

doi: 10.13241/j.cnki.pmb.2018.07.015

## 国内 7 省市老年人抑郁症的检出率及影响因素分析 \*

胡雅娴<sup>1</sup> 罗森林<sup>1</sup> 庞婧<sup>2</sup> 于建民<sup>1</sup> 宫环<sup>2</sup> 曾平<sup>2</sup> 韩怡文<sup>2</sup>  
张延<sup>2</sup> 张恩毅<sup>2</sup> 黎健<sup>2</sup> 张铁梅<sup>2△</sup>

(1 北京理工大学 信息系统及安全对抗实验中心 北京 100081;

2 北京医院 国家老年中心 卫生部老年医学重点实验室 北京 100730)

**摘要 目的:** 调查分析国内 7 省市老年人抑郁症的检出率及特点, 并从老年人基本情况、躯体健康、认知功能等方面综合分析抑郁症的影响因素。**方法:** 采用 GDS-30 量表分析 2011-2012 年在北京、上海、哈尔滨、西安、成都、长沙和重庆市及周边乡镇的 9200 名 60 岁以上老年抑郁症的发生情况, 并分析影响抑郁检出率的相关因素。**结果:** 调查老年对象的抑郁症检出率为 17.2%, 其中男性为 15%, 女性为 19.6%。女性老年人在各个年龄段的抑郁症检出率均高于男性。抑郁症检出率随着年龄的增加逐渐增加。文化水平、健康自评、认知功能与抑郁症检出率密切相关。**结论:** 抑郁症是国内 7 省市老年人常见的心理疾病, 女性、高龄、低文化水平、健康自评差、认知功能障碍的老年人患抑郁症的几率更高。

**关键词:** 抑郁症; 老年人; 影响因素

中图分类号: R749.42; R161.7; R395 文献标识码: A 文章编号: 1673-6273(2018)07-1272-06

## Prevalence of Depression in Chinese Elderly Persons and Associated Factors\*

HU Ya-xian<sup>1</sup>, LUO Sen-lin<sup>1</sup>, PANG Jing<sup>2</sup>, YU Jian-min<sup>1</sup>, GONG Huan<sup>2</sup>, ZENG Ping<sup>2</sup>,  
HAN Yi-wen<sup>2</sup>, ZHANG Yan<sup>2</sup>, ZHANG En-yi<sup>2</sup>, LI Jian<sup>2</sup>, ZHANG Tie-mei<sup>2△</sup>

(1 Information System and Security & Countermeasures Experimental Center, Beijing Institute of Technology, Beijing, 100081, China;

2 Ministry of Health, Beijing Institute of Geriatrics, Beijing Hospital, Beijing, 100730, China)

**ABSTRACT Objective:** To investigate the prevalence of depression in the elderly in 7 provinces in China and determine the impact factors from the aspects of personal information, physical health, and cognitive function. **Methods:** The incidence and impact factors of depression in 9200 cases of elderly people aged over 60 years in Beijing, Shanghai, Harbin, Xi'an, Chengdu, Changsha, Chongqing and surrounding towns were analyzed by GDS-30 scale. **Results:** The prevalence of depression in total elderly was 17.2% and 15% in male and 19.6% in female respectively. At all ages, the prevalence of the depression in female was higher than that in man. With the increase of age, the prevalence of depression increased. Educational level, health self-evaluation and cognitive function were closely associated with the prevalence of depression in the elderly. **Conclusions:** Depression is a common mental disorder in the elderly in the domestic 7 provinces. Female, older people, lower educational level, lower health self-evaluation and lower cognitive function of the elderly are higher risks for depression.

**Key words:** Depression; Elderly; Risk factors

**Chinese Library Classification (CLC):** R749.42; R161.7; R395 **Document code:** A

**Article ID:** 1673-6273(2018)07-1272-06

### 前言

抑郁是老年人常见的心理疾患<sup>[1]</sup>。2014 年发表的分析报告表明中国有高达 23.6% 的老年人有抑郁症状<sup>[2]</sup>, 其症状主要表现为心境低落、思维迟缓、意志活动减退及相关躯体症状, 如睡眠障碍、食欲减退等<sup>[3]</sup>。抑郁症会严重影响老年人的身体健康、情绪状态以及生活质量, 甚至还会导致自杀倾向<sup>[4,5]</sup>。但由于老年人对抑郁症的认识普遍不足, 因此老年人抑郁症常常被忽视<sup>[6]</sup>。国内对于老年人群中的抑郁症检出率和影响因素的研究大

部分集中在某个小范围区域内, 如个别省市、社区或医院等<sup>[7,8]</sup>, 缺少对国内较大范围老年人抑郁症检出率的调查分析。另外, 对老年人抑郁表现和综合健康情况特点的联系与分析不够深入<sup>[10,11]</sup>。本研究以 2011 年开展的老年健康综合评估研究为基础, 分析从国内 6 个地区 7 个城市调查的 9000 多名老年人 GDS 问卷, 旨在为了解老年人心理情绪状态提供信息并进一步分析与老年人心理情绪相关的影响因素。

### 1 材料与方法

\* 基金项目: 卫生部卫生行业科研专项基金项目(201002011); 卫生部卫生行业科研专项项目(201302008)

作者简介: 胡雅娴(1994-), 女, 硕士研究生, 研究方向: 数据挖掘, 电话: 13718355546, E-mail: 13718355546@163.com

△ 通讯作者: 张铁梅, E-mail: tmzhang126@126.com

(收稿日期: 2017-08-28 接受日期: 2017-09-23)

### 1.1 研究对象

研究对象为国内 7 个城市(北京、上海、重庆、哈尔滨、成都、西安、长沙)及其周边乡镇的 9200 名 60 岁及以上年龄的老年人。

### 1.2 方法

横断面调查的方法。老年人健康综合评估问卷由中国卫生部行业基金老年健康综合评估课题组和中国老年人保健及疾病防治联盟联合设计,调查前培训调查员,然后采用标准问卷,以面对面的方式询问相关信息,调查内容包括 A 基本情况、B 躯体健康评估、C 躯体功能评估、D 生活行为与社会功能评估、E 心理健康、F 认知功能、G 医疗情况、H 失能等级评估、L 辅助检查,涉及九大项 482 个问题。共完成调查并收集数据 9503 份,除去部分年龄小于 60 岁、或心理健康评估量表填写不完整的人群,得到实际可用样本 9200 例。

### 1.3 抑郁测评

老年人抑郁症采用老年抑郁量表 GDS-30 (Geriatric Depression Scale)<sup>[12]</sup> 来评估,量表包括 30 个问题,总分 0-10 分为无抑郁,11-20 分为轻度抑郁,21-30 分为中重度抑郁,即 0-10 分为无抑郁,11-30 分为有抑郁。抑郁检出率 = 抑郁检出人数 / 对应类的人数 × 100 %。

### 1.4 认知功能测评

老年人认知功能采用简短精神状态量表 (MMSE)<sup>[13]</sup> 来评估,量表包括 11 项内容,满分为 30 分。考虑到认知功能对于文化水平的敏感性,根据 MMSE 得分和文化水平对个体所属认知功能等级进行界定。文盲、小学、中学和大学的痴呆节点分别是 17、20、22、23;得分在 27 分以上为认知功能正常,否则为认知功能受损或失能,见表 1。

表 1 基于 MMSE 量表的老年人认知功能界定标准

Table 1 Definition of Cognitive Function of Elderly Based on MMSE Scale

Cognitive function score	Educational level	Cognitive function
>=27	~	Normal
24~26	~	Damaged
18~23	Illiteracy	Damaged
21~23	Primary	Damaged
23	Middle	Damaged
<=17	Illiteracy	Disability
<=20	Primary	Disability
<=22	Middle	Disability
<=23	College and above	Disability

### 1.5 统计分析方法

采用 R 语言进行描述性分析、 $\chi^2$  检验以及逻辑回归分析,统计老年人健康综合数据基本特点,并分析老年人抑郁症影响因素。

## 2 结果

### 2.1 一般情况

所调查老年群体年龄跨度为 60-99 岁。其中,男性 4836 人 (52.57 %),女性 4360 人 (47.39 %);高中 / 大专 / 研究生学历比例为 47.72 %,文盲率为 10.18 %;认知功能正常的老年人比例为 65.96 %,认知功能受损或失能的老年人比例为 32.65 %;81.25 % 的老年人健康自评为一般及以上,约 18.75 % 的老年人健康自评较差,见表 2。

### 2.2 老年人抑郁症的检出情况

运用老年抑郁量表 GDS-30 对 9200 位老年人进行抑郁症筛查,GDS 得分在 0-10 分 (无抑郁) 的有 7617 人 (82.79 %),11-20 分 (轻度抑郁) 的有 1464 人 (15.91 %),21-30 分 (中重度抑郁) 的有 119 人 (1.29 %),即老年人抑郁症的检出率为 17.2 %,其中,在无抑郁人群中,男性人数多于女性,在有抑郁人群中,女性人数多于男性。男性在不同抑郁程度下的检出人数比例分

别为 84.99 %、14.08 % 和 0.93 %,女性在不同抑郁程度下的检出人数比例分别为 80.39 %、17.91 % 和 1.70 %,见表 3。

### 2.3 老年人抑郁症的影响因素

老年人抑郁症在性别、年龄、文化水平、认知功能及健康自评方面差异具有统计学意义 ( $P < 0.001$ ),且是老年人抑郁症的危险因素 ( $OR > 1$ )。男性的抑郁症检出率为 15.01 %,女性的抑郁症检出率为 19.61 %。随着年龄的增加,抑郁症检出率增加;文化水平降低,抑郁症检出率提高,且文化水平每降低一个等级,抑郁症检出率提高约 4 %;认知功能降低,抑郁症检出率提高,且认知功能每降低一个等级,抑郁症检出率提高约 9 %;健康自评降低,抑郁症检出率提高,且健康自评每降低一个等级,抑郁症检出率提高约 8 %,见表 4。

在 60~64 岁人群中,不管抑郁程度如何,男性人数均少于女性;在 65~74 岁无抑郁人群中,男性人数多于女性,其他抑郁程度人群中,男性人数少于女性;在 75~84 岁无抑郁和轻度抑郁人群中,男性人数多于女性,中重度抑郁人群中,男性人数少于女性;在 85~99 岁人群中,除两个特例外,其余均是男性人数多于女性。在不同年龄段内,均体现出女性抑郁症检出率高于男性的特点,尤其是 80 岁以上人群,女性抑郁症检出率明显高于男性,见表 5。

表 2 老年人群一般情况  
Table 2 The general situation of elderly population

Factor	Group	Mean Age(± SD)	Number	Proportion(%)
Elderly population	Total	72(± 7.78)	9200	100
Gender	Male	73(± 7.95)	4836	52.57
	Female	71(± 7.45)	4360	47.39
Age	60~64	62(± 1.39)	1894	20.59
	65~69	66.9(± 1.43)	1860	20.22
	70~74	72(± 1.42)	1916	20.83
	75~79	76.8(± 1.40)	1780	19.35
	80~84	81.7(± 1.38)	1156	12.57
	85~89	86.6(± 1.35)	460	5.00
	90~94	91.5(± 1.42)	122	1.33
	95~99	96.8(± 1.70)	12	0.13
Educational level	Illiteracy	74.6(± 7.42)	937	10.18
	Primary	71.7(± 7.37)	1890	20.54
	Junior	70.3(± 7.93)	1820	19.78
	High/Secondary	71.5(± 7.87)	1636	17.78
	College/Undergraduate	73.1(± 7.63)	2677	29.10
	Postgraduate	71(± 8.45)	77	0.84
Cognitive function	Disability	77.2(± 8.39)	922	10.02
	Damaged	73.8(± 7.56)	2082	22.63
	Normal	70.6(± 7.19)	6069	65.96
Self-rated health	Very good	70.8(± 7.85)	501	5.45
	Good	71.8(± 7.83)	2740	29.78
	General	71.8(± 7.61)	4234	46.02
	Bad	73.8(± 7.86)	1504	16.35
	Very bad	74.5(± 8.11)	165	1.79

表 3 老年人抑郁症的检出情况  
Table 3 The detection of depression in the elderly

The degree of depression(GDS Score)	Total number	Proportion(%)	Gender	Detection Number	Proportion in different gender(%)
No depression (0-10)	7617	82.79	Male	4110	84.99
			Female	3505	80.39
Mild depression (11-20)	1464	15.91	Male	681	14.08
			Female	781	17.91
Moderate or severe depression(21-30)	119	1.29	Male	45	0.93
			Female	74	1.70

Note: Proportion in different gender % = Detection Number / Number of different gender \* 100.

### 3 讨论

#### 3.1 抑郁症是老年人常见的心理疾病

本文研究对象的抑郁症检出率为 17.2 %，其中男性为 15 %，女性为 19.6 %，表明抑郁症是老年人常见的心理疾病。与王义强<sup>[14]</sup>等人研究得到的杭州市社区老年人抑郁症检出率为

16.7 %的结论相当，高于熊健<sup>[15]</sup>对辽宁省锦州市某社区老年居民研究所得的抑郁症检出率为 16.22 %的结果，低于张迪等人<sup>[16]</sup>对北京市城市 2 个社区调查所得的抑郁症检出率为 18.259 %的结果。综上，全国大部分省市的老年人表现出较高的抑郁症发病率，严重影响老年人的生活质量。

表 4 不同因素对老年人抑郁症的影响

Table 4 The effects of different factors on the depression in the elderly

Factor	Group	Number of depression (Detection rate%)	P	OR
Gender	Male	726(15.01)	<0.001	1.498
	Female	855(19.61)		
	60~64	248(13.09)		
	65~69	306(16.45)		
	70~74	315(16.44)		
Age	75~79	330(18.54)	<0.001	1.006
	80~84	228(19.72)		
	85~89	111(24.13)		
	90~99	45(33.58)		
	Illiteracy	276(29.46)		
	Primary	408(21.58)		
Educational level	Junior	345(18.96)	<0.001	1.025
	High/Secondary	278(16.99)		
	College/Undergraduate	264(9.86)		
	Postgraduate	4(5.19)		
	Disability	358(38.83)		
Cognitive function	Damaged	547(26.27)	<0.001	1.966
	Normal	644(10.61)		
	Very good	13(2.59)		
	Good	258(9.42)		
Self-rated health	General	713(16.84)	<0.001	3.016
	Bad	524(34.84)		
	Very bad	72(43.64)		

表 5 不同年龄、不同性别下不同程度抑郁症的检出率

Table 5 Detection rate in different degrees of depression, different age, different sex

Age	Gender	Total number	The degree of depression	Number	Number of depression (Detection rate%)
60~64	Male	849	No depression	759	
			Mild depression	84	90(10.58)
			Moderate or severe depression	6	
	Female	1044	No depression	887	
			Mild depression	138	157(15.04)
			Moderate or severe depression	19	
65~69	Male	950	No depression	812	
			Mild depression	130	138(14.53)
			Moderate or severe depression	8	
	Female	910	No depression	742	
			Mild depression	158	168(18.46)
			Moderate or severe depression	10	
70~74	Male	947	No depression	819	
			Mild depression	122	128(13.52)
			Moderate or severe depression	6	
	Female	969	No depression	782	
			Mild depression	174	187(19.30)
			Moderate or severe depression	13	

			No depression	810	
75~79	Male	971	Mild depression	154	161(16.58)
			Moderate or severe depression	7	
			No depression	639	
80~84	Female	807	Mild depression	149	168(20.82)
			Moderate or severe depression	19	
			No depression	606	
85~89	Male	726	Mild depression	112	120(16.53)
			Moderate or severe depression	8	
			No depression	322	
90~99	Female	430	Mild depression	99	108(25.12)
			Moderate or severe depression	9	
			No depression	240	
90~99	Male	307	Mild depression	60	67(21.82)
			Moderate or severe depression	7	
			No depression	109	
90~99	Female	153	Mild depression	42	44(28.76)
			Moderate or severe depression	2	
			No depression	64	
90~99	Male	86	Mild depression	19	22(25.58)
			Moderate or severe depression	3	
			No depression	24	
90~99	Female	47	Mild depression	21	23(48.94)
			Moderate or severe depression	2	

Note: Detection rate% = Number of depression / Total number \* 100.

### 3.2 老年人抑郁症影响因素

女性老年群体的抑郁症检出率高于男性，尤其是 80 岁以上人群，说明女性较男性患抑郁症的风险更高，与李秀丽等人<sup>[17]</sup>对太原市社区老年人、袁群等人<sup>[18]</sup>对长沙市社区老年人、俞丽华<sup>[19]</sup>对江西省精神病院老年患者、Li Yunming 等人<sup>[20]</sup>对西安市某社区老年人抑郁症调查的结论一致。这可能与女性特殊的生理构造导致的情绪不稳、社会角色分工造成的心灵压力有关。

随着老年人年龄的增加，抑郁症检出率逐渐增加，与韩冬梅等人<sup>[21]</sup>对包头市老年人抑郁症调查的结论一致。老年人随年龄增加，躯体疾病发病率上升，会增加患抑郁症的风险。崔向军等人<sup>[22]</sup>的研究结果也表明高龄老年人的抑郁症患病率更高。由于高龄老年人可能患有多种疾病，精神压力较大，负性生活时间增多，导致其更容易产生抑郁情绪<sup>[23]</sup>。

文化水平越低的老年人，抑郁症检出率越高，且文化水平每降低一个等级，抑郁症检出率提高约 4%。Park<sup>[24]</sup>、李秀丽等人<sup>[17]</sup>、曹裴娅等人<sup>[25]</sup>的研究也显示，低文化程度的老年人抑郁症检出率更高。这些群体由于社会地位、经济地位较低，容易产生负性情绪，从而引发抑郁症状。

健康自评越差的老年人抑郁症检出率越高，且健康自评每降低一个等级，抑郁症检出率提高约 9%，雷冬兰<sup>[26]</sup>、袁群等人<sup>[18]</sup>、郝艳华等人<sup>[27]</sup>的研究也反映出抑郁症检出率与健康自评情况相关，而胡月等人<sup>[28]</sup>的研究结果表明健康自评受到收入水平、慢性病、听说障碍、饮食、锻炼等因素的影响。健康自评能够在一定程度上反映老年人的心理健康状况，有些老年人的身体

健康状况不一定很好，但由于其心态乐观，对自身的健康评价较好，不容易产生抑郁情绪；相反，有些老年人虽然身体健康状况较好，但总是过分担心自身的健康状况，因此更容易产生抑郁情绪。

认知功能越低的老年人抑郁症检出率越高，且认知功能每降低一个等级，抑郁症检出率提高约 8%，与李秀丽等人<sup>[17]</sup>对太原市社区老年人、秦碧勇等人<sup>[29]</sup>对湖北省十堰市人民医院住院患者的研究结果相一致。认知功能损害是抑郁症的常见伴发症状，严重影响老年人的生活质量。

综上所述，性别、年龄、文化水平、健康自评以及认知功能是老年人抑郁症的影响因素。

### 3.3 对策与建议

针对本研究的结果，提出以下对策与建议预防老年人抑郁症的发生：关注老年人的情绪变化，尤其是女性高龄老年群体；营造良好的社会氛围，发展老年教育，让老年人继续学习，更好地融入社会；帮助老年人纠正不健康的行为和生活方式，坚持定期体检；引导老年人积极参加健康的社会活动，对其进行心理健康教育干预<sup>[30]</sup>，延缓生理和心理功能的下降。

### 参考文献(References)

- [1] 徐曼,刘冰,柴云,等.城区老年人躯体疾病、生活事件与抑郁症相关性调查研究[J].现代预防医学,2016,43(03): 486-489  
Xu Man, Liu Bing, Chai Yun, et al. Investigation on relationship between somatic diseases/life events and depression in the elderly urban people[J]. Modern Preventive Medicine, 2016, 43(03): 486-489

- [2] Li Dan, Zhang Da-jun, Shao Jing-jin et al. A meta-analysis of the prevalence of depressive symptoms in Chinese older adults [J]. Archives of Gerontology and Geriatrics, 2014, 58(1): 1-9
- [3] 黄海量.老年人抑郁症的影响因素及干预措施[J].中国老年学杂志, 2015, (09): 2581-2583
- Huang Hai-liang. Influencing factors and intervention measures of depression in the elderly [J]. Chinese Journal of Gerontology, 2015, 35 (9): 2581-2583
- [4] 刘丽婷,赵红,张继红.老年抑郁心理干预疗法研究进展[J].中国老年学杂志, 2014, 34(08): 2308-2310
- Liu Li-ting, Zhao Hong, Zhang Ji-hong. Advances in psychological intervention therapy for senile depression [J]. Chinese Journal of Gerontology, 2014, 34(08): 2308-2310
- [5] 林翔,房圆,李霞.老年人抑郁症与认知障碍的鉴别诊断和临床诊治[J].中华老年医学杂志, 2017, 36(1): 12-13
- Lin Xiang, Fang Yuan, Li Xia. Differential diagnosis and management of depression and cognitive disorders in elderly people [J]. Chinese Journal of Gerontology, 2017, 36(1): 12-13
- [6] 衣磊,于慧,崔维珍.老年抑郁症发病的危险因素分析[J].四川精神卫生, 2015, 28(1): 89-90
- Yi Lei, Yu Hui, Cui Wei-zhen. Analysis of risk factors of geriatric depression[J]. Sichuan Mental Health, 2015, 28(1): 89-90
- [7] Yaka Erdem, Keskinoğlu Pembe, Ucku Reyhan et al. Prevalence and risk factors of depression among community dwelling elderly [J]. Archives of Gerontology and Geriatrics, 2014, 59(1): 150-154
- [8] Li Ning, Pang Lihua, Chen Gong, et al. Risk Factors for Depression in Older Adults in Beijing [J]. Canadian journal of psychiatry, 2011, 56 (8): 466-473
- [9] 林茵.社区老年人抑郁症的相关因素及其预防与控制[J].中国老年学杂志, 2006, 26(08): 1013-1014
- Lin Yin. Risk factors and preventive countermeasures of elderly depression in community [J]. Chinese Journal of Gerontology, 2006, 26 (08): 1013-1014
- [10] Qadir F, Haqqani S, Khalid A, et al. A pilot study of depression among older people in Rawalpindi, Pakistan [J]. BMC Res Notes, 2014, 7(1): 409
- [11] Jee Y J, Lee Y B. Factors Influencing Depression among Elderly Patients in Geriatric Hospitals [J]. J Phys Ther Sci, 2013, 25 (11): 1445-1449
- [12] JA Yesavage, TL Brink, TL Rose. Development and validation of a geriatric depression rating scale: a preliminary report[J]. J Psych Res, 1983, 17(1): 37-49
- [13] Folstein M F, Folstein S E, McHugh P R. "Mini-mental state". A practical method for grading the cognitive state of patients for the clinician[J]. Journal of psychiatric research, 1975, 12(3): 189-198
- [14] 王义强,赵国秋,陈树林.社区老年人抑郁障碍及影响因素调查[J].健康心理学杂志, 2000, 8(03): 300-301
- Wang Yi-qiang, Zhao Guo-qiu, Chen Shu-lin. Investigation on depressive disorder and its influencing factors in the elderly [J]. Health Psychology Journal, 2000, 8(03): 300-301
- [15] 熊健.老年人抑郁症的影响因素及干预措施研究[J].中国医药指南, 2016, 14(33): 119-120
- Xiong Jian. Study on influencing factors and intervention measures of depression in the elderly [J]. Guide of China Medicine, 2016, 14(33): 119-120
- [16] 张迪,禤春裕,白波.北京市城市 2 个社区老年人抑郁症状的调查与分析[J].中国健康心理学杂志, 2014, 22(10): 1480-1482
- Zhang Di, Xuan Chun-yu, Bai Bo. Depression of the Elderly from the Urban Community in Beijing[J]. China Journal of Health Psychology, 2014, 22(10): 1480-1482
- [17] 李秀丽,贺润莲,余红梅.太原市社区老年人抑郁症状影响因素分析[J].中华全科医学, 2015, 13(10): 1667-1669
- Li Xiu-li, He Run-lian, Yu Hong-mei. Analysis of influencing factors for elderly depression in Taiyuan community [J]. Chinese Journal of General Practice, 2015, 13(10): 1667-1669
- [18] 袁群,何国平,冯辉,等.长沙市社区老年人抑郁症状影响因素分析[J].中国老年学杂志, 2010, 30(6): 746-748
- Yuan Qun, He Guo-ping, Feng Hui, et al. Analysis of influential factors of depressive symptoms in the elderly in Changsha community [J]. Chinese Journal of Gerontology, 2010, 30(6): 746-748
- [19] 俞丽华.老年抑郁症患者认知功能损伤的影响因素[J].中国老年学杂志, 2013, 33(21): 5328-5330
- Yu Li-hua. Influencing factors of cognitive impairment in elderly patients with depression [J]. Chinese Journal of Gerontology, 2013, 33 (21): 5328-5330
- [20] Li Yun-ming, Chen Chang-sheng, Tu Hai-bo. Prevalence and risk factors for depression in older people in Xi'an China: a community-based study[J]. International journal of geriatric psychiatry, 2012, 27: 31-39
- [21] 韩冬梅,付云,仝晓燕,等.包头市老年人抑郁症状调查及相关因素分析[J].中国老年学杂志, 2002, (06): 466-467
- Han Dong-mei, Fu Yun, Tong Xiao-yan, et al. Investigation on depressive symptoms of the elderly in Baotou City and analysis of related factors[J]. Chinese Journal of Gerontology, 2002, (06): 466-467
- [22] 崔向军,魏志霞,李丽娜,等.农村老年人抑郁症状及其影响因素的相关研究[J].中国健康心理学杂志, 2012, 20(04): 536-538
- Cui Xiang-jun, Wei Zhi-xia, Li Li-na, et al. Depression in Rural Elderly People and Its Influencing Factor [J]. China Journal of Health Psychology, 2012, 20(04): 536-538
- [23] 谭平,张泽丹,包维为.老年人抑郁症发生状况及相关因素调查分析[J].东南国防医药, 2013, 15(04): 365-367
- Tan Ping, Zhang Ze-dan, Bao Wei-wei. Report on factors of causing depression in old people [J]. Military Medical Journal of Southeast China, 2013, 15(04): 365-367
- [24] Park Joon Hyuk, Kim Ki Woong, Kim Myoung-Hee et al. A nationwide survey on the prevalence and risk factors of late life depression in South Korea [J]. Journal of Affective Disorders, 2012, 138 (1-2): 34-40
- [25] 曹裴娅,罗会强,侯利莎,等.中国 45 岁及以上中老年抑郁症状及影响因素研究[J].四川大学学报(医学版), 2016, 47(05): 763-767
- Cao Pei-ya, Luo Hui-qiang, Hou Li-sha, et al. Depressive Symptoms in the Mid- and Old-aged People in China[J]. Journal of Sichuan University (Medical Science Edition), 2016, 47(05): 763-767
- [26] 雷冬兰.长治某社区老年抑郁症影响因素分析[D].山西医科大学, 2011
- Lei Dong-lan. Analysis and recommendations on Influencing Factors of Geriatric Depression in the Communities of Changzhi [D]. Shanxi Medical University, 2011

(下转第 1313 页)

883-899

- [2] Guo Yan, Liu Yi, Liu Cai-li, et al. New progress of blood pressure regulation in acute cerebral hemorrhage [J]. Chinese Journal of Geriatric Heart Brain and Vessel Diseases, 2014, 6(16): 664-666
- [3] Dong Jing, Liu Qun. Experimental study on the expression of cerebral hemorrhage perifocal MMP-9 and brain edema [J]. Journal of Apoplexy and Nervous Diseases, 2016, 2(33): 157-160
- [4] Hockel K, Diedler J, Steiner J, et al. Effect of intra-arterial and intra-venous nimodipine therapy of cerebral vasospasm after SAH on cerebrovascular reactivity and oxygenation[J]. World Neurosurg, 2017
- [5] Hänggi D, Etminan N, Aldrich F, et al. Randomized, Open-Label, Phase 1/2a Study to Determine the Maximum Tolerated Dose of Intraventricular Sustained Release Nimodipine for Subarachnoid Hemorrhage (NEWTON [Nimodipine Microparticles to Enhance Recovery While Reducing Toxicity After Subarachnoid Hemorrhage]) [J]. Stroke, 2017, 48(1): 145-151
- [6] Otite FO, Khandelwal P, Malik AM, et al. Ten-Year Temporal Trends in Medical Complications After Acute Intracerebral Hemorrhage in the United States[J]. Stroke, 2017, 48(3): 596-603
- [7] Buendia I, Tenti G, Michalska P. Addition to "ITH14001, a CGP37157-Nimodipine Hybrid Designed to Regulate Calcium Homeostasis and Oxidative Stress, Exerts Neuroprotection in Cerebral Ischemia" [J]. ACS Chem Neurosci, 2017, 8(1): 210
- [8] Gao Ming-yue, Yang Min, Kuang Wei-hong, et al. Factors and validity analysis of Mini-Mental State Examination in Chinese elderly people [J]. Beijing Da Xue Xue Bao, 2015, 47(03): 443-449
- [9] Jian Wen-jia, Shi Jing, Ni Jing-nian, et al. Activities of daily living rating for differentiating mild cognitive impairment and dementia [J]. Chinese Journal of Gerontology, 2014, 04(34): 865-868
- [10] Huang XX, Hu D, Qu ZW, Zhang JT, et al. Effect of dl-3-butylphthalide on the striatum extracellular amino acid and dopamine contents in the rat during cerebral ischemia [J]. Yao Xue Xue Bao, 1996, 31(4): 246-249
- [11] Buendia I, Tenti G, Michalska P, et al. ITH14001, a CGP37157-Nimodipine Hybrid Designed to Regulate Calcium Homeostasis and Oxidative Stress, Exerts Neuroprotection in Cerebral Ischemia [J]. ACS Chem Neurosci, 2017, 8(1): 67-81
- [12] Helbok R, Zangerle A, Chemelli A, et al. Continuous intra-arterial ni-
- modipine infusion in refractory symptomatic vasospasm after subarachnoid hemorrhage.[J]. Springerplus, 2016, 5(1): 1807
- [13] Xue LX, Zhang T, Zhao YW, et al. Efficacy and safety comparison of DL-3-n-butylphthalide and Cerebrolysin: Effects on neurological and behavioral outcomes in acute ischemic stroke [J]. Exp Ther Med, 2016, 11(5): 2015-2020
- [14] Zhao H, Yun W, Zhang Q, et al. Mobilization of Circulating Endothelial Progenitor Cells by dl-3-n-Butylphthalide in Acute Ischemic Stroke Patients[J]. J Stroke Cerebrovasc Dis, 2016, 25(4): 752-760
- [15] T Wen XR, Tang M, Qi, et al. Butylphthalide Suppresses Neuronal Cells Apoptosis and Inhibits JNK-Caspase3 Signaling Pathway After Brain Ischemia /Reperfusion in Rats [J]. Cell Mol Neurobiol, 2016, 36(7): 1087-1095
- [16] Lattanzi S, Cagnetti C, Provinciali L, Silvestrini M. How Should We Lower Blood Pressure after Cerebral Hemorrhage? A Systematic Review and Meta-Analysis[J]. Cerebrovasc Dis, 2017, 43(5-6): 207-213
- [17] Liang H, Guan D, Gao A, et al. Human amnioticepithelialstemcells inhibit microglia activation thmtIgII downregulation of tumornecrosisfactor ninterleukin 113 and matrixmetalloproteinase-12in vitro and in a rat model of intracerebral hemorrhage [J]. Cyotherapy, 2014, 16 (4): 523-534
- [18] Von Arbin M, B"ton M, Faire U, et al. A stroke unit in a medical de-pa rtment Organization and the"rst 100 patients [J]. Acta Med Scand, 2014, 235(1): 231-235
- [19] Zhou Y, Niu LJ, Qi FM, et al. Effect of 3-n-butylphthalide pretreatment on expression of the HSP70 after brain ischemia/reperfusion [J]. Zhongguo Ying Yong Sheng Li Xue Za Zhi, 2015, 31(2): 136-40
- [20] Du R, Teng JF, Wang Y, et al. Clinical study of Butylphthalide combined with Xue Shuan Tong on serum inflammatory factors and prognosis effect of patients with cerebral infarction [J]. Pak J Pharm Sci, 2015, 28(5 Suppl): 1823-1827
- [21] Zhao L, Arbel-Ornath M, Wang X, et al. Matrix metalloproteinase 9-mediated intracerebral hemorrhage induced by cerebral amyloid angiopathy[J]. Neurobiol Aging, 2015, 26(11): 2963-2971
- [22] Choi KW, Um SH, Kwak JH, et al. Suppression of adhesion molecule expression by phenanthrene-containing extract of bulbils of Chinese Yam in vascular smooth muscle cells through inhibition of MAPK, Akt and NF- $\kappa$ B [J]. Food Chem Toxicol, 2012, 50(8): 2792-2804

(上接第 1277 页)

- [27] 郝艳华,马振玲,姜亚芳.北京市某社区 200 名老年人抑郁症状调查及其影响因素分析[J].中国护理管理,2016, 16(04): 491-494  
Hao Yan-hua, Ma Zhen-ling, Jiang Ya-fang. Prevalence of depression and associated factors in older Chinese in a Beijing community: a cross-sectional analysis [J]. Chinese Nursing Management, 2016, 16 (04): 491-494
- [28] 胡月,龚磊,陈福宽,等.农村老年人自评健康状况的影响因素分析[J].中国卫生统计,2013, 30(02): 232-234  
Hu Yue, Gong Lei, Chen Fu-kuan, et al. Analysis on the influencing factors of self - rated health status of rural elderly[J]. Chinese Journal of Health Statistics, 2013, 30(02): 232-234
- [29] 秦碧勇,戴立磊,郑艳.老年抑郁症患者认知功能受损与社会支持的相关性及其危险因素分析[J].海南医学,2015, 26(19): 2847-2850  
Qin Bi-yong, Dai Li-lei, Zhen Yan. Correlation between the cognitive function damage and social support of elderly depression and the risk factors of cognitive function damage [J]. Hainan Medical Journal, 2015, 26(19): 2847-2850
- [30] 张鑫.社区老年人抑郁症的影响因素及心理健康教育的作用[J].中国社区医师,2015, 31(07): 143-145  
Zhang Xin. The function of psychological health education and the influence factors of elderly depression in community [J]. Chinese Community Doctors, 2015, 31(07): 143-145