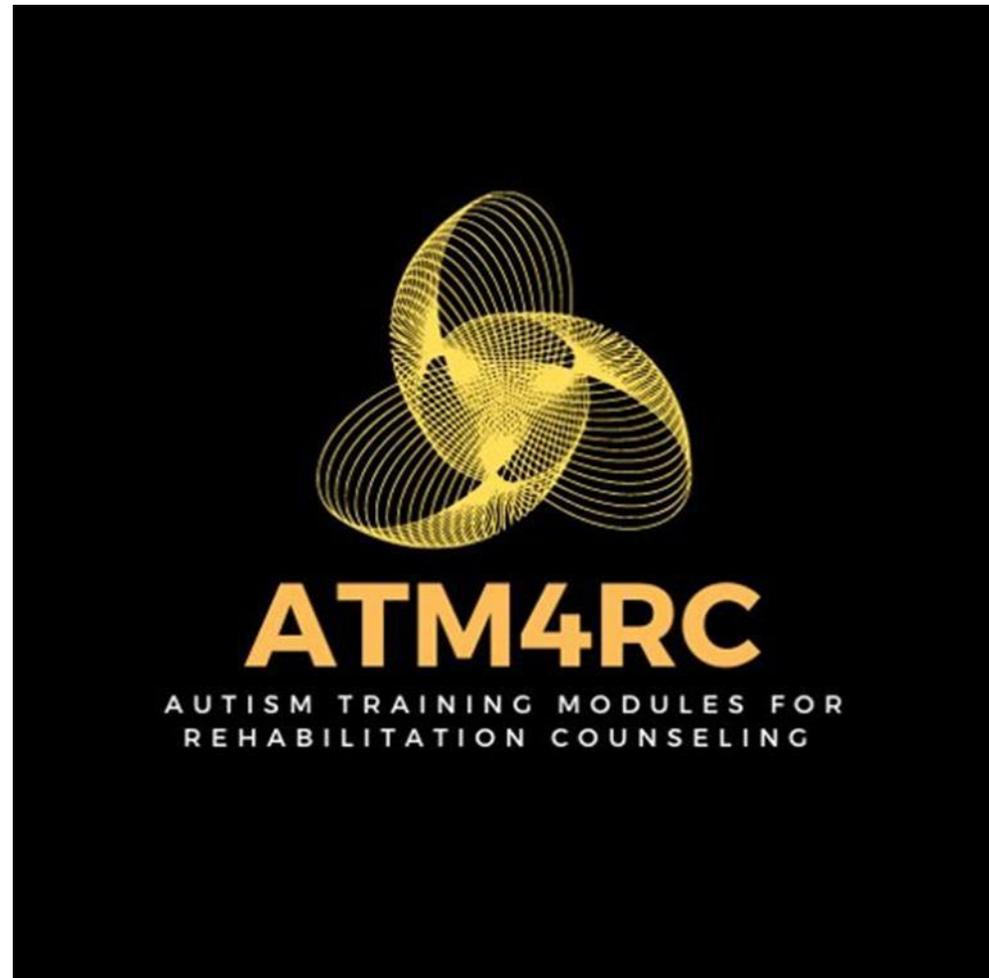


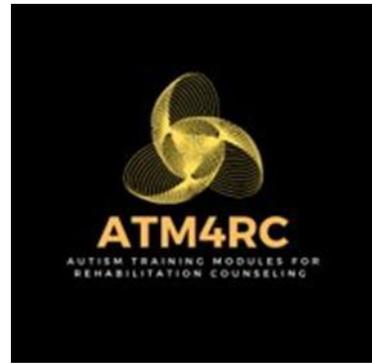
Use of Exercise with Autistic Persons

The contents of this training document were developed under grant number CFDA 84.263, H263C190004, for Rehabilitation Training: Innovative Rehabilitation Training Program. from the U.S. Department of Education. However, those contents do not necessarily represent the policy of the U.S. Department of Education, and you should not assume endorsement by the Federal Government.

Module developed by Dr. Marjorie Bock, Ed.D.
and Dr. Jessica Stallings, ATR-BC, LIMHP,
LMHC



Module Objectives



By the end of this module, participants will be able to:

1. Define what exercise and movement is, and what the benefits are to persons with autism
2. List ways to provide an exercise routine to persons with autism when addressing a target behavior or skill.
3. Identify steps needed to implement an exercise plan/routine and implement.

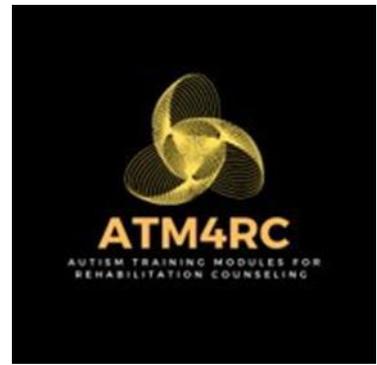
Barriers to physical activity and exercise



“Poor coordination and ball skills leading in turn to both low self-esteem and a propensity to be humiliated and teased by more physically able peers; behavior and emotion management difficulties, inhibiting and limiting participation in group physical activities; and a preference for sedentary, screen-based and intellectual pursuits, with resistance to engaging in an alternative activity. Physical activity supervisors often lack expertise in autism and provide little guidance to neurotypical peers in how to accommodate the characteristics of their autistic [peers].”

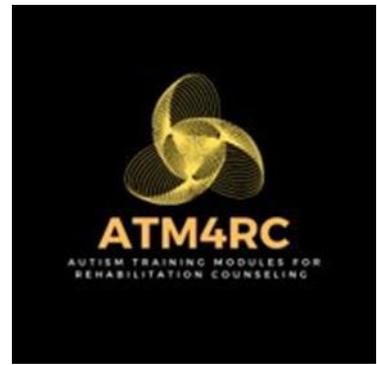
Attwood (para. 2, 2022)

Exercise: Introduction



- Recommendations for physical activity: “150 minutes of moderate-intensity physical activity and 2 days of muscle strengthening activity.” Move more, sit less (United States Department of Health and Human Services, 2018; Centers for Disease Control and Prevention, 2022).
- We can accomplish this by walking, hiking, jogging, swimming, cycling, gardening/ yardwork, lifting weights, skating, tai chi, dancing, aerobics, yoga, karate, taekwondo, all sports, etc.

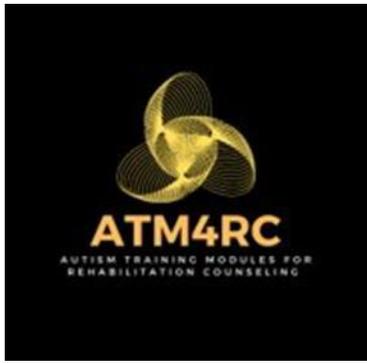
Benefits of Exercise



- weight management,
- reduction of health risks (cardiovascular, diabetes, infectious diseases, some cancers),
- bone and muscle strengthening, managing chronic conditions, preventing falls,
- improving mood,
- and increasing chances of living longer.

(Centers for Disease Control and Prevention, 2022)

Exercise and Movement: An Evidence-Based Practice for Persons with Autism

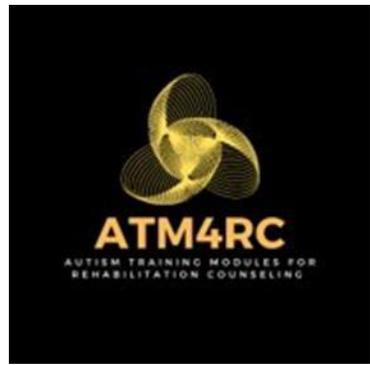


- EBP suggested benefits:

- Academic,
- Adaptive/Self-Help,
- Challenging behaviors,
- Cognitive,
- Motor skills,
- School readiness
- Social skills

(Amonkar, Su, Bhat, Srinivasan, 2021; Duffy, et al, 2017; Arnell, Jerlinder, Lundqvist, 2018; Barak, Oz, Dagan, Hutzler, 2019; Cha, Min, Yoon, Jee, 2020; Griffin & AFIRM Team, 2015; Hillier, Buckingham, & Schena, 2020; Savage, Tomaszewski, & Hume, 2022; Shahane, Kilyk, & Srinivasan, 2023; Spratt, et al, 2018; Steinbrenner et al, 2020; Sung, Ku, Leung, MacDonald, 2022; Todd, Miodrag, Colgate Bougher, Zambom, 2019).

Benefits for Autistic Persons



- Increased opportunities for social interactions and skill development
 - Improved psychological function
 - Better sleep
 - Improved mood
 - Lowered tension and anxiety
 - Sensory regulation
 - Better attention to tasks
- For more information:
<https://autismspectrumnews.org/lets-get-physical-exercise-and-health-issues-in-adults-with-autism/> and
<https://www.sciencedirect.com/science/article/abs/pii/S1750946711001516>
 - See citation list previous slide

Steps to Implementing Exercise and Movement

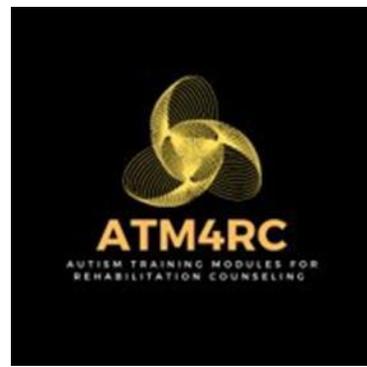
- Conduct an assessment to identify exercise ability and goals
 - Assess baseline activity
- Set exercise goals
- Identify needed equipment and other resources (consider sensory sensitivities)
- Teach routine
- Identify prompts and reinforcers to assist in increasing exercise
- Make fading plan
- Collect data to assist with monitoring progress and making modifications

Review the following for step by step guide and implementation checklist:

<https://afirm.fpg.unc.edu/sites/afirm.fpg.unc.edu/files/imce/resources/ECE%20Step-by-Step.pdf>

<https://afirm.fpg.unc.edu/sites/afirm.fpg.unc.edu/files/imce/resources/Implementation%20Checklist%20for%20ECE.pdf>

(AFIRM, 2015a and b)



Exercise Interest and Ability Assessments



- It is important to identify preferences and abilities before implementation an exercise program, review the following tools to assist in assessment:
- Exercise attitude and interest survey- follow this link
 - <https://www.lths.net/cms/lib/IL01904810/Centricity/domain/657/level%2003%20labs/Level%203%20lab%203%20APF%20Exercise%20Habit%20Survey.docx>
- Exercise activity and inventory checklist—follow this link
 - <https://afirm.fpg.unc.edu/sites/afirm.fpg.unc.edu/files/imce/resources/EC%20Activity%20Inventory%20Checklist.pdf>

Examples of Autism Tailored Workout Plans

- Sensory workouts for autistic adults –
 - https://youtu.be/P2E1hrmcwDE?si=Bd6knWK_IsQHZRm0
- Autism Fitness Tips -- Saaac autism centre - Autism Fitness Tips - Part # 2
 - https://youtu.be/q-elbrfiOiQ?si=yEXzfGf0bITd8_EZ
- Living healthy Chicago - Autism fitness – in home workouts
 - <https://www.youtube.com/watch?v=lqEnorRR2IU>



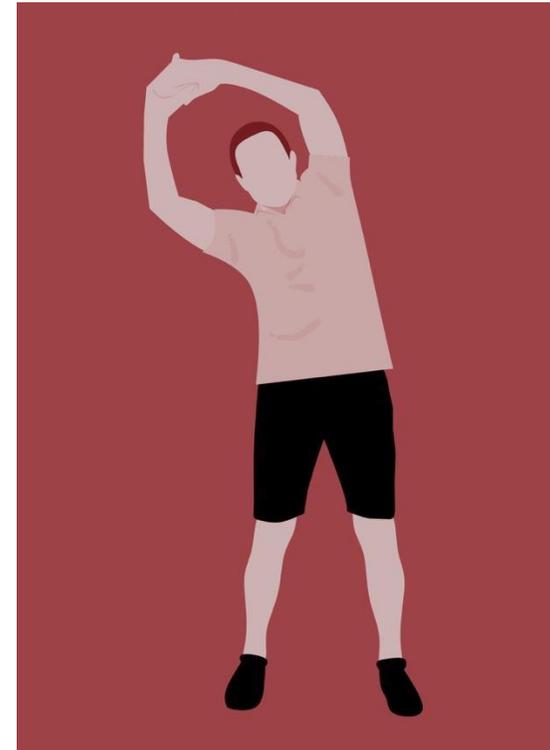
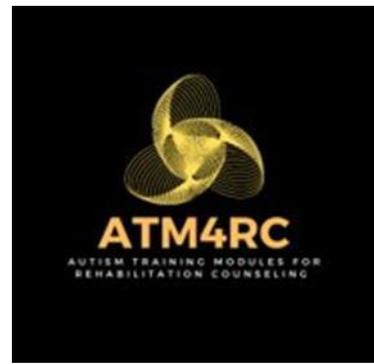
ericchessen.com

Self-Questioning Activity

Review this meta-analysis of regarding physical activity in autistic adults

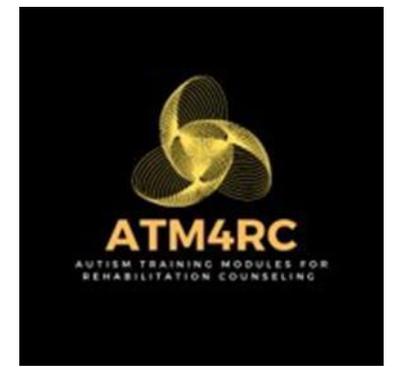
<https://link.springer.com/article/10.1007/s40489-022-00305-x>

Overall autistic adults, as compared to non-autistic peers) engage in physical activity less frequently, had fewer favorable attitudes toward physical activity, indicated lower perceived behavioral control of performing physical activity, and reported greater barriers to physical activity. What can be done to address these negative attitudes and encourage increase in physical activity?



Case study

- Jay states he doesn't like exercise but has been advised by his doctor to do more
- Jay says he does like listening to music
- Jay also states a desire to spend more time watching birds in nature
- What could you do to help Jay make and exercise plan?
 - What reinforcement schedule and reinforcer types may be helpful?
 - How can we determine this?
- Who else can reinforce Jay and how?



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Exercise Plan/Routine Activity (1 of 2)



- Activity: Create an exercise plan/routine for Autistic Adults
- Purpose: To gain practice at implementing this evidence-based strategy
- Description: Using the Steps to Implementing an Exercise and Movement plan/routine, you will create, implement, and evaluate a plan for one of your autistic clients.
- Directions: next slide

Exercise Plan/Routine Activity (2 of 2)



- Directions:
 1. Select one of your autistic clients for whom you think an exercise plan/routine will improve their performance at work, home, community, or relationships in some way.
 2. With the client, identify interests and preferences for exercise, and identify location(s).
 3. Assess the client to determine reinforcers that will enhance their exercise success.
 4. Using the Implementation Checklist, create, implement, and monitor implementation of the exercise plan/ routine you created.
 5. Evaluate the overall efficacy of the exercise plan/routine.

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<https://afirm.fpg.unc.edu/sites/afirm.fpg.unc.edu/files/imce/resources/ECE%20Step-by-Step.pdf>

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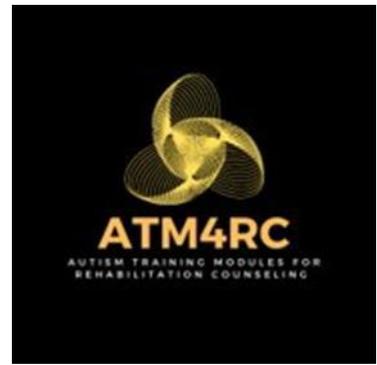
<https://afirm.fpg.unc.edu/sites/afirm.fpg.unc.edu/files/imce/resources/Implementation%20Checklist%20for%20ECE.pdf>

References (2 of 10)



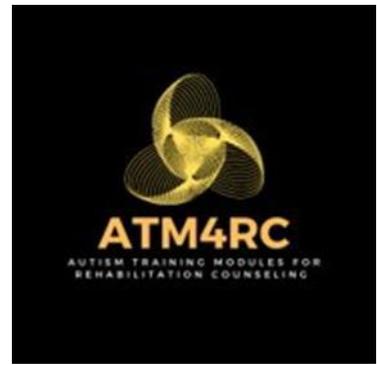
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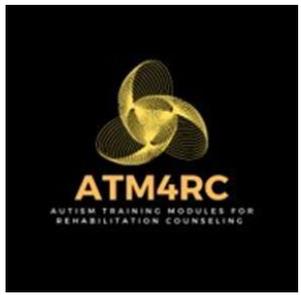


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Additional Resources

Autism Focused Intervention Resources & Modules (AFIRM)



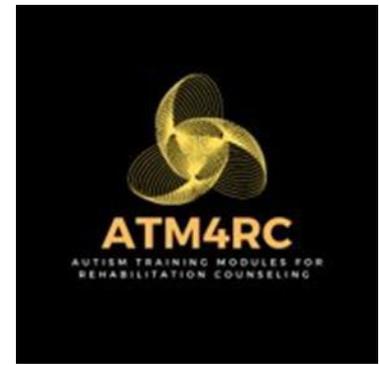
- This interactive module provides in-depth training on exercise and movement for autistic persons.
- The module is an Open Educational Resource (OER)
- <http://afirm.fpg.unc.edu/exercise>

Griffin, W., & AFIRM Team. (2015). Exercise. Chapel Hill, NC: National Professional Development Center on Autism Spectrum Disorder, FPG Child Development Center, University of North Carolina. Retrieved from <http://afirm.fpg.unc.edu/exercise>

Additional Resources:

Websites

Autism Visual Exercise Systems



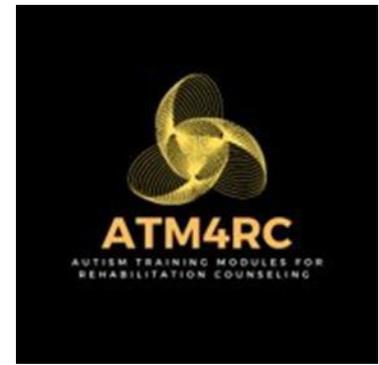
<https://gophersport.com/autism-visual-exercise-systems>

visuals that look like real people doing real exercises, giving students better understanding of the activities. They help improve communication and provide reassuring structure to exercise programs for students with autism.

Utilizing Visual Aids in Exercise Routines

<https://www.linkedin.com/pulse/utilizing-visual-aids-exercise-routines-pete-phillips>

Additional Resources – Websites (cont.)



Aaspire healthcare toolkit for patients and supporters

https://autismandhealth.org/?a=pt&p=detail&t=pt_hth&s=hth_exer&heme=none&size=small

Staying Healthy, exercise, links

Special strong - What Is The Best Workout For People With ADHD and Autism

<https://www.specialstrong.com/>

Different workouts, staying motivated

Additional Resources



Autism fitness -

www.autismfitness.com

Become certified to coach your autistic learner, to teach fitness as a life skill.

Fitbit.com -



Additional Resources: Apps

FitOn App

- <https://fitonapp.com/>
 - free
 - Guided courses
 - workouts from cardio, yoga, strength, pilates, toning and more.
- No equipment needed.
- Fitness, mindfulness, nutrition, motivation



Nike Training App

- <https://www.nike.com/ntc-app>
- free
- Virtual guidance from Nike master trainers
- Personalized workout recommendations
- Minimal workout equipment required for most workouts



Additional Resources: Apps (cont.)



30-Day Fitness at Home

- <https://30dayfitness.app/>
- Offers 30 daily, goal-oriented fitness challenges users can customize based on their preferences, desired commitment to exercise and activity level



Map My Walk

- It tracks and maps every walk
- gives feedback and stats to improve performance.
- it's useful for staying on track and being motivated along the way.
- For beginners and long-term walkers

