with corresponding help and follow-up.

Conclusion

So far as we know, our study is the first survey of psychological response in the police officers during the COVID – 19 epidemic. The police officers have different levels of anxiety and depression during the COVID-19 epidemic in Wuhu. The education, location, police classification and use of sleeping pills were risk factors for depression and anxiety. Age might aggravate the effect of anxiety. We should strengthen the psychological intervention and follow-up for the police officers with high risk of psychological disorders. The findings of the study may provide useful psychological guidance to police officers in other areas of China or outside China dealing with COVID – 19 epidemic.

Abbreviations

CI: Confidence intervals □ COVID-19: Coronavirus Disease 2019 □ GAD-7: Generalized anxiety disorder 7-item scale □ OR: odds ratios □ PHQ-9: Patient health questionnaire 9-item scale

Declarations

Ethical Approval and Consent to participate

All participants provided the informed consent online, and the study was approved by the ethics committee of the First Affiliated Hospital of Wannan Medical College.

Consent for publication

All institutional consent for publication has been provided.

Availability of data and materials

The data used to support the findings of this study are available from the corresponding author upon request.

Competing interests

The authors declared no conflict of interest.

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Contributions

LY assisted in the study design, data preparation and the writing of the article. LZ performed the data analysis and contributed to the writing of the manuscript and sought ethics approval. FC assisted in the study design and performed the data analysis. QC assisted in data preparation and revised the manuscript. QY contributed to the study design and prepared and processed the raw data. ZZ assisted in data preparation and interpretation and the writing of the article. YZ sought ethics approval and assisted in data preparation. YG contributed to the study design and the writing of the article. YZ contributed to the data analysis and revised the manuscript. XZ assisted in the study design, data analysis and revised the article.

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Tables

Table 1. Demographic characteristic of participated police officers

Demographics		Samples	Percentage (%)
Gender			
	Male	557	15.8
	Female	2960	84.2
Education			
	Senior high school or below	760	21.6
	Academy	1207	34.3
	Bachelor or above	1550	44.1
Marital status			
	Married	2769	78.7
	Unmarried	692	19.7
	Others	56	1.6
Location			
	Yijiang district	334	9.5
	Wuhu county	467	13.3
	Sanshan district	169	4.8
	Nanling county	387	11
	Jiujiang district	460	13.1
	Jinghu district	645	18.3
	Jingkai district	97	2.8
	Fanchang county	360	10.2
	Wuwei county	598	17
Police classification			
	Criminal police	330	9.4
	Security police	942	26.8
	Regimental police	341	9.7
	Traffic police	727	20.7
	Police of command center and logistics support	205	5.8
	Police who engaged in organs, internal and political security	198	5.6
	Prison guards	93	2.6
	Anxiliary police	681	19.4
use of sleeping pills			
	No	3401	96.7
	Yes	116	3.3

Table 2. Univariate analysis results of the PHQ-7 in the police officers

Variables	Minimal (0~4)	Mild (5~9)	Moderate (10~14)	Moderate-severe (15~19)	Severe (20~27)	p
Age	35.60 ± 9.61	37.07 ± 8.79	36.78 ± 8.38	37.51 ± 8.92	38.12 ± 8.76	0.001
Gender						0.378
Female	339 (60.9%)	145 (26.0%)	50 (9.0%)	15 (2.7%)	8 (1.4%)	
Male	1906 (64.4%)	699 (23.6%)	216 (7.3%)	95 (3.2%)	44 (1.5%)	
Education						< 0.001
Senior high school or below	617 (81.2%)	102 (13.4%)	27 (3.6%)	12 (1.6%)	2 (0.3%)	
Academy	859 (71.2%)	233 (19.3%)	63 (5.2%)	36 (3.0%)	16 (1.3%)	
Bachelor or above	769 (49.6%)	509 (32.8%)	176 (66.2%)	62 (4.0%)	34 (2.2%)	
Marital status						0.002
Married	1715 (61.9%)	700 (25.3%)	216 (7.8%)	92 (3.3%)	46 (1.7%)	
Unmarried	494 (71.4%)	133 (19.2%)	45 (6.5%)	15 (2.2%)	5 (0.7%)	
Others	36 (64.3%)	11 (19.6%)	5 (8.9%)	3 (5.4%)	1 (1.8%)	
Location						< 0.001
Yijiang district	177 (53.0%)	112 (33.5%)	30 (9.0%)	9 (2.7%)	6 (1.8%)	
Wuhu county	349 (74.7%)	84 (18.0%)	19 (4.1%)	9 (1.9%)	6 (1.3%)	
Sanshan district	115 (68.0%)	35 (20.7%)	12 (7.1%)	5 (3.0%)	2 (1.2%)	
Nanling county	250 (64.6%)	87 (22.5%)	35 (9.0%)	10 (2.6%)	5 (1.3%)	
Jiujiang district	292 (63.5%)	117 (25.4%)	31 (6.7%)	15 (3.3%)	5 (1.1%)	
Jinghu district	372 (57.7%)	168 (26.0%)	59 (9.1%)	32 (5.0%)	14 (2.2%)	
Jingkai district	54 (55.7%)	30 (30.9%)	10 (10.3%)	1 (1.0%)	2 (2.1%)	
Fanchang county	224 (62.2%)	83 (23.1%)	30 (8.3%)	16 (4.4%)	7 (1.9%)	
Wuwei county	412 (68.9%)	128 (21.4%)	40 (6.7%)	13 (2.2%)	5 (0.8%)	
Police classification						< 0.001
Criminal police	164 (49.7%)	106 (37.6%)	46 (13.9%)	13 (3.9%)	1 (0.3%)	
Security police	531 (56.4%)	250 (26.5%)	94 (10.0%)	42 (4.5%)	25 (2.7%)	
Regimental police	229 (67.2%)	85 (24.9%)	21 (6.2%)	5 (1.5%)	1 (0.3%)	
Traffic police	537 (73.9%)	127 (17.5%)	34 (4.7%)	23 (3.2%)	6 (0.8%)	
Police of command center and logistics support	143 (69.8%)	48 (23.4%)	8 (3.9%)	4 (2.0%)	2 (1.0%)	

Police who engaged in organs, internal and political security	107 (54.0%)	71 (35.9%)	15 (7.6%)	3 (1.5%)	2 (1.0%)
Prison guards	46 (49.5%)	25 (26.9%)	15 (16.1%)	4 (4.3%)	3 (3.2%)
Anxiliary police	488 (71.7%)	132 (19.4%)	33 (4.8%)	16 (2.3%)	12 (1.8%)
use of sleeping pills					< 0.001
No	2222 (65.3%)	807 (23.7%)	237 (7.0%)	100 (2.9%)	35 (1.0%)
Yes	23 (19.8%)	37 (31.9%)	29 (25.0%)	10 (8.6%)	17 (14.7%)

Table 3. Ordered multivariate logistic regression for depression in the police officers

Variables	β	SE	Wald	<i>p</i>	OR	95%CI
Age	0.009	0.005	3.483	0.062	1.009	1.000 1.018
Gender						
Female	0.009	0.102	0.007	0.931	1.009	0.826 1.231
Education						
Senior high school or below	- 1.347	0.110	148.721	< 0.001	0.260	0.210 0.323
Academy	- 0.732	0.083	77.264	< 0.001	0.481	0.409 0.566
Marital status						
Unmarried	- 0.27	0.289	0.875	0.35	0.763	0.433 1.344
Others	- 0.184	0.108	2.824	0.087	0.832	0.673 1.027
Location						
Yijiang district	0.355	0.144	6.104	0.013	1.426	1.076 1.889
Wuhu county	- 0.410	0.143	8.166	0.004	0.664	0.501 0.879
Sanshan district	- 0.041	0.192	0.046	0.830	0.960	0.658 1.398
Nanling county	0.108	0.142	0.578	0.447	1.114	0.843 1.473
Jiujiang district	0.122	0.136	0.801	0.371	1.130	0.865 1.476
Jinghu district	0.303	0.122	6.127	0.013	1.354	1.065 1.719
Jingkai district	0.303	0.227	1.777	0.183	1.354	0.868 2.111
Fanchang county	0.085	0.144	0.350	0.554	1.089	0.821 1.445
Police classification						
Criminal police	0.458	0.142	10.447	0.001	1.581	1.197 2.088
Security police	0.635	0.111	32.546	< 0.001	1.887	1.517 2.347
Regimental police	0.069	0.154	0.200	0.655	1.071	0.792 1.448
Traffic police	- 0.111	0.125	0.799	0.371	0.895	0.700 1.142
Police of command center and logistics support	- 0.116	0.183	0.404	0.525	0.890	0.623 1.274
Police who engaged in organs, internal and political security	0.337	0.170	3.938	0.047	1.401	1.004 1.954
Prison guards	0.533	0.224	5.681	0.017	1.704	1.100 2.643
use of sleeping pills						
No	- 1.899	0.176	116.408	< 0.001	0.150	0.106 0.211

Table 4. Univariate analysis results of the GAD-7 in the police officers

Variables	Minimal (0~4)	Mild (5~9)	Moderate (10~14)	Severe (20~27)	p
Age	35.60±9.66	37.01±8.49	38.09±8.52	38.88±8.36	< 0.001
Gender					0.018
Female	342 (61.4%)	165 (29.6%)	41 (7.4%)	9 (1.6%)	
Male	1971 (66.6%)	730 (24.7%)	178 (6.0%)	81 (2.7%)	
Education					< 0.001
Senior high school or below	643 (84.6%)	90 (11.8%)	21 (2.8%)	6 (0.8%)	
Academy	890 (73.7%)	242 (20.0%)	51 (4.2%)	24 (2.0%)	
Bachelor or above	780 (50.3%)	563 (36.3%)	147 (9.5%)	60 (3.9%)	
Marital status					< 0.001
Married	1741 (62.8%)	755 (27.2%)	192 (6.9%)	83 (3.0%)	
Unmarried	536 (77.5%)	129 (18.6%)	22 (3.2%)	5 (0.7%)	
Others	37 (66.1%)	12 (21.4%)	5 (8.9%)	2 (3.6%)	
Location					< 0.001
Yijiang district	189 (56.6%)	106 (31.7%)	29 (8.7%)	10 (3.0%)	
Wuhu county	359 (76.9%)	83 (17.8%)	15 (3.2%)	10 (2.1%)	
Sanshan district	120 (71.0%)	33 (19.5%)	11 (6.5%)	5 (3.0%)	
Nanling county	260 (67.2%)	89 (23.0%)	30 (7.8%)	8 (2.1%)	
Jiujiang district	314 (68.3%)	118 (25.7%)	20 (4.3%)	8 (1.7%)	
Jinghu district	375 (58.1%)	194 (30.1%)	58 (9.0%)	18 (2.8%)	
Jingkai district	53 (54.6%)	34 (35.1%)	6 (6.2%)	4 (2.5%)	
Fanchang county	227 (63.1%)	96 (26.7%)	25 (6.9%)	12 (3.3%)	
Wuwei county	416 (69.6%)	142 (23.7%)	25 (4.2%)	15 (2.5%)	
Police classification					< 0.001
Criminal police	174 (52.7%)	124 (37.6%)	28 (8.5%)	4 (1.2%)	
Security police	552 (58.6%)	226 (28.2%)	79 (8.4%)	45 (4.8%)	
Regimental police	249 (73.0%)	79 (23.3%)	8 (2.3%)	5 (1.5%)	
Traffic police	533 (73.3%)	146 (20.1%)	34 (4.7%)	14 (1.9%)	
Police of command center and logistics support	153 (74.6%)	41 (20.0%)	8 (3.9%)	3 (1.5%)	
Police who engaged in organs, internal and political security	108 (54.5%)	73 (36.9%)	13 (6.6%)	4 (2.0%)	

Prison guards	48 (51.6%)	27 (29.0%)	14 (15.5%)	4 (4.3%)
Anxiliary police	496 (72.8%)	139 (20.4%)	35 (5.1%)	11 (1.6%)
use of sleeping pills				< 0.001
No	2287 (67.2%)	845 (24.9%)	197 (5.8%)	72 (2.1%)
Yes	26 (22.4%)	50 (43.1%)	22 (19.0%)	18 (15.5%)

Table 5. Ordered multivariate logistic regression for anxiety in the police officers

Variables	β	SE	Wald	p	OR	95%CI	
Age	0.010	0.005	4.071	0.044	1.010	1.000	1.019
Gender							
Female	0.640	0.104	0.376	0.540	1.896	0.869	1.307
Education							
Senior high school or below	- 1.640	0.118	192.854	< 0.001	0.194	0.154	0.244
Academy	- 0.900	0.860	109.763	< 0.001	0.407	0.343	0.481
Marital status							
Unmarried	- 0.294	0.295	0.993	0.319	0.745	0.419	1.342
Others	- 0.487	0.115	17.841	< 0.001	0.614	0.490	0.770
Location							
Yijiang district	0.289	0.147	3.856	0.050	1.335	1.001	1.782
Wuhu county	- 0.503	0.147	11.489	0.001	0.605	0.452	0.809
Sanshan district	- 0.150	0.199	0.570	0.450	0.861	0.583	1.271
Nanling county	0.084	0.147	0.323	0.570	1.088	0.815	1.451
Jiujiang district	- 0.078	0.142	0.301	0.583	0.925	0.700	1.223
Jinghu district	0.244	0.125	0.382	0.051	1.276	0.999	1.631
Jingkai district	0.408	0.299	0.317	0.750	1.504	0.960	2.356
Fanchang county	0.064	0.148	0.186	0.666	1.066	0.798	1.425
Police classification							
Criminal police	0.267	0.146	3.331	0.068	1.306	0.980	1.740
Security police	0.600	0.115	27.276	0.000	1.822	1.455	2.282
Regimental police	- 0.105	0.163	0.417	0.519	0.900	0.653	1.240
Traffic police	- 0.009	0.127	0.005	0.945	0.991	0.773	1.273
Police of command center and logistics support	- 0.383	0.193	3.736	0.053	0.682	0.472	1.005
Police who engaged in organs, internal and political security	0.330	0.173	3.627	0.057	1.391	0.990	1.952
Prison guards	0.491	0.229	4.590	0.032	1.634	1.043	2.563
use of sleeping pills							
No	- 1.681	0.180	87.436	< 0.001	0.186	0.135	0.265

Figures

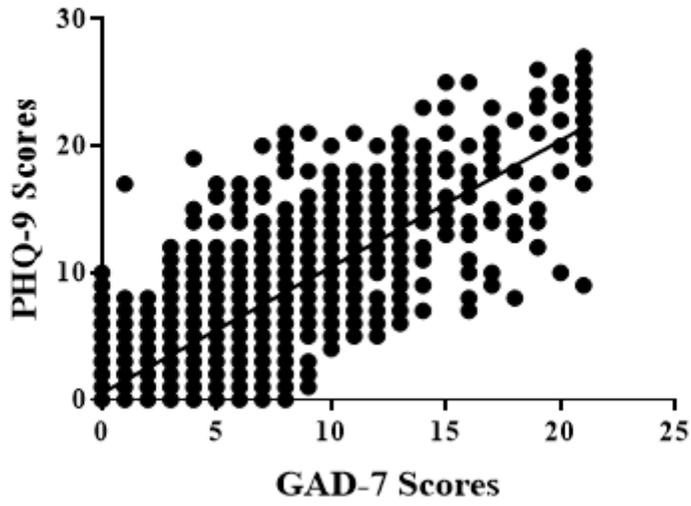


Figure 1