中南大学学报(医学版) 2013, 38(3) 301-306 DOI: 10.3969/j.issn.1672-

7347.2013.03.014 ISSN: 1672-7347 CN: 43-1427/R

本期目录 | 下期目录 | 过刊浏览 | 高级检索

[打印本页] [关闭]

#### 论著

加权TOPSIS法与加权秩和比法在湖南省农村药品监督与供应网络建设评价中的应用

沈敏学<sup>1</sup>, 曾娜<sup>1</sup>, 胡婧璇<sup>1</sup>, 吴公平<sup>2</sup>. 许林勇<sup>1</sup>

- 1. 中南大学公共卫生学院流行病与卫生统计学系, 长沙410078;
- 2. 湖南省食品药品监督管理局药品市场监管处, 长沙410013

摘要: 目的:评价加权TOPSIS 法和加权秩和比法在湖南省农村药品监督与供应网络的建设综合评价中的科学性与有效性。方法:以2010 年湖南农村药品监督与供应网络建设情况的数据为资料,构建综合评价模型,应用加权TOPSIS 法和秩和比法对其进行实证研究,并与综合评分法的排序结果对比。结果:构建了3个一级指标、8个二级指标、56个三级指标的综合评价模型,加权秩和比法与综合评分法的排序结果高度相关,加权TOPSIS 法与另2种方法相关性稍低,但均有统计学意义(P<0.01)。结论:两种评价方法各有优缺点,但在本研究中均具有合理性、有效性和科学性。

关键词: 综合评价模型 综合评分法 加权TOPSIS 法 加权秩和比法 药品监督与供应网

Weighted TOPSIS method and weighted RSR method in the construction of drug supervision and supply networks in rural areas of Hunan

SHEN Minxue<sup>1</sup>, ZENG Na<sup>1</sup>, HU Jingxuan<sup>1</sup>, WU Gongping<sup>2</sup>, XU Linyong<sup>1</sup>

- 1. Department of Epidemiology and Health Statistics, School of Public Health, Central South University, Changsha 410078;
- 2. Department of Drug Market Supervision, Hunan Food and Drug Administration Bureau, Changsha 410013, China

Abstract: Objective: To evaluate the rationality and validity of weighted TOPSIS method and weighted RSR method to evaluate drug supervision and supply networks construction in rural areas of Hunan. Methods: Data of drug network construction in rural Hunan in 2010 were used to establish a comprehensive evaluation model, and weighted TOPSIS and RSR method were applied to this model and the results of which were compared to that of synthetical scored method to examine the validity. Results: A comprehensive evaluation model was established, comprising of 3 primary indices, 8 secondary indices and 56 tertiary ones. The result of weighted RSR method was highly correlated to that of synthetical scored method, yet the result of TOPSIS was less correlated to the formers. All correlations were significant (*P*<0.01).

Conclusion: Both weighted RSR and TOPSIS are not perfect methods, but the application of the methods in drug network evaluation is scientific and effective.

Keywords: comprehensive evaluation model synthetical scored method weighted TOPSIS method weighted RSR method drug supervision and supply network

收稿日期 2012-03-07 修回日期 网络版发布日期

DOI: 10.3969/j.issn.1672-7347.2013.03.014

基金项目:

湖南省自然科学基金 (08JJ3072)

通讯作者: 吴公平, Email: yjswgp@yahoo.cn; 许林勇, Email: linyongxu@gmail.com

作者简介:沈敏学,硕士研究生,主要从事综合评价方法的研究。

作者Email: yjswgp@yahoo.cn;linyongxu@gmail.com

#### 参考文献:

- 1. 王洪国, 张乐, 孔德众, 等. 肺结核患者心理状况的模糊综合评价 [J]. 中国热带医学, 2011, 11(5): 528-529.WANG Hongguo, ZHANG Le, KONG Dezhong, et al. Fuzzycomprehensive evaluation of psychological status of pulmonarytuberculosis patients [J]. China Tropical Medicine, 2011, 11(5): 528-529.
- 2. 伍志刚, 沈敏学, 胡明, 等. 湖南省三甲医院服务质量评价体系的构建研究 [J]. 中国卫生统计, 2012, 29(3):

### 扩展功能

# 本文信息

- ▶ Supporting info
- PDF(902KB)
- ▶[HTML全文]
- ▶参考文献[PDF]
- ▶参考文献

#### 服务与反馈

- ▶把本文推荐给朋友
- ▶加入我的书架
- ▶加入引用管理器
- ▶引用本文
- ▶ Email Alert
- ▶ 文章反馈
- ▶浏览反馈信息

## 本文关键词相关文章

- ▶ 综合评价模型
- ▶ 综合评分法
- ▶加权TOPSIS 法
- ▶加权秩和比法
- ▶ 药品监督与供应网

# 本文作者相关文章

- ▶沈敏学
- ▶曾娜
- ▶胡婧璇
- ▶ 吴公平
- ▶许林勇

### PubMed

- Article by SHEN Minxue
- Article by ZENG Na
- Article by HU Jingxuan
- Article by WU Gongping
- Article by XU Linyong

- 382-384.WU Zhigang, SHEN Minxue, HU Ming, et al. Construction of anevaluative system for service quality of level-three a hospitals in humanprovince [J]. Chinese Journal of Health Statistics, 2012, 29 (3): 382-384.
- 3. 乌云娜, 林平, 陈文君. 改进的TOPSIS模型在代建人信用评价中的运用[J]. 中南大学学报: 社会科学版, 2010, 16(6): 75-82.WU Yunna, LIN Ping, CHEN Wenjun. Evaluation of constructionagencycredit based on the improved TOPSIS model [J]. Journal ofCentral South University. Social Science, 2010, 16(6): 75-82.
- 4. 吴启红, 万世明, 彭文祥. 一种多层采空区群稳定性的综合评价法[J]. 中南大学学报: 自然科学版, 2012, 43 (6): 2324-2330.WU Qihong, WAN Shiming, PENG Wenxiang. A comprehensive evaluation method about stability of polyaminate goafs [J]. Journal of Central South University. Science and Technology, 2012, 43(6): 2324-2330.
- 5. 许林勇, 吴公平, 沈敏学, 等. 湖南省农村药品监督和供应网络建设效果综合评价 [J]. 中国药事, 2010, 25(6): 535-537.XU Linyong, WU Gongping, SHEN Minxue, et al. Syntheticalevaluation of drug "supervision and supply" nets construction in therural area of human province [J]. Chinese Pharmaceutical Affairs, 2010, 25(6): 535-537.
- 6. 吴公平. 湖南省药品监督与供应网络现状分析与综合评价研究 [D]. 长沙: 中南大学, 2011.WU Gongping. Analysis of current drug supervising and supplynetwork and research for comprehensive evolution in humanprovince [D]. Changsha: Central South University, 2001.
- 7. 孙振球. 医学统计学 [M]. 北京: 人民卫生出版社, 2009.SUN Zhenqiu. Medical statistics [M]. Beijing: People's MedicalPublishing House, 2009.
- 8. 高永, 王玖, 石德文. 加权TOPSIS法综合评价在Excel中的实现[J]. 中国卫生统计, 2007, 24(4): 428-429.GAO Yong, WANG Mei, SHI Dewen. Computation of weigtedTOPSIS method in Excel [J]. Chinese Journal of Health Statistics, 2007, 24(4): 428-429.
- 9. 林佩贤, 王维, 钟倩红, 等. 应用Excel实现秩和比法的计算及其评价[J]. 数理医药学杂志, 2009, 22(2): 183-186.LIN Peixian, WANG Wei, ZHONG Qianhong, et al. Computationand evaluation of actualizing RSR in Excel [J]. Journal of MathematicalMedicine, 2009, 22(2): 183-186.
- 10. 孙振球. 医学综合评价方法及其应用[M]. 北京: 化学工业出版社, 2006.SUN Zhenqiu. Comprehensive evaluation methods and applicationson medical science [M]. Beijing: Chemical Industrial Press, 2006. 11. 田凤调. 秩和比法的应用[M]. 北京: 人民卫生出版社, 2002.TIAN Fengtiao. Application of RSR method [M]. Beijing: People's Medical Publishing House, 2002.
- 12. 王一任, 孙振球. 医用综合评价方法研究进展[J]. 中南大学学报: 医学版, 2005, 30(2): 228-232.WANG Yiren, SUN Zhenqiu. Progress in comprehensive evaluationmethods in medical science [J]. Journal of Central South University.Medical Science, 2005, 30(2): 228-232.
- 13. 王一任, 任力锋, 孙振球. 一种新的动态TOPSIS法在医疗质量评价中的应用[J]. 中南大学学报: 医学版, 2012, 37(10): 1071-1076.WANG Yiren, REN Lifeng, SUN Zhenqiu. Novel dynamic TOPSISmethod in evaluation for quality of medical care [J]. Journal of CentralSouth University. Medical Science, 2012, 37 (10): 1071-1076.

本刊中的类似文章

Copyright by 中南大学学报(医学版)