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### 述评

1349 快速康复理念下胃癌腹腔镜手术患者营养管理研究现状

苗瑛铭, 王杰, 刘君儿, 李琬

### 基础研究

1356 LincRNA-p21调控PI3K/AKT信号通路逆转结肠癌细胞伊立替康耐药性

戴丹平, 余灵芝, 叶梦飞

### 临床研究

1365 循环miRNAs对乙肝患者肝纤维化诊断价值的荟萃分析

路晴晴, 陈敏, 王晓林, 曹仕琼

1375 口服S-1方案治疗转移性结直肠癌疗效与安全性的Meta分析

赵娟娟, 雷鑫明

### 临床实践

1383 血清G-17、PG I、PG II、Hcy在胃黏膜癌变进展中的表达及临床意义

南寿山, 靳荣, 贾惠娟, 王珏磊, 赵春美, 王柏清

### 研究快报

1391 老年功能性消化不良患者心理弹性、感知压力及睡眠质量间的相关性分析

童丽琴

1396 金华市某三级医院老年功能性消化不良患者生存质量及其影响因素分析

章肖平

1402 基于Wexner评分系统的综合护理干预对缺血性脑卒中合并便秘患者便秘症状及生活质量的影响分析

贾苹苹

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- 1355 《世界华人消化杂志》2011年开始不再收取审稿费  
1374 《世界华人消化杂志》栏目设置  
1382 《世界华人消化杂志》参考文献要求  
1390 《世界华人消化杂志》外文字符标准

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## Contents

Volume 27 Number 22 Nov 28, 2019

## EDITORIAL

- 1349 Nutritional management of patients undergoing laparoscopic surgery for gastric cancer based on the concept of rapid rehabilitation

*Miao YM, Wang J, Liu JE, Li L*

## BASIC RESEARCH

- 1356 LincRNA-p21 reverses irinotecan resistance in colon cancer cells via the PI3K/AKT signaling pathway

*Dai DP, Yu LZ, Ye MF*

## CLINICAL RESEARCH

- 1365 Meta-analysis of diagnostic value of circulating microRNAs in hepatitis B-related fibrosis

*Lu QQ, Chen M, Wang XL, Cao SQ*

- 1375 Meta-analysis of safety and efficacy of S-1-based regimens in treatment of metastatic colorectal cancer

*Juan-Juan Zhao, Xin-Ming Lei*

## CLINICAL PRACTICE

- 1383 Clinical significance of expression of serum gastrin-17, pepsinogen I, pepsinogen II, and homocysteine in evolution of gastric cancer

*Nan SS, Jin R, Jia HJ, Wang JL, Zhao CM, Wang BQ*

## RAPID COMMUNICATION

- 1391 Correlation among mental resilience, perceived stress, and sleep quality in elderly patients with functional dyspepsia

*Tong LQ*

- 1396 Quality of life and its influencing factors in elderly patients with functional dyspepsia in a tertiary hospital in Jinhua

*Zhang XP*

- 1402 Effects of comprehensive nursing intervention based on Wexner scoring system on constipation symptoms and quality of life in patients with ischemic stroke complicated with constipation

*Ping-Ping Jia*



## Contents

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### COVER

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# 老年功能性消化不良患者心理弹性、感知压力及睡眠质量间的相关性分析

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## Correlation among mental resilience, perceived stress, and sleep quality in elderly patients with functional dyspepsia

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## Abstract

### BACKGROUND

Repeated episodes of functional dyspepsia (FD) in the elderly tend to affect the psychological mood and sleep quality of patients. Sleep disorders and negative

psychological mood can affect each other, forming a vicious circle. In this study, the psychological resilience, perceived pressure, and sleep quality of elderly FD patients were investigated, in order to provide important objective evidence for clinical management of this population.

### AIM

To analyze the correlation among perceived stress, mental resilience, and sleep quality in elderly FD patients.

### METHODS

One hundred and twenty elderly patients with FD admitted to the Second Hospital of Jinhua City, Zhejiang Province from March 2017 to June 2019 were selected as study subjects, and Pittsburgh sleep quality index (PSQI), perceived stress scale (PSS), and mental resilience scale (CD-RISC-10) were used to analyze the sleep quality, perceived stress, and mental resilience.

### RESULTS

Mean PSS score was  $15.3 \pm 4.8$ , mean mental resilience score was  $26.1 \pm 6.2$ , and mean PSQI score was  $7.3 \pm 2.7$ . Mean mental resilience scores were negatively correlated with PSS scores and PSQI scores ( $r = -0.58, -0.41, P < 0.05$ ). PSS scores were positively correlated with PSQI scores ( $r = 0.33, P < 0.05$ ). PSS scores can positively predict PSQI scores ( $\beta = 0.31, P < 0.05$ ), and negatively predict PSQI scores ( $\beta = -0.28, P < 0.05$ ).

### CONCLUSION

Elderly FD patients have poor sleep quality, and perceived pressure and mental resilience are risk factors affecting sleep quality. In clinical practice, sleep can be improved by reducing psychological pressure.

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**Key Words:** Old age; Functional dyspepsia; Mental resilience; Perceived stress; Quality of sleep

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## 摘要

### 背景

老年功能性消化不良(functional dyspepsia, FD)反复发作易影响患者心理情绪和睡眠质量. 睡眠障碍和负面心理情绪相互影响, 长期形成恶性循环. 本研究对老年FD患者心理弹性、感知压力及睡眠质量进行调查分析, 旨在为临床提供重要客观依据.

### 目的

旨在探讨老年FD患者感知压力、心理弹性及睡眠质量的关系.

### 方法

选取2017-03/2019-06在浙江省金华市第二医院就诊的老年FD患者120例为研究对象, 采用匹兹堡睡眠质量指数量表(pittsburgh sleep quality index, PSQI), 感知压力量表(perceived stress scale, PSS)及心理弹性量表分别调查并分析.

### 结果

老年FD患PSQI总得分2-17, 7.4分 $\pm$ 2.9分, 其中72.50%(87/120)的患者PSQI评分 $>$ 5分, 睡眠质量较差. 老年FD患者PSS评分为15.3分 $\pm$ 4.8分, 心理弹性评分为26.1分 $\pm$ 6.2分, PSQI评分为7.3分 $\pm$ 2.7分. 心理弹性评分与PSS和PSQI评分呈负相关( $r = -0.58, -0.41, P < 0.05$ ), PSS评分与PSQI评分呈正相关( $r = 0.33, P < 0.05$ ). PSS能正性预测PSQI评分( $\beta = 0.31, P < 0.05$ ), 心理弹性能负性预测PSQI评分( $\beta = -0.28, P < 0.05$ ), 且PSS对PSQI的预测作用降低( $\beta = -0.58, P < 0.05$ ); Bootstrap检验中介效应95%CI: 0.127-0.325,  $P < 0.01$ .

### 结论

老年FD患者睡眠质量较差, 感知压力和心理弹性是影响睡眠质量的危险因素, 在临床中可通过疏导心理压力改善睡眠.

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**关键词:** 老年; 功能性消化不良; 心理弹性; 感知压力; 睡眠质量

**核心提要:** 探讨老年功能性消化不良患者心理弹性、感知压力及睡眠质量之间的关系是重要的研究课题, 对临床干预具有重要指导价值和意义.

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## 0 引言

功能性消化不良(functional dyspepsia, FD)是临床常见疾病之一, 多见于老年人, 病情易反复发作, 严重者影响患者心理情绪和睡眠质量. 有研究表明, 睡眠障碍是重要的行为危险因素, 能够预测FD的发生和进展<sup>[1,2]</sup>. 老年FD患者睡眠质量的高低将影响其健康结局, 增加负面心理情绪<sup>[3,4]</sup>. 研究表明, 压力将影响患者个体睡眠生理过程紊乱和睡眠结构改变<sup>[5]</sup>, 这主要以与压力增大影响下丘脑-垂体-肾上腺(hypothalamic-pituitary-adrenal axis, HPA)轴调节功能紊乱有关, 引起5-羟色胺(5-hydroxytryptamine, 5-HT)分泌增多和觉醒期皮质醇水平增加, 导致睡眠减少<sup>[6]</sup>. 同时, 压力增大将使个体处于应激状态, 能够实现良好适应的过程称为心理弹性. 心理弹性与心理社会适应能力和良好身体健康呈正相关<sup>[7]</sup>. 基于以上认识, 可推测心理弹性、感知压力及睡眠质量之间存在一定关系. 本研究通过对120例老年FD患者的资料进行调查分析, 旨在为临床提供重要客观依据. 现报道如下.

## 1 材料和方法

**1.1 材料** 选取2017-03/2019-06在浙江省金华市第二医院就诊的老年FD患者120例为研究对象, 其中男62例, 女58例; 年龄62-78岁, 平均68.4岁 $\pm$ 7.2岁; 病程1-12年, 平均6.8年 $\pm$ 3.4年; BMI为24.1-29.7 kg/m<sup>2</sup>, 平均26.4 kg/m<sup>2</sup> $\pm$ 3.2 kg/m<sup>2</sup>; 其中有吸烟史82例, 饮酒史68例; 合并冠心病者26例, 高血压者34例, 糖尿病24例, 高脂血症36例. 纳入标准: (1)诊断均符合罗马IV功能性消化不良标准, 且均为住院患者; (2)年龄 $>$ 60岁, 意识清晰, 能正常交流者; (3)均经过患者及家属知情同意; (4)均经过医院伦理委员会批准同意者. 排除标准: (1)消化系统有器质性病变者, 或有手术史者; (2)有精神系统或神经系统疾病者; (3)有严重心肝肾疾病及血液系统疾病者; (4)有认知、意识障碍, 或语言沟通障碍者; (5)配合调查欠佳者; (6)有使用安眠药、精神类药物者.

**1.2 方法** 课题负责人参照文献制定调查表, 在问卷调查



前认真细心向患者讲解研究目的, 注意事项等, 要求患者均独立完成问卷调查, 时间控制在1 h内完成, 完成后回收问卷。(1)匹兹堡睡眠质量指数量表(pittsburgh sleep quality index, PSQI)<sup>[8]</sup>, 包括19个条目, 7个维度, 总分为21分, 各维度得分之和为量表总分, 得分越高睡眠质量越差, 该量表内部一致性系数为0.71; (2)感知压力量表(perceived stress scale, PSS)<sup>[9]</sup>, 该量表共有10个条目, 5级评分, 总分40分, 得分越高PSS越大. 该量表内部一致性系数为0.86; (3)心理弹性量表<sup>[10]</sup>, 包括10个条目, 5级评分, 总分40分, 得分越高心理弹性越高. 该量表内部一致性系数为0.93.

**统计学处理** 采用SPSS 23.0软件分析数据. 计量资料以 $\text{mean} \pm \text{SD}$ 表示, 采用 $t$ 检验; 计数资料以百分比(%)表示, 采用 $\chi^2$ 检验; 采用Pearson相关分析感知压力、心理弹性及睡眠质量间的相关关系; 线性回归分析和Bootstrap法对心理弹性、感知压力及睡眠质量间的相关性分析. $P < 0.05$ 为差异有统计学意义.

## 2 结果

**2.1 有效问卷调查结果分析** 本研究共发放问卷120份, 回收有效问卷120份, 问卷有效回收率100.0%.

**2.2 120例老年FD患者PSQI总得分及各维度分布状况** 老年FD患PSQI总得分2-17, 7.4分 $\pm$ 2.9分, 其中72.50%(87/120)的患者PSQI评分 $>5$ 分, 睡眠质量较差(表1).

**2.3 老年FD患者PSS评分、心理弹性评分及PSQI评分相关性分析** 老年FD患者PSS评分为15.3分 $\pm$ 4.8分, 心理弹性评分为26.1分 $\pm$ 6.2分, PSQI评分为7.3分 $\pm$ 2.7分. 心理弹性评分与PSS和PSQI评分呈负相关( $r = -0.58, -0.41, P < 0.05$ ), PSS评分与PSQI评分呈正相关( $r = 0.33, P < 0.05$ )(表2).

**2.4 老年FD患者心理弹性在PSS与PSQI关系间的相关性分析** PSS能正性预测PSQI评分( $\beta = 0.31, P < 0.05$ ), 心理弹性能负性预测PSQI评分( $\beta = -0.28, P < 0.05$ ), 且PSS对PSQI的预测作用降低( $\beta = -0.58, P < 0.05$ ); Bootstrap检验中介效应95%CI: 0.127-0.325,  $P < 0.01$ (表3).

## 3 讨论

近年来, 随着生活压力的增加, 老年FD患者呈上升趋势, 严重影响老年患者身心健康和心理情绪. 本研究结果表明, 72.50%的老年FD患者睡眠质量较差. 既往有研究表明<sup>[11]</sup>, 感知压力能预测睡眠质量, 且呈正相关. 因此, 本研究对老年FD患者进行感知压力、心理弹性和睡眠质量进行分析.

失眠是老年人常见症状之一, 与其对压力事件的反应密切相关. 感知压力越大, 睡眠质量较差, 这可能与

压力增大影响个体HPA轴的调节功能, 导致睡眠质量降低<sup>[12]</sup>. 由于老年FD患者病情反复, 病程较长, 久之导致心理压力累积进而造成出现睡眠质量的降低和焦虑情绪的发生. 因此, 对老年FD患者采用合理的心理疏导是提高睡眠质量的关键所在<sup>[13]</sup>. 本研究中FD患者心理弹性能够预测较好的睡眠质量, 说明心理弹性越高, 睡眠质量越好, 从而能够维持良好的睡眠状态, 积极面对治疗和乐观的生活态度.

心理弹性是个体在面对各种压力时采取积极有效的保护性方案, 使患者通过内部调整尽快恢复身体功能并得以发展, 心理弹性评分较高的个体能有效调动机体心理资源, 调整心理状态, 正确认知心理水平, 从而减少感知压力对身体的负面影响, 以更好的维持良好的睡眠质量和积极向上的乐观态度<sup>[14,15]</sup>. 表3结果表明, 感知压力能正性预测睡眠质量, 可见老年FD患者心理弹性在PSS与PSQI间发挥一定作用, 由此说明, 感知压力可直接作用于睡眠质量, 也可通过心理弹性影响睡眠, 三者之间具有相关性. 反之, 睡眠质量的高低也会影响心理弹性, 在一定程度上增加心理压力.

本研究不足之处: 样本量小, 且为单中心研究, 对人口学资料统计不完善, 在今后的研究中将进一步补充和完善, 以更好的为临床大数据提供客观依据. 总之, 老年FD患者睡眠质量较差, 感知压力和心理弹性是影响睡眠质量的危险因素, 在临床中可通过疏导心理压力改善睡眠.

## 文章亮点

### 实验背景

功能性消化不良(functional dyspepsia, FD)反复发作易影响患者心理情绪和睡眠质量. 睡眠障碍是重要的行为危险因素, 能够预测FD的发生和进展. 老年FD患者睡眠质量的高低将影响其健康结局, 增加负面心理情绪. 本研究对老年FD患者心理弹性、感知压力及睡眠质量进行调查分析, 旨在为临床提供重要客观依据.

### 实验动机

睡眠障碍已经是困扰老年患者的重要疾病之一, 本研究通过调查分析以探讨老年FD患者感知压力、心理弹性及睡眠质量的关系.

### 实验目标

本研究通过调查分析探讨老年FD患者感知压力、心理弹性及睡眠质量的关系.

### 实验方法

本研究采用匹兹堡睡眠质量指数量表, 感知压力量表及



表 1 120例老年FD患者PSQI各维度分布状况

PSQI不同维度	等级	n (%)
主观睡眠质量	很好	16 (13.33)
	较好	64 (53.33)
	较差	35 (29.17)
	很差	5 (4.17)
睡眠困扰	0	8 (6.67)
	1-9	82 (68.33)
	10-18	28 (23.33)
	19-27	2 (1.67)
入睡时长(h)	0	25 (20.83)
	1-2	53 (44.17)
	3-4	39 (32.50)
	5-6	3 (25.00)
睡眠药物使用	0	106 (88.33)
	1-9	10 (8.33)
	10-18	3 (25.0)
	19-27	1 (0.83)
睡眠持续时间(h)	<5	32 (26.67)
	5-6	33 (27.50)
	6-7	40 (33.33)
	>7	5 (4.17)
日间功能紊乱	0	15 (12.50)
	1-2	50 (41.67)
	3-4	33 (27.50)
	5-6	22 (18.33)
睡眠效率(%)	<65	50 (41.67)
	66-75	33 (27.50)
	76-85	18 (15.0)
	>85	19 (15.83)
PSQI总得分	≤5	33 (27.50)
	>5	87 (72.50)

PSQI: 睡眠质量指数量表.

表 2 老年FD患者PSS、心理弹性得分、PSQI评分及相关性分析(n)

变量	范围	得分	年龄	PSS	心理弹性	PSQI
年龄	62-78	57.2 ± 11.9	1.00	-	-	-
PSS	3-28	15.3 ± 4.8	-0.08	1.00	-	-
心理弹性	4-39	26.1 ± 6.2	-0.01	-0.58	1.00	-
PSQI	2-17	7.3 ± 2.7	0.02	0.29	-0.41	1.00

PSS: 感知压力量表; PSQI: 睡眠质量指数量表.

心理弹性量表对老年FD患者进行调查分析.

实验结果

72.50%的患者睡眠质量较差. 心理弹性评分与感知压力量表(perceived stress scale, PSS)评分和匹兹堡睡眠质量

指数量表(pittsburgh sleep quality index, PSQI),评分呈负相关, PSS评分与PSQI评分呈正相关.

实验结论

老年FD患者睡眠质量较差, 感知压力和心理弹性是影

表 3 老年功能性消化不良患者心理弹性在PSS与PSQI关系间的相关性分析

因变量	自变量	$\beta$ 值	$t$ 值	$R^2$ 值	$F$ 值
PSQI	PSS	0.31	5.289	0.175	12.987
心理弹性	PSS	-0.58	11.76	0.389	36.271
PSQI	心理弹性	-0.28	3.526	0.224	12.584

PSS: 感知压力量表; PSQI: 睡眠质量指数量表。

响睡眠质量的危险因素,

## 展望前景

通过对老年FD患者睡眠质量, 感知压力和心理弹性进行分析, 以明确影响睡眠质量的危险因素, 为临床干预提供重要参考价值。

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