

The background of the slide is a photograph of the Golden Gate Bridge in San Francisco, California, taken during sunset or sunrise. The bridge's iconic red-orange towers and suspension cables are visible against a sky with soft, colorful clouds. The water of the bay is in the foreground, and the city skyline is faintly visible in the distance.

Videogame-based physical activity: a novel approach to physical activity for older adults with serious mental illness.

Heather Leutwyler, RN, PhD, FNP-BC, CNS

Assistant Professor

Department of Physiological Nursing

John A. Hartford Center of Geriatric Nursing
Excellence

University of California, San Francisco

Outline of the Presentation

- **List the benefits of physical activity for older adults with serious mental illness (SMI).**
- **Identify barriers to physical activity for older adults with SMI.**
- **Describe a videogame-based physical activity program for older adults with SMI.**

Benefits of Physical Activity for Older Adults

Prevent or delay disease

Disease management

Manage Stress

Improve Mood

Socialization

Just to name a few...



Why is physical activity so important for older adults with SMI?

People with SMI have **exceedingly** low levels of physical activity

In our study of 30 older adults with schizophrenia from a variety of treatments setting, we found that these individuals were sedentary 20 hours a day.

People with a SMI have a lifespan that is about 11 years shorter than someone without a SMI and low levels of physical activity contribute this shortened life span.

Even short periods of low intensity physical activity can positively influence mental and physical health.

We know physical activity is good.....so why don't we get our patients moving?



FOCUS PF

- **Aim 1:** To describe the perceptions of **older adults with schizophrenia** about barriers and facilitators to engage in activities that promote physical activity.
- **Aim 2:** To describe the perceptions of **clinicians and staff members** about barriers and facilitators to engage in activities that promote physical activity among older adults with schizophrenia.

Sample and Recruitment

Inclusion criteria: Adults older than or equal to 55 with a DSM-IV diagnosis of schizophrenia or schizoaffective disorder that pass a capacity to consent test based on comprehension of the consent form.

AND

Staff (Nurses, NPs, Psych Techs, Social Workers, Psychiatrist, etc)

3 Recruitment Sites: A transitional facility, an outpatient center, and a locked facility

Procedure: Posting Flyers, Staff Referrals, Self-Referrals, Snowball Sampling

Study Procedure

Interviews took place at a private meeting room at the facility the person attends or works.

Interviews included: semi-structured group or one-on-one interview

FOCUS PF Staff Results

Leutwyler, H., Hubbard, E., Jeste, D., and Vinogradov, S. “We’re not just sitting on the periphery”: a staff perspective of physical activity in older adults with schizophrenia. *Gerontologist*, 2012 August 30 (Epub ahead of print), doi: 10.1093/geront/gns092

Mental Health

Role Models and Rewards

Institutional Factors

Safety

Staff barriers: Mental Health Prioritization

- *And so my older people are not as, you know, the schizophrenics, you've got the paranoia going. And what's unfortunate about them is that they could be doing well for a while, well, for a good while, and then they'll have a break, right? And then it takes longer for that - for them to come back to baseline, and so that is when I'm looking at other things, not the exercising.*



Staff Barriers: Institutional Factors

- *in an institution where you can't do your own thing all the time, when and where, and how you want to do it. So you have those institutional factors... Like go to the gym, or go play baseball, or go play tennis. I play tennis and, you know, if I was in a locked facility, that, you know, that wouldn't work...*



Staff Facilitators: Role Models and Rewards

- *...there's some exercise that they don't like, so I say, okay, well, do it while you're sitting there, you know, just stand here and go like this, or move your feet, or walk in place while you're sitting down. You don't have to get up and do it, but don't just sit there.*



Staff Facilitators: Meeting Clients at their Level.

- *You can't do a blanket on almost anything here except fire drills.*



Staff Facilitators-Rewards

- *If you're ever going to actually do a program, would be the motivational issue. What's in it for me? Why should I do that, you know? That's so much the mentality. You've got to remember that a lot of these clients are homeless street people who are substance abusers dealing with a chronic psychiatric disorder. ... Playing basketball, jogging, doing sit-ups, it's not part of the equation. It's not even on*



FOCUS PF Patient Results

**Leutwyler, H., Hubbard, E., Slater, M., and Jeste, D.
“It’s good for me”: Physical Activity in Older
Adults with Schizophrenia. Community Mental
Health Journal, 2014, 50 (1), 75-80.**

- **Mental Health**
- **No longer a spring chicken**
- **Pride and Sense of Well-being**
- **Comfort and Safety**
- **Belonging**

Mental Health

- **Oh, depression makes me exercise less, I mean, it keeps me from walking, but, you know, watching television, you know, going to the movies, a lot of it keeps me depressed and, you know, keeps me from enjoying life. But solitude is what makes me - when I go outside and walk, you see, nobody's there but myself in a room, and after a while it gets really lonely and scary.... The only days that - I said it before - what makes me go out is boredom. That's what - if it wasn't the boredom, then my mental illness would keep me inside all the time.**

Mental Health-facilitator

- After I walk, because I'm thinking all these anxious thoughts, and I'm walking fast, and by the time I get to where I live, I'm tired and I feel great, you know, just really relaxed.



Mental Health Barrier

- **J:** If I feel I'm feeling kind of nutty, I don't go out.



Patient Barriers- No longer a spring chicken

- R: Oh, you know, I should have alerted you...that I'm no longer a spring chicken, you know, and another five, or four months, I'm going to turn 59. And I'm limited to, you know, how much exertion I can go through without causing a bad problem, you know, so I want to approach this thing with my eyes open, see? But the calisthenics, I can do I think, yeah.



Patient Facilitators- Pride

- I used to take a class with my ex-wife weightlifting, and I was able to bench press 250 pounds, lift 150 pounds, squat 150 pounds, used the exercise machines, and my wife took the class using exercise machines, and she would - we did pushups and sit-ups. It was great. I guess we're both kind of got an A,



Patient Facilitators-Belonging

- **P:** Yeah. Everybody goes out smoking cigarettes while I stay in the house by myself. That isn't much fun, so I go off and walk.



Patient Facilitators- It's good for me.

- **J: I do that just because I know it's good for me... Well, like I said, I like seeing the city, and I like the sunshine, and I like to exert my body so that, well, like Audrey said, so I can relax when I get home - so I feel good when I get home.**



Could video games be the answer?



Reasons we thought a videogame-based physical activity would work

- Videogame-based physical activity has demonstrated clinical effectiveness in improving physical activity in adults without SMI
- An ideal way to initiate and sustain physical activity in sedentary or deconditioned adults.
- In addition, previous studies of adults without SMI found that videogame-based physical activity programs improved cognition and psychological well-being

More reasons we thought this would work

- **Offering a physical activity program within the context of a reinforcing videogame is a promising avenue for increasing physical activity during normally sedentary times, such as watching television.**
- **Requires no special athletic attire**
- **An appealing way to begin a physical activity program**
- **Provides the opportunity to experience novel activities in a safe environment.**

MOVE: Moving with Video Game based Exercise



- **Aim 1: To examine the feasibility and acceptability of an active play video game based physical activity program in a sample of 34 older (55+ years) adults with schizophrenia.**
- **Aim 2: To examine the short term adherence to an active play video game based physical activity program during a 6- week study period in a sample of 34 older (55+ years) adults with schizophrenia.**
- **Aim 3: To describe changes in the amount of physical activity and level of physical function from baseline to intervention completion (week 6) in a sample of 34 older (55+ years) adults with schizophrenia.**

Xbox Games

- <http://marketplace.xbox.com/en-US/Product/KS-Ultimate/66acd000-77fe-1000-9115-d8024d530a55>
- <http://marketplace.xbox.com/en-US/Product/Kinect-Sports/66acd000-77fe-1000-9115-d8024d5308c9?DownloadType=GameDemo#LiveZone>

Details about Our Program

- **Frequency:** Once a week for 6 weeks
- **Duration:** 30 minute sessions
- **Location:** On site at a mental health facility
- **Size:** Groups of up to 4
- **Start each group with bowling**
- **Encourage a different game at each group.**
- **Games played included:** Bowling, Darts, River Rafting, 20,000 leaks under the Sea, Skiing, Dance, Carnival Games, just to name a few...

Trials and Tribulations

- **Finding the right space**
- **Finding the right games for the right patients**
- **Adapting for physical limitations**

Successes

- **Adapted for physical limitations**
- **Smile meters**
- **Group socialization**

Preliminary Results

- **Leutwyler, H., Hubbard, E., Vinogradov, S., and Dowling, G. Video Games to Promote Physical Activity in Older Adults with Schizophrenia. *Games for Health Journal*, Games for Health Journal, October 2012, 1(5): 381-383. doi:10.1089/g4h.2012.0051.**
- **The average Borg score for bowling was 5 (sd=2, range = 3-10) which indicates a strong level of perceived exertion.**
- **Positive comments about the bowling session included the following themes: easy to play and do well, had fun, and enjoyed the group atmosphere.**

Adherence Results

- **The mean number of groups attended was 5 out of 6 total (SD=2)**
- **Mean total minutes attended were 139 out of 180 total (SD=55)**
- **Fifty percent had perfect attendance by attending six out of six sessions.**

Tips for how to incorporate into your own practice

- **Start with Bowling**
- **Get involved**
- **Experiment with different games-the kinect sports DVD offers a lot of variety**

Questions?

