

The Impact of Individual Exercise Versus Large and Small Group Exercise in Community-Dwelling Adults

Reid Pietila, BS; Derek Olson, DPT

ABSTRACT

Background: Exercise offers multiple health benefits, and improving adherence may positively influence community health. Thus, improving exercise adherence is likely to have a positive impact on community health. The YMCA, a longstanding community resource, provides exercise opportunities ranging from individual workouts to large-group classes. Group cohesion may enhance adherence; however, the effect of group size on cohesion is not well understood.

Methods: This study at the Greater Green Bay YMCA examined the impact of individual, small-group (<12 participants), and large-group (≥12 participants) exercise on adherence, frequency, satisfaction, confidence in safe exercise, and self-perceived health. An online survey distributed via the YMCA newsletter collected data on exercise preferences, membership duration, and related factors.

Results: Fifty-six members completed the survey: 14 exercised exclusively in large groups, four in small groups, 20 individually, and 18 used multiple methods. Large-group participants reported the highest satisfaction (8.8/10) and exercised most frequently, with 64% attending three or more times per week. Large-group and individual exercisers reported the highest confidence in safety (8.3/10). Combination exercisers had the highest self-perceived health (7.9/10). Among long-term members, 73% participated in some form of group exercise.

Discussion/Conclusions: Exercising in groups of at least 12 participants was associated with greater satisfaction and more frequent exercise compared with smaller groups or exercising alone. Participation in any group exercise was linked to higher self-perceived health. These findings suggest that group cohesion may influence adherence and health perceptions, providing a foundation for future research and program development.

BACKGROUND

The benefits of exercise are multifactorial, encompassing several aspects of health, and exercise capacity may be inversely related to mortality risk.¹ Knowing this, optimizing exercise adherence could profoundly affect mortality prevention. The YMCA has been a community pillar in the United States since 1851, promoting healthy living and community engagement. It offers various exercise opportunities across different degrees of group involvement, ranging from individual exercise to large group classes. Perception of group cohesion may be associated with improved exercise adherence in a structured exercise setting.²⁻⁵ However, additional research is needed to understand the effect of group size on overall group cohesion and how this may impact exercise adherence and satisfaction over time. Additionally, no data suggest an ideal group size to optimize cohesion and exercise adherence over time.

We sought to investigate the impact of individual, small-, and large-group exercise

on adults at the Greater Green Bay YMCA and to determine participants' adherence to various exercise methods. We also aimed to help the YMCA improve program offerings to maximize member retention.

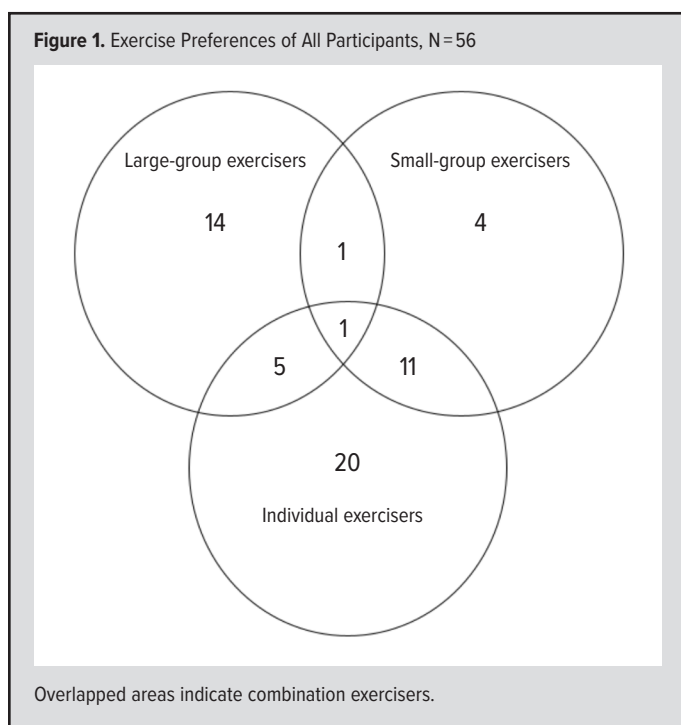
METHODS

A 12-question survey was created to assess exercise preferences among YMCA members. After Institutional Review Board approval, members of the Greater Green Bay YMCA (N = 13 000)

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Author affiliations: Medical College of Wisconsin, Green Bay, De Pere, Wisconsin (Pietila, Olson).

Corresponding author: Reid Pietila, Medical College of Wisconsin, Green Bay, WI; email rpietila@mcw.edu

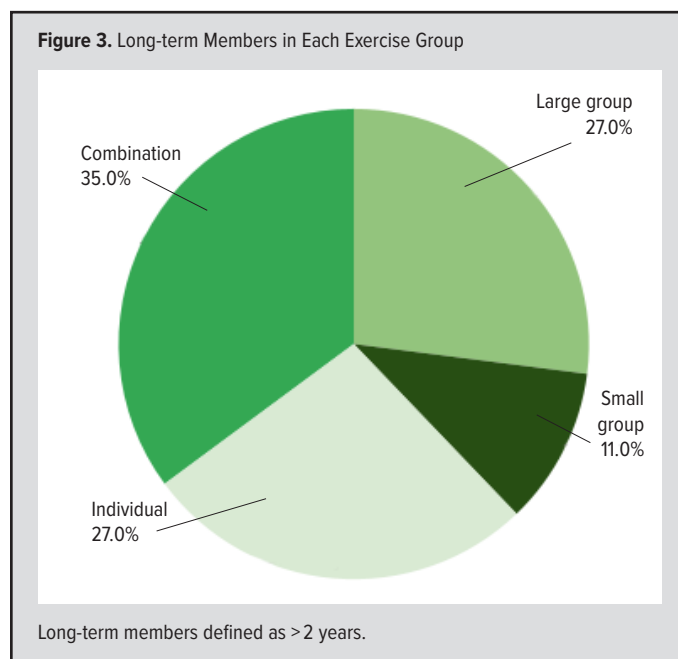
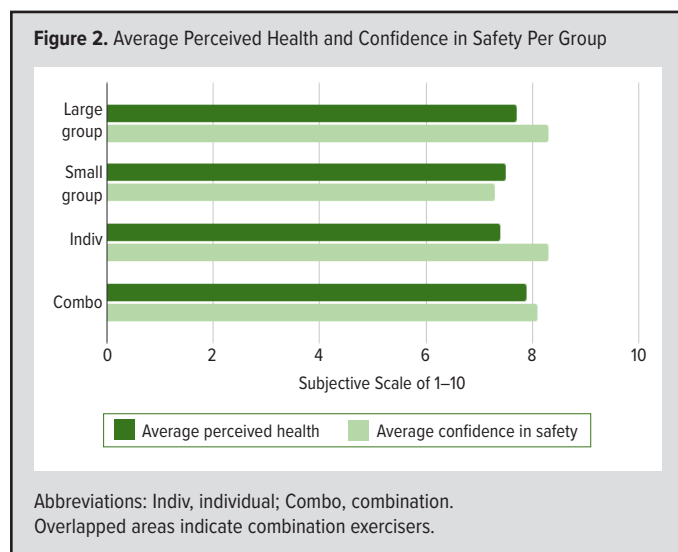


were invited to participate in the study via an online survey included in the YMCA monthly newsletter email. Participants voluntarily completed the survey, which assessed various aspects of their exercise involvement with the YMCA.

The survey included questions on age, sex, length of membership, frequency of YMCA exercise per week, members' primary reason for exercising, exercise method of choice, favorite aspect of chosen exercise method, satisfaction with exercise routine (0-10 scale), self-perceived health (0-10 scale), and confidence in performing exercise techniques safely (0-10 scale). All in-person exercise classes offered at the YMCA were included in the study, including weightlifting, cardio, cycling, Pilates, water aerobics, and cross-training. Virtual exercise classes and online coaching were excluded from the study. Members were designated as individual exercisers, small-group exercisers (<12 members), or large-group exercisers (≥ 12 members). The cutoff of 12 members to distinguish small from large groups was determined in consultation with YMCA exercise program directors, based on the prevalence of classes exceeding 12 participants. Those participating in multiple exercise methods were termed combination exercisers. Members were further categorized based on the length of their membership: short-term (< 6 months), intermediate (6 months - 2 years), and long-term (>2 years).

RESULTS

A total of 56 members participated in the study: 45 females and 11 males. The average participant age was 59.4 years. The study included 37 long-term, 13 intermediate, and 6 short-term members. Of the 56 participants, 14 participated exclusively in large-



group classes, 4 in small-group classes, 20 in individual exercise, and 18 in more than one method (Figure 1). Ninety percent of males exercised individually as part of their routine, and 50% incorporated group exercise. Sixty-six percent of female participants engaged in group exercise, and 30% participated exclusively in large-group exercise.

Large-group exercisers reported the highest average satisfaction (8.8/10), followed by combination exercisers (8.2/10), individual exercisers (7.7/10), and small-group exercisers (7.5/10) (Appendix Supplemental Figure 1). Large-group exercisers worked out at the YMCA most frequently, with 64% exercising 3 or more times per week, followed by individual exercisers (55%), combination exercisers (50%), and small-group exercisers (50%) (Appendix Supplemental Figure 2). Combination exercisers reported the highest average self-perceived health (7.9/10), followed by large-

group exercisers (7.7/10), small-group exercisers (7.5/10), and individual exercisers (7.4/10) (Figure 2).

Large-group exercisers and individual exercisers reported the highest average confidence in safety (8.3/10) (Figure 2). Combination exercisers and large-group exercisers most valued socialization as part of their exercise routine (50% and 36%, respectively). Seventy-five percent of small-group exercisers, 53% of combination exercisers, and 50% of large-group exercisers reported workout quality as their favorite aspect of their routine, whereas 65% of individual exercisers cited convenience. Among long-term members, 35% were combination exercisers, 27% were large-group exercisers, 27% were individual exercisers, and 11% were small-group exercisers. Overall, 73% of long-term members participated in some form of group exercise (Figure 3).

DISCUSSION

Socialization and group cohesion may influence exercise adherence, as 73% of long-term members participated in some form of group exercise. Interestingly, small-group exercisers represented the smallest proportion of long-term members, which may reflect the limited availability of small-group classes. The study included only 4 participants who exercised exclusively in small groups, suggesting either low interest in small-group classes or limited offerings. This finding may indicate that large-group exercise is more likely to support long-term exercise adherence.

Large-group exercisers were most likely to exercise at the YMCA at least 3 times per week, followed by individual exercisers. Small-group and combination exercisers were least likely to exercise at the YMCA at this frequency, which may suggest decreased adherence among members who rely solely on small-group exercise. Participants involved in any form of group exercise reported higher levels of self-perceived health, with combination and large-group exercisers reporting the highest scores. This trend suggests that group cohesion may positively influence self-perceived health and that large-group exercise may have a greater impact than small-group exercise.

As expected, individual exercisers placed less importance on socialization and valued convenience most highly. In contrast, group exercisers prioritized socialization and most enjoyed workout quality. Large-group and individual exercisers reported the highest confidence in exercising safely, which is notable. We anticipated that small-group and individual exercisers would report the highest confidence because small-group classes offer more direct instruction, and individual exercisers typically have sufficient experience to function independently in a gym. Participants in the large-group category demonstrated the highest satisfaction, likely related to a sense of group cohesion. This trend aligns with the value placed on socialization in large-group exercise. Participant demographics may further explain this finding, as most participants were of retirement age, and exercise classes may serve as a source of social engagement.

This study had several limitations. First, participation in multiple exercise methods introduced confounding variables. Second, the small sample size of small-group exercisers ($n = 4$) limits analysis. Third, the overall sample size and descriptive nature of the data precluded statistical significance. Finally, the average participant age was 59.4, limiting generalizability to a younger population.

Next Steps

The YMCA may encourage participation in group exercise through incentives such as discounts for members attending group classes or waiving fees for special offerings. These strategies may increase member retention and ultimately benefit public health. Although conclusions are limited, this study provides a foundation for further investigation. Future studies should aim to clarify the relationship between group size and exercise adherence, ideally with greater statistical power and balanced representation across groups. Additional research should identify an optimal group size for adherence and satisfaction and explore age-related differences in exercise preferences.

CONCLUSIONS

Because members participated in several different exercise modes, we could not determine a specific group size that optimizes cohesion and exercise adherence over time. However, our results suggest that exercising in groups of at least 12 participants is associated with more frequent exercise, better long-term adherence, and greater satisfaction compared with exercising in groups of fewer than 12 participants or exercising alone. Our data also suggest that participants involved in any form of group exercise report higher self-perceived health than those who exercise exclusively alone.

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Appendix: Available at wmjonline.org

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