

**Weekend warrior physical activity engagement and the risk of mental health conditions: A systematic review and narrative synthesis**

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**Supplementary Material 4- Table 1:** Quality assessment of studies through the adapted Newcastle-Ottawa Scale for cross-sectional studies

		Selection			Comparability	Outcome		Total Score	Quality	
Author, year	Type of study	1) Representativeness of the sample	2) Non-respondents	3) Ascertainment of the exposure	1) Controlling for Confounding factors	1) Assessment of the outcome	2) Statistical test			Decision
Hamer et al., 2017	Cross-sectional	*	-	-	**	*	*	5	High	Include
Chen et al., 2023	Cross-sectional	*	-	-	**	*	*	5	High	Include
Liang et al., 2023	Cross-sectional	*	-	-	**	*	*	5	High	Include
Xing ling, 2023	Cross-sectional	-	-	-	-	*	-	1	Low	Exclude
Li et al., 2024	Cross-sectional	*	-	-	**	*	*	5	High	Include
Seol et al., 2024	Cross-sectional	*	*	-	**	*	*	6	High	Include
Chen et al., 2025	Cross-sectional	*	-	-	**	*	*	5	High	Include
Xu et al., 2023	Cross-sectional	*	-	*	**	*	*	6	High	Include
Rossato de Victo et al., 2025	Cross-sectional	-	-	-	**	*	*	4	High	Include

**Notes:** The Newcastle-Ottawa Scale (NOS) assesses study quality and risk of bias across three categories: participant selection, comparability, and outcomes. A study may receive a maximum of one point (\*) for each item in the selection and outcome categories and up to two points (\*\*) for comparability. Cross-sectional studies can achieve a maximum of seven points. Accordingly, scores of 0–2, 2–4, and 4–7 were categorized as low, moderate, and high quality, respectively.

**Supplementary Material 4- Table 2:** Quality assessment of prospective cohort studies through the Newcastle-Ottawa Scale

Author, year	Type of study	Selection				Comparability	Outcome			Total Score	Quality
		1) Representativeness of the exposed cohort	2) Selection of the non-exposed cohort	3) Ascertainment of the exposure	4) Demonstration that outcome of interest was not present at start of study		1) Comparability of cohorts on the basis of the design or analysis	1) Assessment of the outcome	2) Was follow-up long enough for outcomes to occur		
Min et al., 2024	Prospective cohort	*	*	*	*	**	*	*	*	9	High
Yang et al., 2024	Prospective cohort	*	*	*	*	**	*	*	*	9	High
Andersen et al., 2025	Prospective cohort	*	*	*	*	**	*	*	*	9	High
Liu et al., 2025	Prospective cohort	*	*	*	*	**	*	*	*	9	High

**Notes:** The Newcastle-Ottawa Scale (NOS) assesses study quality and risk of bias across three categories: participant selection, comparability, and outcomes. A study can receive a maximum of one point (\*) for each item in the selection and outcome categories and up to two points (\*\*) for comparability. Longitudinal studies can achieve a maximum of nine points. Accordingly, longitudinal studies were classified as low, moderate, and high quality based on scores of 0–3, 4–6, and 7–9, respectively.