

A randomized controlled trial of an enhanced balance program to improve mobility ...

[Health & Medicine](#), [Healthcare](#)



Introduction

Fall due to imbalance is the common but crucial and critical incidence or problems for the elderly populations and also might be one of the life threatening causes other than heart attack. It represents a main cause or source of disability in elderly and affecting their physical health, psychological, social well being and bring great impact to the daily activities. Thus, here comes the role of balance training not only to preventing the fall risk but also improve mobility, coordination, but also confidence and the quality of life. However, the conventional balance training which have walking as a primary balance training does not appear to have much effect to prevent fall risk.

The bright side, the enhanced therapy has the components of all conventional therapy but also with additional balance exercises, which might provide and improvement and enhance the therapy with the present of target time and distances, with adequate repetitions accompanied progression such as increase complexity of the functional tasks. This is so important that not only affecting individually but also their increase burden of family members or even the society.

Thus, it is so important to find out that whether the enhanced balanced therapy improve the outcome in preventing risk fall in elderly. I choose this article as a critical appraisal to find different between conventional and enhanced therapy.

Eligibility Criteria

Inclusion criteria specified helps in reduce and improve the baseline similarities which indicate a truer change to the result or outcome. Exclusion criteria specified identifies the participants who are not fit to the criteria such as stroke patients, to prevent their health condition become worse and keep them safe.

With the specific criteria, It allows the study to be consistently transparent documentation across the trials. Result it, when the subjects meet the criteria mentioned, the effects by the intervention would be increase by chance compare to other factors.

Random Allocation

Concealment of allocation means the person that allocate the subjects does not know what is the treatment subjects receiving and the subjects who being allocated. It is so important to prevent and minimize the selection bias especially from the subjects. Without concealment, there might be aware which groups are there assigned to and the treatments they receiving which may affect psychologically, health care or even result in ineffective treatment.

Groups Similarity at Baseline

Similar baseline is so important that to provide a fair reliability throughout the treatment. As there might be chance of characteristic to affect and influence the outcome between the two group. For example, not similar baseline

Blinding of Subjects

Blinding is one of the key factor that affect validity. It is only in blinded, randomized experiments that we can assure that the treatment precedes the outcome, and that there is little chance of confounding which would allow alternative explanations. It is these two conditions, along with statistically significant association, which allow a claim of causality.

Thus, if the subjects know the treatment that they will receive, this might directly affect the result or outcome with the bias such as Hawthorn effect or placebo effect.

Blinding of Therapists

As it is hard or even impossible to design a double blind trial in which therapists were unaware of the treatment they were providing(9). Without blinding to therapist, might cause bias where the therapists will concentrate and give more encouragement to the treatment group compare to the control group patient for more significant or effective outcome and result.

Blinding of Assessors

An independent or blinded assessor or observers helps in reducing the potential bias by increasing the feasibility while using the blinded assessment(5). Result in, the assessors or observers are unaware of the treatment and allocation of the subjects, so they wont be affected physically, psychologically by the experience or knowledge they had.

Reporting at Follow-Up

Total of 32. 83% of subjects were dropout. For intervention group there are 28. 125 % of subjects were drop out which indicates less than 85% of the subjects initially allocated to groups. While for control group, there are 37. 25 % of subjects drop out from the trials which also indicates less than 85 % of subjects as well.

Drop out is when the subject starts a study but do not complete it due to personal reasons. The high drop rate on both treatment group and control group create a great and bad impact not only to the external validity, low validity and outcome. Thus, this factor may directly influence the outcome of failure difference between the conventional training program and seated balance training on the subjects over 12 month under observation.

Also, reducing the population to generalize from the outcome as drop-out rate is high.

Intent to Treat Analysis

Analysis on intention to treat helps in higher reliable to estimate the true change and preventing the cross over of either treatment or subjects, and make sure the subjects always get the treatment they should get in respective blocks, thus reduce the bias and improve the true effect.

Between-Group Comparison

As there is no significant different between the groups in all of the outcomes between the CT and EBT patients, which means that the effects of both CT and EBT are similar or equal and does not make a significant different

between the outcome of the treatments even with the similar baseline characteristic. Thus, the EBT is unlikely to be better than the CT although both has an improvement in preventing the risk of fall.

Point Measure

Both conventional therapy and enhanced balance therapy did improve in the outcome of 10 m timed walk test in sec. According to the table 1, the p value for conventional therapy is higher than the enhanced balance therapy. We can conclude that, there are highly statistically significant different on the EBT which indicates a true change from the intervention that contribute to the outcome compare to the conventional therapy which the p value indicates there is close to being significant different as it is less than .05 which slightly higher than the border line, means assuming the has zero effect in the population, but I obtain the sample effect, or larger because of the sample error.

Variability expressed as mean plus minus standard deviation for both CT and EBT.

Both assessment of the 10 m timed walk test in sec of the EBT and Conventional therapy that taken during baseline, 6 weeks, 12 weeks and 24 weeks, which has a high standard deviation of more than 3 which shows the spread out of the result and indicates less reliable of the outcome respectively.