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Baseline Physical Activity in the Canada-wide EXercise for Cancer to Enhance Living Well (EXCEL) study: Understanding Rural/Urban Differences

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Introduction: Rural–urban differences in physical activity (PA) among individuals living with and beyond cancer (ILWC) are poorly understood. Using baseline data from the Canada-wide EXercise for Cancer to Enhance Living Well (EXCEL) study, we compared PA levels between rural and urban participants and with national benchmarks.

Methods: Baseline data from 1,485 participants (73% rural, 27% urban) were analyzed. Self-reported PA (m-GLTEQ) was quantified via MET-hours/week (mild, moderate, strenuous, and summed for total) and compared to national guidelines (8.3-16.6 MET-hours/week, approximately 150-300 min moderate PA). Rural-urban classifications were defined by postal codes linked to population sizes $< > 100,000$, respectively. Rural–urban differences were assessed using nonparametric group comparisons of self-reported MET-hours/week after exclusion of extreme high values using an IQR-based approach. National adherence metrics were from the accelerometry-measured 2025 Canadian Health Measures Survey (StatsCan).

Results: ILWBC in EXCEL exhibited high baseline PA, with rural participants reporting significantly higher moderate-intensity PA (median 10.0 vs 8.3 MET-hours/week, $p = 0.01$) and higher total weekly MET-hours (median 36.0 rural vs 35.8 urban, $p = 0.02$). Both rural (88.4%) and urban participants (80.3%) reported levels greater than the WHO-recommended 16.6 MET-hour/week needed for added health benefits ($p = 0.02$). PA levels for the recommended ≥ 8.3 MET-hours/week threshold were also high ($>98\%$) in both groups compared to national norms (46.2%). Strenuous and mild PA did not significantly differ between groups.

Conclusions: PA levels in the EXCEL baseline cohort exceeded those of the general population, possibly reflecting selection bias common in exercise oncology research. While 46% of Canadian adults meet accelerometry-based national PA guidelines (≥ 8.3 MET-hours/week), the EXCEL study's self-reported 98% adherence may reflect overestimation, warranting cautious interpretation. Observed rural–urban differences in PA levels have implications for our future work, including interpreting EXCEL effectiveness and designing sustainable programs that reach less active individuals.

Keywords

physical activity, PA guidelines, rural-urban disparities, cancer

Conflict of Interest & Ethical Approval

yes

Abstract submitters declaration

yes

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