

S3 Table: Categorization of extracted potential physical environmental determinants

Table A: Categorization of extracted potential physical environmental determinants (preschool)

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| MICRO-ENVIRONMENT |
| Home/Household |
| Access/Availability of outdoor toys/objects/equipment |
| <i>Outdoor: balls and objects (De Craemer)</i> |
| <i>Outdoor: open space (De Craemer)</i> |
| <i>Outdoor: Fixed equipment (De Craemer)</i> |
| <i>Outdoor: Wheel toys (De Craemer)</i> |
| Access/ Availability of play/ PA facilities and equipment in the home |
| <i>Availability of toys (De Craemer)</i> |
| <i>Play equipment at home (De Craemer)</i> |
| Access/Availability/Size of backyard space |
| <i>Backyard size (big) (De Craemer)</i> |
| Access/Availability to family transport (own more than one car) |
| <i>Own more than one car (De Craemer)</i> |
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| Educational institutions |
| Distance to school |
| <i>Distance to school < 800m (De Craemer)</i> |
| Play space features |
| <i>Markings (De Craemer)</i> |
| <i>Vegetation (De Craemer)</i> |
| <i>Ground surface (De Craemer)</i> |
| Availability of PA equipment/ toys/ play structures in school areas |
| <i>Availability of toys (Hinkley)</i> |
| <i>Availability of toys (De Craemer)</i> |
| <i>Aiming equipment (De Craemer)</i> |
| <i>Playing equipment (De Craemer)</i> |
| Active means of transport to school (De Craemer) |
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| Neighbourhood |
| Negative street characteristics |
| <i>Steep road on way to school (De Craemer)</i> |
| <i>No lights/crossings (De Craemer)</i> |
| <i>Busy road barrier on route to school (De Craemer)</i> |
| High traffic density/speed |
| <i>Heavy traffic (De Craemer)</i> |
| Availability/ Access/ Proximity of public transport system |
| <i>Public transport is limited (De Craemer)</i> |
| Presence of street lights |
| <i>Lighting along public open space paths (De Craemer)</i> |

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| Access/ Availability of PA infrastructure/ equipment |
| <i>Equipment (De Craemer)</i> |
| Distance to PA facilities |
| <i>Miles to park (De Craemer)</i> |
| Access/ presence of parks/playgrounds/open space |
| <i>Convenient play spaces (Hinkley) (De Craemer)</i> |
| <i>Presence of public open spaces/playgrounds (De Craemer)</i> |
| <i>Number of recreational facilities in public open spaces (De Craemer)</i> |
| Neighbourhood Safety (Hinkley) |
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| MACRO-ENVIRONMENT |
| City/Municipality/Regions |
| Environment aesthetics/ quality |
| <i>Environment (De Craemer)</i> |
| Season/ Temperature |
| <i>Season (De Craemer)</i> |
| Weather condition (favourable) |
| <i>Weather conditions (warmer/drier) (Hinkley)</i> |
| Preschool attended (rural/urban) (De Craemer) |

PA: Physical Activity; PE: Physical Education

Overall category in bold, additional variables contributing to category in italics

Table B: Categorization of extracted potential physical environmental determinants (children and adolescents)

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| MICRO-ENVIRONMENT |
| Home/Household |
| Access/ Availability of play/ PA facilities and equipment in the home |
| <i>Home equipment (Davison)</i> |
| <i>PA equipment in home (Maitland)</i> |
| <i>Access/availability of exercise equipment (Ferreira)</i> |
| <i>Access/availability of PA equipment (Ferreira)</i> |
| <i>Access to facilities/ Home Equipment (Van der Horst)</i> |
| Access/Availability/Size of backyard space |
| <i>House and yard (Maitland)</i> |
| Access/Availability to family transport |
| <i>Own more than one car (De Craemer)</i> |
| <i>Instrumental parent support (transportation) (Beets)</i> |
| <i>Instrumental behaviors (transportation) (Pugliese)</i> |
| <i>Number of cars in household (Ferreira)</i> |
| <i>Transporting child (Gustafson)</i> |
| |
| Educational institutions |
| Distance to school |
| <i>Distance to school (school location) (Davison)</i> |
| <i>Distance to school (Craggs)</i> |
| <i>Distance (from home) (Ferreira)</i> |
| Availability of PA equipment/ toys/ play structures in school areas |
| <i>Equipment/play structures in school play areas (Davison)</i> |
| <i>Availability of PA equipment (Ferreira)</i> |
| <i>Access to loose equipment (Stanley)</i> |
| <i>Unfixed equipment (Ridgers)</i> |
| <i>Access to fixed equipment (Stanley)</i> |
| <i>Fixed equipment/markings (Ridgers)</i> |
| Access/ provision of school facilities/ resources |
| <i>School facilities/ resources (Ferreira)</i> |
| <i>Overall facility provision (Ridgers)</i> |
| <i>Access to facilities (Stanley)</i> |
| <i>Number of facilities (Stanley)</i> |
| Number of PA programs/ activities (Stanley) |
| Access to seating (Stanley) |
| Access to play space |
| <i>Access to play space (Stanley)</i> |
| <i>Indoor space/areas (Ridgers)</i> |
| <i>Access to indoor activity space (Stanley)</i> |
| <i>Access to outdoor space (Ridgers)</i> |
| <i>Outdoor physical activity areas (Ridgers)</i> |

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| <i>Outdoor space (Ridgers)</i> |
| <i>Play location (indoor) (Ridgers)</i> |
| Access to areas that facilitate PA |
| <i>Access to court space (Stanley)</i> |
| <i>Access to playing fields (with markings) (Stanley)</i> |
| <i>Access to sledding hill (Stanley)</i> |
| <i>Access to ski tracks (Stanley)</i> |
| <i>Access to ice-skating areas (Stanley)</i> |
| <i>Access to fenced courtyard space (Stanley)</i> |
| <i>Access to climbing wall (Stanley)</i> |
| <i>Access to a wooded area (Stanley)</i> |
| <i>Access to water (sea, river, lake) (Stanley)</i> |
| <i>Access to bitumen areas (Stanley)</i> |
| <i>Access to areas for hopscotch/skipping (Stanley)</i> |
| <i>Access to areas for board/skating (Stanley)</i> |
| <i>Access to swimming facilities (Stanley)</i> |
| Access to outdoor obstacle course (Stanley) |
| Play space features |
| <i>Access to green space (no markings) (Stanley)</i> |
| <i>Play surface (grass) (Ridgers)</i> |
| <i>Playground markings (Stanley)</i> |
| <i>Size of play space (Stanley)</i> |
| <i>Design of the school grounds (Stanley)</i> |
| Access to a gym with cardio & weightlifting equipment (Stanley) |
| Condition of facilities |
| <i>Condition of facilities (Stanley)</i> |
| <i>Condition of a gymnasium (Stanley)</i> |
| <i>Condition of field (Stanley)</i> |
| Active means of transport to school |
| <i>Walking to school (McGrath)</i> |
| <i>Active commuting to school (Lee)</i> |
| <i>Active school transportation (Larouche)</i> |
| Environmental barriers to active travel (Stanley) |
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| Neighbourhood |
| Neighbourhood Design |
| <i>Range of Housing Opportunities and Choices (Durand)</i> |
| Access/distance/proximity to destinations |
| <i>Access to destinations (Davison)</i> |
| <i>Proximity of neighbourhood shops (McGrath)</i> |
| <i>Distance to destinations (Ferreira)</i> |
| Street characteristics |
| <i>Street characteristics (Davison)</i> |
| <i>Road characteristics (Craggs)</i> |

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| Street length |
| <i>Road length (Craggs)</i> |
| Negative street characteristics |
| <i>Steep terrain (Davison)</i> |
| Availability of sidewalks/trails |
| <i>Presence of sidewalks (Davison)</i> |
| <i>Provision of sidewalks (McGrath)</i> |
| Street Connectivity |
| <i>Connectivity of street network (Davison)</i> |
| <i>Number of sidewalks (McGrath)</i> |
| <i>Street connectivity (D'Haese) (Ding)</i> |
| Footpath conditions/ available shelters |
| <i>Street and sidewalk conditions (Davison)</i> |
| <i>Available shelters/foot path conditions (Ferreira)</i> |
| Presence of Walking and Cycling Paths/Amenities |
| <i>Presence of bike lanes/ease of cycling (Davison)</i> |
| <i>Presence of walking & cycling paths (Stanley)</i> |
| <i>Walk/ cycle facilities (D'Haese) (Ding)</i> |
| Pedestrian and cyclist safety structure |
| <i>Pedestrian and cyclist safety (Davison)</i> |
| <i>Pedestrian safety structures (Ding)</i> |
| <i>Presence of controlled crossings (Davison)</i> |
| Number of roads to cross |
| <i>Number of roads to cross (Davison)</i> |
| Traffic density/speed |
| <i>Traffic speed/volume (Ding)</i> |
| <i>Traffic (density/speed) (Davison)</i> |
| <i>Road traffic (Craggs)</i> |
| Walkability |
| <i>Walkability (McGrath) (D'Haese) (Ding)</i> |
| <i>Walkable neighbourhoods (Durand)</i> |
| Accessiblity (D'Haese) |
| Traffic safety (D'Haese) |
| Traffic related hazards |
| <i>Traffic infrastructure (McGrath)</i> |
| <i>Neighbourhood hazards (e.g. many roads/no lights crossings; heavy traffic; physical disorder; pollution) (Ferreira)</i> |
| Availability/ Access/ Proximity of public transport system |
| <i>Availability of public transportation (Davison)</i> |
| <i>Limited public transport (Ferreira)</i> |
| <i>Variety of Transportation Choices (Durand)</i> |
| Presence of street lights |
| <i>Presence of lighting along paths (Stanley)</i> |
| Availability of physical activity infrastructure/equipment |
| <i>Availability of physical activity infrastructure/equipment (Craggs)</i> |

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| <i>Access to equipment (Stanley)</i> |
| Availability/Access/Proximity of PA facilities/programmes |
| <i>Access to facilities (Stanley)</i> |
| <i>Access/availability to PA facilities/programmes (Ferreira)</i> |
| <i>Access/availability to PA equipment/facilities/programmes (Ferreira)</i> |
| <i>Availability of facilities (Van der Horst)</i> |
| <i>Number of amenities (Stanley)</i> |
| Access/ availability/ proximity recreational facilities |
| <i>Availability recreation facilities (Davison)</i> |
| <i>Recreation facilities (D'Haese)</i> |
| <i>Recreation facilities (access/density/proximity) (Ding)</i> |
| Distance to PA facilities |
| <i>Distance to PA facilities (Ferreira)</i> |
| Access/ proximity parks/playgrounds/open space |
| <i>Proximity of playgrounds and parks (Davison)</i> |
| <i>Neighbourhood play space (McGrath)</i> |
| <i>Parks (access/density/proximity) (Ding)</i> |
| <i>Open Space and Critical Environmental Areas (Durand)</i> |
| <i>Park coverage (Stanley)</i> |
| Presence of other features (e.g. signage, trees) |
| <i>Presence of trees (Stanley)</i> |
| <i>Presence of shade (Stanley)</i> |
| <i>Presence of a water feature (Stanley)</i> |
| <i>Presence of signage re dogs (Stanley)</i> |
| <i>Presence of signage restricting other activities (Stanley)</i> |
| Neighbourhood Safety |
| <i>Perceived safety (Davison)</i> |
| <i>Neighbourhood Safety (Craggs) (Stanley)</i> |
| <i>Safety (D'Haese)</i> |
| Crime safety (D'Haese) |
| Neighbourhood physical disorder |
| <i>Physical disorder/tidiness of area (Davison)</i> |
| <i>Neighbourhood physical disorder (Ferreira)</i> |
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| MACRO-ENVIRONMENT |
| City/Municipality/Regions |
| Season/ Temperature |
| <i>Month of year (average temperature) (Davison)</i> |
| <i>Seasonal variation (Rich)</i> |
| <i>Seasons/temperature/weather (Ridgers)</i> |
| <i>Temperature (Stanley)</i> |
| <i>Season (spring, summer) (Ferreira)</i> |
| Weather condition (unfavourable) |
| <i>Unsuitable weather (Davison) (Ferreira)</i> |

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| Land use mix diversity |
| <i>Land use mix (Stanley) (Ding)</i> |
| <i>Mix land uses (Durand)</i> |
| <i>Land use mix diversity (D'Haese)</i> |
| Population/ residential density |
| <i>Population/ residential density (Davison)</i> |
| <i>Density (D'Haese)</i> |
| <i>Residential density (Ding)</i> |
| Urban Form |
| <i>Compact buidling design (Durand)</i> |
| Urban vs Rural residential location |
| <i>Rural/suburban versus urban (Davison)</i> |
| <i>Urban vs. rural (Ferreira)</i> |
| Urban vs suburban (McGrath) (Ferreira) |
| Rural school location |
| <i>School location (rural) (Ridgers)</i> |
| Environment aesthetics/quality |
| <i>Aesthetics of neighborhood (Davison)</i> |
| <i>Aesthetics in the environment (Craggs)</i> |
| <i>Aesthetics (Ridgers) (Stanley) (D'Haese)</i> |
| Vegetation (presence of street trees) (Ding) |
| Level of urbanization |
| <i>Level of urbanization (Lachowycz) (Ferreira)</i> |
| Coastal location |
| <i>Coastal vs. mountains (Ferreira)</i> |

PA: Physical Activity; PE: Physical Education

Overall category in bold, additional variables contributing to category in italics

Table C: Categorization of extracted potential physical environmental determinants (adults)

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| MICRO-ENVIRONMENT |
| Neighbourhood |
| Neighbourhood Design |
| <i>Range of Housing Opportunities and Choices (Durand)</i> |
| Access/availability/proximity of destinations |
| <i>Access to shops/services/work (Van Holle)</i> |
| Negative street characteristics |
| <i>Lack of sidewalks and streetlights (Olsen)</i> |
| <i>Hills (Wendel-Vos)</i> |
| <i>Hilliness (Van Holle)</i> |
| Street Connectivity |
| <i>Street/pedestrian connectivity (McCormack)</i> |
| Availability/Presence of Walking and Cycling Paths/Amenities |
| <i>Trails/pathways/cycle ways/sidewalk (McCormack)</i> |
| <i>Walking/cycling facilities (Van Holle)</i> |
| <i>Pedestrian/cyclist amenities (street furniture, lighting, shading) (McCormack)</i> |
| <i>Availability of sidewalks (Wendel-Vos)</i> |
| <i>Availability of trails (Wendel-Vos)</i> |
| <i>Presence of sidewalks (Casagrande)</i> |
| <i>Convenience of trails (Wendel-Vos)</i> |
| Traffic density/speed |
| <i>Traffic volume (Wendel-Vos)</i> |
| <i>Light traffic (Casagrande)</i> |
| <i>Heavy traffic (Siddiqi)</i> |
| Walkability |
| <i>Walkability (Van Holle) (Hajna)</i> |
| <i>Walkable neighbourhoods (Durand)</i> |
| Traffic safety |
| <i>Traffic-related safety (Van Holle)</i> |
| <i>Traffic safety (Wendel-Vos)</i> |
| <i>Traffic related (McCormack)</i> |
| Availability/ Access/ Proximity of public transport system |
| <i>Access to public transport (Van Holle)</i> |
| <i>Convenience of public transport (Wendel-Vos)</i> |
| <i>Variety of Transportation Choices (Durand)</i> |
| <i>Lack of public transportation (Siddiqi)</i> |
| <i>Transit proximity/access (McCormack)</i> |
| Presence of streetlights |
| <i>Streetlights (Wendel-Vos)</i> |
| Availability/Access/Proximity of PA facilities/programmes/equipment |
| <i>Availability of PA equipment (Wendel-Vos)</i> |
| <i>Accessibility of facilities (Wendel-Vos)</i> |
| <i>Places to exercise (Casagrande)</i> |

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| <i>Program availability at church/community (Siddiqi)</i> |
| Access/ availability/ proximity recreational facilities |
| <i>Access to recreational Facilities (Van Holle)</i> |
| <i>Availability of recreational facilities (Wendel-Vos)</i> |
| <i>Accessibility of recreational facilities (Wendel-Vos)</i> |
| <i>Recreation land use proximity (McCormack)</i> |
| <i>Convenience recreational facilities (Wendel-Vos)</i> |
| Non-recreational land use proximity (McCormack) |
| Access/ proximity parks/playgrounds/open space |
| <i>Access to open space (Babacus)</i> |
| <i>Easy access to parks (Siddiqi)</i> |
| <i>Parks/public open space install or improvements (McCormack)</i> |
| Lack of access to PA equipment/facilities/programmes |
| <i>Lack of Access (Transportation difficulties, lack of resources, lack of affordability) (Olsen)</i> |
| <i>Culturally inappropriate facilities (Babacus)</i> |
| <i>Lack of facilities (Siddiqi)</i> |
| Lack of parks and open space (Siddiqi) |
| <i>Open Space and Critical Environmental Areas (Durand)</i> |
| Neighbourhood Satisfaction |
| <i>Satisfaction neighbourhood (Wendel-Vos)</i> |
| <i>Satisfaction neighbourhood services (Wendel-Vos)</i> |
| Neighbourhood Safety |
| <i>Lack of Safety (lack a safe place: busy road, weather (ice & heat), dogs and wild animals) (Olsen)</i> |
| <i>Safety (Van Holle)</i> |
| <i>Unsafe neighbourhood (Siddiqi)</i> |
| <i>Neighbourhood safety for walking (Koeneman)</i> |
| Safety from crime (Van Holle) |
| Environmental barriers of PA (Casagrande) |
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| MACRO-ENVIRONMENT |
| City/Municipality/Regions |
| Weather condition (unfavourable) |
| <i>Poor weather (Babacus)</i> |
| <i>Bad weather (Wendel-Vos)</i> |
| <i>Adverse weather/climate conditions (Siddiqi)</i> |
| Season/ Temperature |
| <i>Season (Tzormpatkis)</i> |
| Land use mix diversity |
| <i>Land use mix (Wendel-Vos) (McCormack)</i> |
| <i>Mix land uses (Durand)</i> |
| <i>Land use mix diversity (Van Holle)</i> |
| Population/ residential density |
| <i>Residential density (Van Holle)</i> |
| <i>Population/residential density (McCormack)</i> |

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| Urban Form |
| <i>Compact buidling design (Durand)</i> |
| <i>Urban sprawl (Wendel-Vos)</i> |
| <i>Urban form (Casagrande)</i> |
| Urban vs Rural residential location |
| <i>Living in rural/ urban area (Tzormpatkis)</i> |
| Environment aesthetics/quality |
| <i>Aesthetics (Van Holle)</i> |
| <i>Environment aesthetics (Wendel-Vos)</i> |
| <i>Physical environment (Coble)</i> |
| <i>Aesthetics/variety/diversity (McCormack)</i> |
| Quality of the environment (Van Holle) |
| Environment score (Wendel-Vos) |
| Air/noise pollution (Wendel-Vos) |
| Level of urbanization |
| <i>Level of urbanization (Lachowycz)</i> |
| <i>Urbanization (Van Holle)</i> |
| Coastal location |
| <i>Coastal location (Wendel-Vos)</i> |