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*The Socializing Together while Running InDependently (STRIDE) pilot randomized controlled trial: Feasibility and acceptability of an online-delivered running and walking group program to support low active university students' well-being and exercise behaviour during the COVID-19 pandemic*

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## Project Summary

Group-based sport and exercise programs, guided by the social identity approach<sup>1</sup>, represent a viable strategy to promote physical activity and well-being among university students, particularly during the COVID-19 context. Social identity informed interventions aim to cultivate a sense of 'togetherness' and distinctiveness by grouping individuals based on salient characteristics (e.g., age, similar lived experiences) and using group-based activities<sup>2,3</sup>. We aimed to test the feasibility and acceptability of an eight-week social identity informed online-delivered running and walking group program to support low active (i.e., not currently meeting Canadian physical activity guidelines) undergraduate university students' well-being and exercise behaviour during the COVID-19 pandemic. Seventy-two undergraduate students were randomized to either the running/walking group program (n = 36) delivered via online platforms (Zoom, Strava, Canvas) or the attention control group (n = 36). Feasibility and acceptability outcomes included program interest and enrollment, study adherence, program satisfaction, and social identification with group members. Effect sizes (for future power analyses) were also calculated for affective exercise attitudes, exercise identity, well-being, and exercise behaviour. Participants' (n = 16) experiences and perceptions of the running group program were evaluated using semi-structured interviews. Program interest and enrollment, study adherence, and program satisfaction were high. However, participants noted difficulties with developing deeper social connections with group members via online platforms (Zoom and Strava), which may explain the small-to-null intervention effects and moderate social identification with group members (see below). Although social identity informed running groups appear to be a feasible and acceptable intervention strategy, particularly for low active university students, an in-person component should be integrated to support deeper social connection among group members and piloted before delivering a full-scale efficacy trial.

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## Research Methods

**Study Design:** Eight week, pre-registered (Clinical Trials ID: NCT04857918), two-arm, parallel group, unblinded pilot randomized controlled trial.

**Participants:** Low active undergraduate university students were recruited using various strategies (class announcements, advertisements, social media).

**Randomization:** Once 12 participants met the eligibility criteria (via screening call) and completed the baseline survey, they were equally randomized (stratified by gender) to either the online-delivered running group program or the attention control group.

**Program Description:** Running groups consisted of six individuals. All participants attended an initial meet-and-greet/program orientation via Zoom. Each running group had a group goal to collectively run and walk the distance of BC (940 km) across the eight-week program and were encouraged to individually meet the Canadian physical activity guidelines each week. Participants were instructed to record running, walking, and other exercise on Strava, and running groups were created on Strava so participants could view each of their members' exercise and provide 'kudos' and words of encouragement. Running groups were encouraged to create their own group name on Strava and participants were provided an athletic t-shirt with the study logo to encourage group distinctiveness. Each week, running groups had a coffee chat hosted on Zoom to encourage social connectivity. The web platform (i.e., canvas) provided program information and resources (e.g., running tip videos).

**Attention Control Group:** Individuals were instructed to download Strava, record all exercise on the application, and encouraged to meet the Canadian physical activity guidelines each week of the study.

**Measures/Assessment:** Frequency counts were recorded for study interest, enrollment, and study adherence. Participants completed a baseline and post-study questionnaire. Select measures (for this report) included program satisfaction<sup>4</sup> and social identification<sup>5</sup> with group members (intervention group and follow up only), affective exercise attitudes<sup>6</sup>, exercise identity<sup>7,8</sup>, well-being (i.e., flourishing<sup>9</sup>), and weekly exercise logs to calculate moderate-to-vigorous exercise minutes per week. Participants' (n = 16) experiences and perceptions of the running group program were evaluated in semi-structured interviews.

**Analysis:** Along with descriptive statistics for feasibility and acceptability outcomes, 2 X 2 mixed ANOVAs were used to calculate condition X time effects for affective attitudes, exercise identity, and well-being. Cohen's *d* was calculated for group differences in average weekly exercise behaviour. Missing data at follow up was handled using intention-to-treat methods (baseline scores carried forward). Post-program interviews were transcribed verbatim to identify common quotes that supplement quantitative findings and will be analyzed using thematic analysis<sup>10</sup> in the future.

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## Research Results

**Primary Feasibility and Acceptability Outcomes:** A total of 254 individuals expressed interest in the program and 72 were enrolled. Study retention was 90.30%. Average coffee chat attendance was 62.88% among participants retained in the intervention group. Average follow up questionnaire completion and exercise log completion were 96.90% and 99.00%, respectively, among participants retained in the study. Participants reported moderate to high program satisfaction ( $M = 4.13$ ,  $SD = .73$ ; scale ranged from 1 to 5) and moderate social identification with group members ( $M = 4.63$ ,  $SD = 1.43$ ; scale ranged from 1 to 7). Results from semi-structured interviews indicated that participants were satisfied with the program and highlighted the benefits of participating in a group where members shared similar running/exercise capabilities and experiences (challenges with university). Participants also

noted that seeing others make exercise/running progress (via Strava and coffee chats) was motivating for their own exercise behaviour. Participants noted difficulties in developing meaningful social connections via Zoom and Strava and expressed desire to participate in in-person running and walking activities. For affective exercise attitudes, there was a large time effect ( $\eta_p^2 = .180$ ), but a negligible condition X time effect ( $\eta_p^2 = .004$ ).

**Secondary Outcomes:** For exercise identity, there was a large time effect ( $\eta_p^2 = .216$ ), and a small condition X time effect ( $\eta_p^2 = .025$ ) in favour of the intervention group. For well-being, there was a small time effect ( $\eta_p^2 = .035$ ) and no condition X time effect ( $\eta_p^2 = .000$ ). Finally, for average weekly moderate-to-vigorous exercise minutes, there was a small intervention effect ( $d = .126$ ), such that individuals in the intervention group reported higher average weekly exercise ( $M = 157.78$  minutes) than individuals in the control group ( $M = 144.17$  minutes). However, after removing an outlier in the intervention group ( $Z = 5.24$ ), the effect size was negligible ( $d = -.045$ ).

**Limitations:** The student investigator (CW) was directly involved in the program delivery which may have biased participants' evaluation of the program.

**Conclusions:** A full-scale efficacy trial appears to be feasible and acceptable. However, small to negligible intervention effects suggest more work is needed to improve intervention potency. Including in-person group run sessions and opportunities to socialize after runs may improve intervention efficacy and should be tested in future pilot studies.

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### **Policy and Program Implications**

The findings of the current investigation have several implications for recreational sport and exercise programs aimed at supporting physical activity of Canadians, which is the primary goal of the Federal/Provincial/Territorial Physical Activity and Recreation Committee. First, the findings suggest that group-based sport and exercise interventions may be desirable for individuals not meeting Canadian physical activity guidelines. Second, it is important to group individuals based on exercise ability and shared experience (e.g., occupational similarity). Third, there is desire among individuals to develop meaningful social connections with group members, and program developers should consider including unstructured social components after in-person exercise/sport participation (e.g., coffee chats).

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### **Next Steps**

Given the level of interest in the program and study retention, a full-scale efficacy trial should be developed and delivered. Future efficacy trials would benefit from incorporating and piloting an in-person running component with unstructured social time after exercise.

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### **Knowledge Translation**

This knowledge translation report should be shared with the Federal/Provincial/Territorial Physical Activity and Recreation Committee.

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**Tags:** Community Sport, Health and Wellness, Mental Health, Psychology

## References

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