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复杂避障能力训练用于预防高龄老人跌倒的效果 [点此下载全文](#)

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摘要:

摘要目的:探讨复杂避障能力训练方法对预防高龄老人跌倒的效果。方法:将75岁以上社区高龄老人86名,随机分为复杂环境组(multiple组,以下简称M组)和单一环境组(single组,以下简称S组),M组41名,S组43名。两组共同参加运动体操和身体灵活性训练后,再分别参与不同的避障能力训练,M组参加复杂环境避障训练,S组参加单一环境避障训练,3个月后对训练效果进行评价。结果:两组试验前后运动机制比较,配对t检验结果:10m行走时间缩短( $P<0.001$ ),10m步数减少( $P=0.01$ ),5s双脚触地次数增加( $P<0.001$ ),下肢肌力增加( $P=0.04$ )。重复测量双因素双水平方差分析结果:经过功能训练后M组通过单一环境时间缩短( $P<0.01$ ),通过复杂环境时间缩短( $P<0.01$ );S组通过单一环境时间缩短( $P<0.01$ ),通过复杂环境时间缩短( $P<0.01$ )。两组试验前后障碍物触及次数比较Wilcoxon检验结果:M组在单一环境( $P=0.019$ )和复杂环境( $P=0.001$ ),试验后触及障碍物次数均显著减少,S组仅在单一环境试验后触及次数减少( $P=0.002$ ),两组比较,试验后通过复杂环境时触及次数存在显著差异,M组明显减少( $P<0.001$ )。结论:复杂避障训练能提高高龄老人的运动功能和回避障碍物的能力,对预防高龄老人跌倒有较好的效果。

关键词:老年人 跌倒 运动功能 障碍物回避能力 训练

The effect of complex avoiding-obstacles training in preventing falling accidents in old people [Download Fulltext](#)

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Abstract:

Abstract Objective: To investigate the effect of complex avoiding-obstacles training in preventing falling accidents in old people. Method: Eighty-six community citizens aged over 75years were selected and divide randomly into two groups, namely, multiple group(M group, 41 persons) and single group (S group, 43 persons). After they were trained with gymnastics and physical flexible exercises, M group and S group took different kinds of obstacle-avoiding training in complex and simplex environments respectively. The training results were evaluated at 3 months later. Result: Comparing the motor function of two groups before and after training, the testing results were as follows: the paired t-test showed 10m walking time reduced( $P<0.001$ ) and 10m stride number decreased( $P=0.01$ ); times of touching ground during 5s increased ( $P<0.001$ ); muscle strength of lower limbs increased( $P=0.04$ ). The repetitive measure bi-level and two-factor variance analysis results showed after training, there was time reduction in both M group and S group through simplex environment ( $P<0.01$ ) and complex environment( $P<0.01$ ); The Wilcoxon test results of touching obstacles times before and after the experiment in the two groups showed that the times of touching obstacles reduced significantly in M group in both simplex ( $P=0.019$ ) and complex environment ( $P=0.001$ ) after experiment. In S group times of touching obstacles reduced ( $P=0.002$ ) only in simplex environment after the experiment. There was significant difference in the obstacles touching times between the two groups after experiment with M group decreasing significantly ( $P<0.001$ ). Conclusion: Complex avoiding-obstacles training for improving older people's motor function and their obstacle avoiding ability, is helpful in preventing falling accidents.

Keywords: [the elderly](#) [fall](#) [motor function](#) [obstacle avoidance ability](#) [training](#)

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