In 2020, because of the COVID-19, many countries told their citizens to stay indoors, this will cause people who couldn't get into the gym and train;

I wonder that can a video game(such as Wii Fit, Xbox Kinect, ring fit adventure) helps people to get some minimal fitness.

So I picked this paper: **Exercise Videogames, Physical Activity, and Health: Wii Heart Fitness: A Randomized Clinical Trial**

Studies have demonstrated that playing EVGs elicits greater energy expenditure compared with rest and inactive (sedentary) videogames and some EVGs have evidenced energy expenditure commensurate with MVPA(moderate-to-vigorous physical activity)—similar to walking and cycling, at approximately 3–6 METs, increasing energy expenditure up to 300% above resting levels. In addition, EVGs have been reported to result in an enjoyable exercise experience, even when working at higher intensities. These findings suggest that EVGs may present a viable, practical, and attractive alternative to traditional modes of exercise.

In their experiment, Participants (N=283) had an average age of 46.2 ±13.5 years; 79% were female.

They divide their tester into three groups: one is supervised exercise videogames, another group is with standard exercise(e.g., treadmill), and other people become the controlled group. they execute a 12-week program.

The goals of their study were to examine the effect of EVGs on (1) time spent in MVPA following a 12-week supervised laboratory intervention, (2) cardiovascular health risk indices, and (3) maintenance of MVPA after the conclusion of the intervention. Study hypotheses were (1) at week 12, EVG and standard exercise participants will engage in significantly more minutes of MVPA than controls, (2) at week 12, EVG participants will

engage in significantly more MVPA than standard participants, (3) adherence to recommended PA(physical activity) will be greater in the EVG arm than in the standard arm, (4) at follow-up, EVG participants will engage in significantly more MVPA than standard participants, (5)both EVG and standard groups will show significantly greater improvement in cardiovascular health risk indices than controls, and (6) EVG participants will show greater improvement in these measures than standard participants.

They measured their subject's Heart Rate to determine whether they stay in the MVPA zone; Each week, the testers need to perform 50 minutes of exercising on groups 1 and 2.

Conclusion:

The Wii Heart Fitness trial is the first study to examine the potential of EVGs for uptake and longer-term maintenance of PA. Results indicated significantly greater participation in MVPA among those in the EVG group compared with standard exercise and controls. EVG participants also showed greater improvements in some cardiovascular risk compared with

controls. Physical inactivity is a significant public health issue that requires multifaceted approaches including innovative strategies to incorporate PA in daily routines. This study is an important and timely evaluation of EVG for PA adoption and cardiovascular outcomes

among adults. To date, this is a first large-scale rigorous RCT(randomized controlled trial) using objective measures and a long-term follow-up to establish the benefits of a technology that is rapidly growing. EVGs were found to be effective, providing critical support in the fight against obesity and cardiovascular diseases.

What I think after this article:

Well I think it was a very wonderful article, but I doubt the correctness of this experiment : the experiment's result shows that exercising with video games has more effectiveness than standard exercise. I also have the same game(Wii Fit Plus) but when I play it, I don't feel like I am exercising, I feel like I don't need to breathe too hard compare to running, and I don't feel exhaustion after an hour's play. So is it has more effective than standard exercise? I not sure. But one thing is confirmed that at least playing some active video games can give some fitness instead of just staying at home, and it can reduce the chance of getting cardiovascular disease. I will recommend to my friend who stays in the home a lot a want to have a healthier, more fitness body to try on this.