1. Please read the following abstract carefully. (50%)

Background Falls are a common and disabling feature of Parkinson disease (PD). Early identification of patients at greatest risk of falling is a key goal of physical therapy assessment. The Timed "Up & Go" Test (TUG), a frequently used mobility assessment tool, has moderate sensitivity and specificity for identifying fall risk.
Objective The study objective was to investigate whether adding a task (cognitive or manual) to the TUG (TUG-cognitive or TUG-manual, respectively) increases the utility of the test for identifying fall risk in people with PD.
Design This was a retrospective cohort study of people with PD (N=36).
Methods Participants were compared on the basis of self-reported fall exposure in the preceding 6 months (those who had experienced falls ["fallers"] versus those who had not ["nonfallers"]). The time taken to complete the TUG, TUG-cognitive, and TUG-manual was measured for both groups. Between-group differences were calculated with the Mann-Whitney *U* test. The discriminative performance of the test at various cutoff values was examined, and estimates of sensitivity and specificity were based on receiver operating characteristic curve plots.
Results Fallers took significantly longer than nonfallers (n=19) to complete the TUG under all 3 conditions. The TUG-cognitive showed optimal discriminative performance (receiver operating characteristic area under the curve=0.82; 95% confidence interval [CI]=0.64, 0.92) at a cutoff of 14.7 seconds. The TUG-cognitive was more likely to correctly classify participants with a low risk of falling (positive likelihood ratio=2.9) (<14.7 seconds) and had higher estimates of sensitivity (0.76; 95% CI=0.52, 0.90) than of specificity (0.73; 95% CI=0.51, 0.88) at this threshold (negative likelihood ratio=0.32).
Limitations Retrospective classification of fallers and nonfallers was used.
Conclusions The addition of a cognitive task to the TUG enhanced the identification of fall risk in people with PD. The TUG-cognitive should be considered a component of a multifaceted fall risk assessment in people with PD.
(Phys Ther 95(1):95-102)

<u>According this study, please state your opinions about how to apply the authors' findings in your clinical practices.</u>

2. Please read the following abstract carefully. (50%)

The use of virtual reality through exergames or active video game, i.e. a new form of interactive gaming, as a complementary tool in rehabilitation has been a frequent focus in research and clinical practice in the last few years. However, evidence of their effectiveness is scarce in the older population. This review aim to provide a summary of the effects of exergames in improving physical functioning in older adults. A search for randomized controlled trials was performed in the databases EMBASE, MEDLINE, PsyInfo, Cochrane data base, PEDro and ISI Web of Knowledge. Results from the included studies were analyzed through a critical review

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and methodological quality by the PEDro scale. Thirteen studies were included in the review. The most common apparatus for exergames intervention was the Nintendo Wii gaming console (8 studies), followed by computers games, Dance video game with pad (two studies each) and only one study with the Balance Rehabilitation Unit. The Timed Up and Go was the most frequently used instrument to assess physical functioning (7 studies). According to the PEDro scale, most of the studies presented methodological problems, with a high proportion of scores below 5 points (8 studies). The exergames protocols and their duration varied widely, and the benefits for physical function in older people remain inconclusive. However, a consensus between studies is the positive motivational aspect that the use of exergames provides. Further studies are needed in order to achieve better methodological quality, external validity and provide stronger scientific evidence. (J Neuroeng Rehabil 11:156)

According this study, please state your opinions about how to apply the authors' findings in your clinical practices.

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