

1. To explore whether exercise duration and the type of exercise has an impact on individual well-being and to provide a more in-depth insight to why this might be

2. 2 types of exercise:

Aerobic – sustained activity needing oxygen (e.g., running, cycling) - (Wahid et al., 2016).

Anaerobic – short bursts, no oxygen needed, uses glucose (e.g., weightlifting, sprints) - (Patel et al., 2017).

WHO recommends: (~2.5 hours).

80% of adolescents and 27% of adults **don't meet** this.

Barriers to exercise (Herazo-Beltrán et al., 2017):

Top barriers: Lack of motivation, time, and embarrassment (especially among women).

Least common barrier: Injury.

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3. Mental health impact: Physical activity boosts mental well-being — became more obvious during COVID-19 lockdowns.

Stat: Antidepressant prescriptions in UK rose from 72M (2019) to 89M (2023) - (Gray, 2022).

Natural alternative: Exercise releases dopamine & endorphins - boosts mood, lowers stress.

Endorphin Theory (Craft & Perna, 2004): Intense exercise = euphoria & well-being.

Social/emotional benefits:

Hovland et al. (2023): Improved social connection in people with mental illness.
(Small sample size = limited generalisability)

Longer aerobic exercise:

Basso et al. (2022): Reduced sadness, better body image.
(Didn't compare to anaerobic)

Exercise types & age differences:

Welford et al. (2022): Yoga & dance helped older adults' well-being.
(Could test on younger group for comparison)

Motivation varied:

Granero-Jiménez et al. (2022):

Men = intrinsically motivated.

Women = motivated extrinsically - by appearance.

Agius et al. (2024): Men prefer solo training.

Women thrive in group settings.

(Both used self-report = possible bias – fit societal expectations)

4. Exercise benefits: Well-known for boosting physical & mental health — improves body image and reduces stress.

Literature gap: Limited research comparing aerobic vs. anaerobic exercise.

Unclear how exercise duration impacts well-being.

Past study limitations: Small sample sizes. Focused on one type of exercise.

Mostly quantitative — lacked deeper personal insights.

Current study:

Uses a mixed-methods design:

Quantitative: Warwick-Edinburgh Mental Well-being Scale.

Qualitative: Open-ended questions for personal experiences.

Why this matters: Combines measurable outcomes - greater understanding of how exercise affects mental well-being.

5. Hypothesis

Duration

Participants exercising 150+ minutes per week will report higher well-being than those exercising less or not at all.

Type

Participants doing aerobic exercise will score higher on well-being than those doing anaerobic.

Duration + Type Hypothesis

Longer aerobic sessions will lead to greater improvements in well-being scores.

6. Methodology-

Volunteer sample - 53 participants -quantitative questionnaire.

50 participants -qualitative open-ended questions.

Recruited -EMS and UWTSD social media pages.

Grouped by: Exercise type: Aerobic or Anaerobic

Exercise duration – divided 4 group – as shown

Design

Mixed-method design: Web-based questionnaire via Qualtrics with two phases.

Phase 1: Quantitative

Demographics, exercise type and duration, and well-being scale

Data analyzed with 2x4 ANOVA

IVs: Exercise type (aerobic vs anaerobic), Duration (4 groups)

DV: Well-being scores

Phase 2: Qualitative

5 open-ended questions about exercise experiences

Thematic analysis: 67 codes, 4 main themes

Materials - Online Study - computer or smartphone.

Hosted on Qualtrics platform.

Warwick-Edinburgh Well-being Scale (Tennant et al., 2007):

14 items to measure well-being.

Responses on a 5-point Likert scale.

Open-ended Questionnaire - qualitative data on exercise experiences – inspiration - Burton et al. (2021)

7. Procedure

The study received ethical approval before collecting data.

Access: Participants selected a link from EMS or UWTSD social media.

Participants reviewed the information sheet, provided consent by ticking statements, and were informed they could leave the study at any time.

Demographics: Collected age, gender, primary form of exercise, and physical activity duration.

Well-being Assessment: Warwick Edinburgh Well-being Scale (Tennant et al., 2007) using a 5-point Likert scale.

Qualitative Data: Open-ended questions about exercise experiences

After completion, participants received a debrief form and were informed of their right to withdraw data within 48 hours.

Quantitative data: Analyzed using SPSS with a 2x4 ANOVA.

Qualitative data: Thematic analysis, with themes identified from open-ended responses.

8. Results - Quantitative side

Group with highest well-being: 60-150 minutes per week.

Lowest Well-being: No exercise.

No significant difference between aerobic vs. anaerobic exercise in well-being scores.

Group with highest well-being score: Anaerobic exercise (60–150 mins/week).

Lowest Well-being: Anaerobic exercise with no exercise.

Key Insight: Duration of exercise had a greater impact on well-being than the type of exercise.

9. The qualitative side developed 4 themes

Self-perception & Mental Well-being

Many felt exercise helped relieve stress and improved mood.

Participant 24: “It clears my thoughts, and I feel focused and relaxed after exercise.”

2. Barriers to Exercise

Common barriers included time, motivation, injury, and cost.

Participant 30: “Not enough hours in the day.” - struggle to find time to incorporate

3. Personal Preference in Exercise

Some preferred solo training for focus, others valued the social aspect.

Participant 5: “Alone. It gives me time to switch off and focus.”

Participant 34: “With a friend, less intimidating in a gym/class.”

4. Physical Health & Fitness Goals

Participants exercised for muscle gain, weight loss, mobility, or sports performance.

Participant 9: “To gain muscle.”

Participant 17: “Help towards my weight loss goal.”

10. Discussion of quantitative

Hypothesis 1 – Supported

Finding: Both the 150+ min and 60–150 min groups had significantly higher well-being scores than the no-exercise group.

Supporting Study: Iwon et al. (2021) – Regular physical activity improves happiness, self-esteem, and life satisfaction.

Implication: Promoting moderate exercise (60–150 min) could boost public mental health and well-being.

Hypothesis 2 – Not Supported

Finding: No significant difference in well-being scores between aerobic and anaerobic exercise types.

Supporting Study: Welford et al. (2022) – Both exercise types improve well-being, but neither is superior.

Implication: Both aerobic and anaerobic exercise lead to similar improvements in mental well-being.

This means people can choose the type of exercise they enjoy most.

Increases flexibility and accessibility—exercise doesn't have to follow one format to be beneficial.

Hypothesis 3 – Not Supported

Finding: The anaerobic group (60–150 min) had the highest well-being scores, not aerobic 150+ minutes.

Goes against previous studies: Basso et al. (2022) – Longer aerobic sessions improve well-being, but this wasn't supported by this study.

Implication: time spent exercising had more impact on well-being than whether it was aerobic or anaerobic.

Consistency is key—regular activity in any form is beneficial.

Promoting all types of exercise may be more effective than recommending only aerobic workouts.

11. Qualitative discussion

Mental Health Benefits of Exercise

Key Findings: Participants reported feeling less stressed, more focused, and in a better mood after exercising.

Theories:

Endorphin Hypothesis: Exercise increases mood-enhancing neurotransmitters – endorphins - improving mood (Craft & Perna, 2004).

Cardiovascular Adaptation Theory: Exercise improves blood flow, boosting energy and well-being (Vega et al., 2017).

Fitness Goals & Self-Perception

Key Findings: Participants noted that goals like muscle building or weight loss enhanced self-esteem and motivation.

Supporting Study: Iwon et al. (2021) found that fitness-related goals are linked to better body image and higher self-worth.

Personal Preferences in Exercise

Key Findings:

Some preferred group/team-based exercises for motivation and social connection.

Others preferred solo workouts for focus and personal development.

Supporting Study: Agius et al. (2024) noted that women benefit more from social aspects of exercise, while men prefer solo training for focus and discipline.

Barriers to Exercise

Common Barriers:

Lack of time

Low motivation

Embarrassment in group settings

Supporting Study: Herazo-Beltrán et al. (2017) identified similar barriers to physical activity.

Implication for the qualitative side of the study -

Aimed at -Mental Health Professionals: Encourage physical activity for treating depression and anxiety.

Exercise – natural alternative - could enhance mental health and reduce reliance on antidepressants, improving overall well-being –

12. Strengths

Combines quantitative data and qualitative insights.

-greater understanding of the relationship between exercise and well-being.

Enhances the validity and depth of findings - statistical trends and personal insights.

Different types and durations of exercise, making the results widely applicable.

Captures various perspectives: By including participants with varied experiences, the study – compare against groups - reflects a range of perspectives

13. Weaknesses

Uneven group sizes:

Aerobic group =35 vs. Anaerobic =18 - may have unreliable + biased results.

Future studies should aim for equal group sizes to improve accuracy and reduce bias (Grace-Martin, 2020).

Wording of question 11:

Question on stress coping - didn't produce useful responses – how they coped – what they did to cope.

Future studies should rephrase the question - the researcher would gain more extended and useful answers regarding the research question.

Focus on age groups:

Future research should explore how exercise affects different age groups -

Could reveal how responses vary by age and uncover reasons for these differences.

14.. Conclusion

Longer duration of exercise improves well-being.

Exercise Type: No significant difference between aerobic and anaerobic exercises.

Mental Benefits: enhanced mood, energy, stress reduction, and self-esteem. Team sports/group workouts boosted social connections.

Barriers: Lack of time and motivation, along with embarrassment, prevented regular exercise despite knowing its benefits.

What I Learned:

Many people are aware of the benefits of exercise - barriers such as lack of motivation, time, and embarrassment often prevent participation.

-barriers can lead individuals to view exercise as a chore or negative experience.

However, studies show that social interaction can increase motivation and make the experience more enjoyable.

Having a gym partner can offer support and encouragement, helping individuals stay consistent and gain the physical and psychological benefits of regular exercise.

