

Thank you for participating in this survey on quantitative methods used in studies related to children and adolescent behavior (e.g. free play, physical activity and social interaction) in outdoor play spaces such as playgrounds or other outdoor environments.

The survey will take approximately 20 to 40 minutes, depending on how many methods you choose to share insights about.

We recommend selecting the 1-3 methods you are most keen to share insights about and where you feel your experience will be of the greatest benefit to your colleagues.

By providing answers and information, you agree to anonymized data being shared with other researchers and included in a publication.

How many years have you been working in this field (children and adolescent behavior in outdoor spaces)?

- (4) <1 year
- (5) 1-2 years
- (6) 3-4 years
- (7) 5-10 years
- (8) >10 years

Which of the following quantitative methods (in relation to children and adolescent behavior in outdoor play spaces) would you like to share your insights about?

We recommend choosing 1-3 methods. Choose the methods where you feel your experience will be of the greatest benefit to your colleagues.

- (1) Systematic observations on group-level (Scan-based e.g. SOPARC, SOPLAY)
- (10) Systematic observations on individual-level (Focal e.g. SOFIT)
- (2) Accelerometer
- (3) GPS
- (4) Behavioural mapping (e.g. TOPO)

- (5) Camera observation
- (6) Proximity sensors (e.g. RFID)
- (7) Survey
- (8) Other _____
- (9) I have not used any quantitative methods to study children and adolescent behaviour in outdoor play spaces

Systematic observations on group-level (Scan-based e.g. SOPARC, SOPLAY)

In the following section, we would like you to consider the times you used **systematic observations on group-level** to study children and adolescent behaviour in outdoor spaces.

Systematic observations on group-level (Scan-based e.g. SOPARC, SOPLAY)

For this method, do you consider yourself

- (1) Expert user: Contributed to development of the method and/or analysis
- (2) Experienced user: Extensive experience using this method across multiple studies over many years
- (3) Regular user: Moderate experience using this method in more than one study
- (4) Beginning user: Limited experience using this method in one study

**Think about the project(s), where you have used systematic observations on group-level in relation to children and adolescent behaviour in outdoor spaces. What part(s) of these projects were you involved with?
Choose all relevant items.**

- (1) Primary investigator / project manager
- (2) Planning (been involved in the decision-making process and logistics)

- (3) Data collection (hands-on experience with the method)
- (4) Data analysis
- (5) Other _____

In the studies where you used systematic observations on group-level was fixed play equipment (e.g., swings, climbing structures, slides, etc.) present in the outdoor spaces?

- (1) Yes, in all studies
- (2) Yes, in most studies
- (6) Yes, in about half of the studies
- (3) Yes, in some studies, but most did not have fixed play equipment
- (4) No
- (5) Don't know

Systematic observations on group-level (Scan-based e.g. SOPARC, SOPLAY)

The purpose of the following questions is to gather valuable **learnings, recommendations and experiences** in relation to **systematic observations on group-level** when studying children and adolescent behaviour in outdoor spaces.

Systematic observations on group-level (Scan-based e.g. SOPARC, SOPLAY)

Do you have examples from your own research where you used this method to study children and adolescent behaviour in outdoor spaces? Please share aim and study design.

Only share examples if you would recommend others to use this method for similar research.

For what age group(s) would you recommend others to use systematic observations on group-level?

- (1) 0-2 years
- (2) 3-5 years
- (3) 6-12 years
- (4) 13-18 years
- (5) I do not recommend others to use this method on children and adolescents

Please elaborate why:

In which outdoor play setting(s) would you recommend others to use systematic observations on group-level?

- (1) Public open space (E.g. parks, squares with public playgrounds)
- (4) School (E.g. primary, elementary, middle, secondary)
- (5) Early Childhood Education and Care (E.g. childcare, kindergarten, day-care, pre-school)
- (8) Housing associations
- (14) Play streets

- (11) Healthcare (e.g. hospitals, rehabilitations centers)
- (12) Other _____
- (13) I do not recommend others to use this method in play settings

Please elaborate why:

For which of the following outcomes (aspects of play) would you recommend others to use systematic observations on group-level?

- (1) Physical activity intensity
- (2) Activity type/behaviour
- (3) Play volume (total sum of play activity within a given time-frame and space)
- (4) Frequency
- (7) Time spent in the outdoor space
- (10) Number of users/visitors
- (5) Number of UNIQUE users/visitors
- (8) Social interaction
- (6) Other _____
- (9) In my opinion, this method is not good for measuring any quantitative aspects of play

Please elaborate why:

Systematic observations on group-level (Scan-based e.g. SOPARC, SOPLAY)

What BENEFITS have you experienced when using systematic observations on group-level to study children and adolescents behavior in outdoor spaces?

Please select the top 3 benefits you experience with this method

- (1) Recruitment was easy
- (2) The method did not require any recruitment of participants
- (3) Cost was low (lower than other relevant methods we considered)
- (4) Equipment was easy to understand and use
- (5) Can easily be used under different outdoor weather conditions
- (6) Easy to use with children
- (7) Low participant burden
- (8) Requires limited working hours (lower than other relevant methods we considered)
- (9) Scalability
- (10) Easy to adhere to privacy and data protection regulations (incl. GDPR)
- (12) Data quality is high
- (13) No reactivity issues (e.g. change in participants' behavior due to awareness of researchers' presence and/or the use of equipment)
- (11) Other _____

Please elaborate why these were benefits, e.g. how it influenced your project and/or decisions?

What CHALLENGES have you experienced when using systematic observations on group-level to study children and adolescents behavior in outdoor spaces?

Please select the top 3 challenges you experience with this method

- (1) Recruitment
- (2) Cost was high
- (3) Equipment (e.g. loss, technical difficulties, broke, difficult to understand and use)
- (4) Sensitive to weather conditions
- (5) Not optimal to use with children
- (12) High participant burden
- (6) Data collection was time-consuming
- (7) Data processing was time-consuming
- (11) Scalability
- (10) Difficult to adhere to privacy and data protection regulations (incl. GDPR)
- (8) Data quality was low
- (9) Ethical issues
- (14) Reactivity (e.g., changes in participants' behavior due to awareness of researchers' presence and/or the use of equipment)
- (13) Other _____

Please elaborate why these were challenges, e.g. how it influenced your project and/or decisions:

Could the method be improved to enhance usefulness? How?

Systematic observations on group-level (Scan-based e.g. SOPARC, SOPLAY)

Is there anything about the use of systematic observations on group-level that you haven't mentioned yet and would like to share?

Systematic observations on individual-level (Focal e.g. SOFIT)

In the following section, we would like you to consider the times you used **systematic observations on individual-level** to study children and adolescent behaviour in outdoor spaces.

Systematic observations on individual-level (Focal e.g. SOFIT)

For this method, do you consider yourself

- (1) Expert user: Contributed to development of the method and/or analysis
- (2) Experienced user: Extensive experience using this method across multiple studies over many years
- (3) Regular user: Moderate experience using this method in more than one study
- (4) Beginning user: Limited experience using this method in one study

Think about the project(s), where you have used systematic observations on individual-level in relation to children and adolescent behaviour in outdoor spaces. What part(s) of these projects were you involved with?

Choose all relevant items.

- (1) Primary investigator / project manager
- (2) Planning (been involved in the decision-making process and logistics)
- (3) Data collection (hands-on experience with the method)
- (4) Data analysis
- (5) Other _____

In the studies where you used systematic observations on individual-level, was fixed play equipment (e.g., swings, climbing structures, slides, etc.) present in the outdoor spaces?

- (1) Yes, in all studies
- (2) Yes, in most studies
- (6) Yes, in about half of the studies
- (3) Yes, in some studies, but most did not have fixed play equipment
- (4) No

(5) Don't know

Systematic observations on individual-level (Focal e.g. SOFIT)

The purpose of the following questions is to gather valuable **learnings, recommendations and experiences** in relation to **systematic observations on individual-level** when studying children and adolescent behaviour in outdoor spaces.

Systematic observations on individual-level (Focal e.g. SOFIT)

Do you have examples from your own research where you used this method to study children and adolescent behaviour in outdoor spaces? Please share aim and study design.

Only share examples if you would recommend others to use this method for similar research.

For what age group(s) would you recommend others to use systematic observations on individual-level?

(1) 0-2 years

(2) 3-5 years

(3) 6-12 years

(4) 13-18 years

(5) I do not recommend others to use this method on children and adolescents

Please elaborate why:

In which outdoor play setting(s) would you recommend others to use systematic observations on individual-level?

- (1) Public open space (E.g. parks, squares with public playgrounds)
- (4) School (E.g. primary, elementary, middle, secondary)
- (5) Early Childhood Education and Care (E.g. childcare, kindergarten, day-care, pre-school)
- (8) Housing associations
- (14) Play streets
- (11) Healthcare (e.g. hospitals, rehabilitations centers)
- (12) Other _____
- (13) I do not recommend others to use this method in play settings

Please elaborate why:

For which of the following outcomes (aspects of play) would you recommend others to use systematic observations on individual-level?

- (1) Physical activity intensity
- (2) Activity type/behaviour
- (3) Play volume (total sum of play activity within a given time-frame and space)
- (4) Frequency
- (7) Time spent in the outdoor space
- (10) Number of users/visitors
- (5) Number of UNIQUE users/visitors
- (8) Social interaction
- (6) Other _____
- (9) In my opinion, this method is not good for measuring any quantitative aspects of play

Please elaborate why:

Systematic observations on individual-level (Focal e.g. SOFIT)

What BENEFITS have you experienced when using systematic observations on individual-level to study children and adolescents behavior in outdoor spaces?

Please select the top 3 benefits you experience with this method

- (1) Recruitment was easy
- (2) The method did not require any recruitment of participants
- (3) Cost was low (lower than other relevant methods we considered)

- (4) Equipment was easy to understand and use
- (5) Can easily be used under different outdoor weather conditions
- (6) Easy to use with children
- (7) Low participant burden
- (8) Requires limited working hours (lower than other relevant methods we considered)
- (9) Scalability
- (10) Easy to adhere to privacy and data protection regulations (incl. GDPR)
- (12) Data quality is high
- (13) No reactivity issues (e.g. change in participants' behavior due to awareness of researchers' presence and/or the use of equipment)
- (11) Other _____

Please elaborate why these were benefits, e.g. how it influenced your project and/or decisions?

What CHALLENGES have you experienced when using systematic observations on individual-level to study children and adolescents behavior in outdoor spaces?

Please select the top 3 challenges you experience with this method

- (1) Recruitment
- (2) Cost was high
- (3) Equipment (e.g. loss, technical difficulties, broke, difficult to understand and use)
- (4) Sensitive to weather conditions

- (5) Not optimal to use with children
- (12) High participant burden
- (6) Data collection was time-consuming
- (7) Data processing was time-consuming
- (11) Scalability
- (10) Difficult to adhere to privacy and data protection regulations (incl. GDPR)
- (8) Data quality was low
- (9) Ethical issues
- (14) Reactivity (e.g., changes in participants' behavior due to awareness of researchers' presence and/or the use of equipment)
- (13) Other _____

Please elaborate why these were challenges, e.g. how it influenced your project and/or decisions:

Could the method be improved to enhance usefulness? How?

Systematic observations on individual-level (Focal e.g. SOFIT)

Is there anything about the use of systematic observations on individual-level that you haven't mentioned yet and would like to share?

Accelerometer

In the following section, we would like you to consider the times you used **accelerometer** to study children and adolescent behaviour in outdoor spaces.

Accelerometer

For this method, do you consider yourself

- (1) Expert user: Contributed to development of the method and/or analysis
- (2) Experienced user: Extensive experience using this method across multiple studies over many years
- (3) Regular user: Moderate experience using this method in more than one study
- (4) Beginning user: Limited experience using this method in one study

Think about the project(s), where you have used accelerometer in relation to children and adolescent behaviour in outdoor spaces. What part(s) of these projects where you involved with?

Choose all relevant items.

- (1) Primary investigator / project manager

- (2) Planning (been involved in the decision-making process and logistics)
- (3) Data collection (hands-on experience with the method)
- (4) Data analysis
- (5) Other _____

In the studies where you used accelerometer, was fixed play equipment (e.g., swings, climbing structures, slides, etc.) present in the outdoor spaces?

- (1) Yes, in all studies
- (2) Yes, in most studies
- (6) Yes, in about half of the studies
- (3) Yes, in some studies, but most did not have fixed play equipment
- (4) No
- (5) Don't know

Accelerometer

The purpose of the following questions is to gather valuable **learnings, recommendations and experiences** in relation to **accelerometer** when studying children and adolescent behaviour in outdoor spaces.

Accelerometer

Do you have examples from your own research where you used this method to study children and adolescent behaviour in outdoor spaces? Please share aim and study design.

Only share examples if you would recommend others to use this method for similar research.

For what age group(s) would you recommend others to use accelerometer?

- (1) 0-2 years
- (2) 3-5 years
- (3) 6-12 years
- (4) 13-18 years
- (5) I do not recommend others to use this method on children and adolescents

Please elaborate why:

In which outdoor play setting(s) would you recommend others to use accelerometer?

- (1) Public open space (E.g. parks, squares with public playgrounds)
- (4) School (E.g. primary, elementary, middle, secondary)
- (5) Early Childhood Education and Care (E.g. childcare, kindergarten, day-care, pre-school)
- (8) Housing associations

- (14) Play streets
- (11) Healthcare (e.g. hospitals, rehabilitations centers)
- (12) Other _____
- (13) I do not recommend others to use this method in play settings

Please elaborate why:

For which of the following outcomes (aspects of play) would you recommend others to use accelerometer?

- (1) Physical activity intensity
- (2) Activity type/behaviour
- (3) Play volume (total sum of play activity within a given time-frame and space)
- (4) Frequency
- (7) Time spent in the outdoor space
- (10) Number of users/visitors
- (5) Number of UNIQUE users/visitors
- (8) Social interaction
- (6) Other _____
- (9) In my opinion, this method is not good for measuring any quantitative aspects of play

Please elaborate why:

Accelerometer

What BENEFITS have you experienced when using accelerometer to study children and adolescents behavior in outdoor spaces?

Please select the top 3 benefits you experience with this method

- (1) Recruitment was easy
- (2) The method did not require any recruitment of participants
- (3) Cost was low (lower than other relevant methods we considered)
- (4) Equipment was easy to understand and use
- (5) Can easily be used under different outdoor weather conditions
- (6) Easy to use with children
- (7) Low participant burden
- (8) Requires limited working hours (lower than other relevant methods we considered)
- (9) Scalability
- (10) Easy to adhere to privacy and data protection regulations (incl. GDPR)
- (12) Data quality is high
- (13) No reactivity issues (e.g. change in participants' behavior due to awareness of researchers' presence and/or the use of equipment)
- (11) Other _____

Please elaborate why these were benefits, e.g. how it influenced your project and/or decisions?

What CHALLENGES have you experienced when using accelerometer to study children and adolescents behavior in outdoor spaces?

Please select the top 3 challenges you experience with this method

- (1) Recruitment
- (2) Cost was high
- (3) Equipment (e.g. loss, technical difficulties, broke, difficult to understand and use)
- (4) Sensitive to weather conditions
- (5) Not optimal to use with children
- (12) High participant burden
- (6) Data collection was time-consuming
- (7) Data processing was time-consuming
- (11) Scalability
- (10) Difficult to adhere to privacy and data protection regulations (incl. GDPR)
- (8) Data quality was low
- (9) Ethical issues
- (14) Reactivity (e.g., changes in participants' behavior due to awareness of researchers' presence and/or the use of equipment)
- (13) Other _____

Please elaborate why these were challenges, e.g. how it influenced your project and/or decisions:

Could the method be improved to enhance usefulness? How?

Accelerometer

Is there anything about the use of accelerometer that you haven't mentioned yet and would like to share?

GPS

In the following section, we would like you to consider the times you used **GPS** to study children and adolescent behaviour in outdoor spaces.

GPS

For this method, do you consider yourself

- (1) Expert user: Contributed to development of the method and/or analysis
- (2) Experienced user: Extensive experience using this method across multiple studies over many years
- (3) Regular user: Moderate experience using this method in more than one study
- (4) Beginning user: Limited experience using this method in one study

Think about the project(s), where you have used GPS in relation to children and adolescent behaviour in outdoor spaces. What part(s) of these projects where you involved with?

Choose all relevant items.

- (1) Primary investigator / project manager
- (2) Planning (been involved in the decision-making process and logistics)
- (3) Data collection (hands-on experience with the method)
- (4) Data analysis
- (5) Other _____

In the studies where you used GPS, was fixed play equipment (e.g., swings, climbing structures, slides, etc.) present in the outdoor spaces?

- (1) Yes, in all studies
- (2) Yes, in most studies
- (6) Yes, in about half of the studies
- (3) Yes, in some studies, but most did not have fixed play equipment
- (4) No
- (5) Don't know

GPS

The purpose of the following questions is to gather valuable **learnings, recommendations and experiences** in relation to **GPS** when studying children and adolescent behaviour in outdoor spaces.

GPS

Do you have examples from your own research where you used this method to study children and adolescent behaviour in outdoor spaces? Please share aim and study design.

Only share examples if you would recommend others to use this method for similar research.

For what age group(s) would you recommend others to use GPS?

- (1) 0-2 years
- (2) 3-5 years
- (3) 6-12 years
- (4) 13-18 years
- (5) I do not recommend others to use this method on children and adolescents

Please elaborate why:

In which outdoor play setting(s) would you recommend others to use GPS?

- (1) Public open space (E.g. parks, squares with public playgrounds)
- (4) School (E.g. primary, elementary, middle, secondary)
- (5) Early Childhood Education and Care (E.g. childcare, kindergarten, day-care, pre-school)
- (8) Housing associations
- (14) Play streets
- (11) Healthcare (e.g. hospitals, rehabilitations centers)
- (12) Other _____
- (13) I do not recommend others to use this method in play settings

Please elaborate why:

For which of the following outcomes (aspects of play) would you recommend others to use GPS?

- (1) Physical activity intensity
- (2) Activity type/behaviour
- (3) Play volume (total sum of play activity within a given time-frame and space)

- (4) Frequency
- (7) Time spent in the outdoor space
- (10) Number of users/visitors
- (5) Number of UNIQUE users/visitors
- (8) Social interaction
- (6) Other _____
- (9) In my opinion, this method is not good for measuring any quantitative aspects of play

Please elaborate why:

GPS

What BENEFITS have you experienced when using GPS to study children and adolescents behavior in outdoor spaces?

Please select the top 3 benefits you experience with this method

- (1) Recruitment was easy
- (2) The method did not require any recruitment of participants
- (3) Cost was low (lower than other relevant methods we considered)
- (4) Equipment was easy to understand and use
- (5) Can easily be used under different outdoor weather conditions
- (6) Easy to use with children
- (7) Low participant burden

- (8) Requires limited working hours (lower than other relevant methods we considered)
- (9) Scalability
- (10) Easy to adhere to privacy and data protection regulations (incl. GDPR)
- (12) Data quality is high
- (13) No reactivity issues (e.g. change in participants' behavior due to awareness of researchers' presence and/or the use of equipment)
- (11) Other _____

Please elaborate why these were benefits, e.g. how it influenced your project and/or decisions?

What CHALLENGES have you experienced when using GPS to study children and adolescents behavior in outdoor spaces?

Please select the top 3 challenges you experience with this method

- (1) Recruitment
- (2) Cost was high
- (3) Equipment (e.g. loss, technical difficulties, broke, difficult to understand and use)
- (4) Sensitive to weather conditions
- (5) Not optimal to use with children
- (12) High participant burden
- (6) Data collection was time-consuming
- (7) Data processing was time-consuming
- (11) Scalability

- (10) Difficult to adhere to privacy and data protection regulations (incl. GDPR)
- (8) Data quality was low
- (9) Ethical issues
- (14) Reactivity (e.g., changes in participants' behavior due to awareness of researchers' presence and/or the use of equipment)
- (13) Other _____

Please elaborate why these were challenges, e.g. how it influenced your project and/or decisions:

Could the method be improved to enhance usefulness? How?

GPS

Is there anything about the use of GPS that you haven't mentioned yet and would like to share?

Behavioural mapping (e.g. TOPO)

In the following section, we would like you to consider the times you used **behavioural mapping** to study children and adolescent behaviour in outdoor spaces.

Behavioural mapping (e.g. TOPO)

For this method, do you consider yourself

- (1) Expert user: Contributed to development of the method and/or analysis
- (2) Experienced user: Extensive experience using this method across multiple studies over many years
- (3) Regular user: Moderate experience using this method in more than one study
- (4) Beginning user: Limited experience using this method in one study

**Think about the project(s), where you have used behavioural mapping in relation to children and adolescent behaviour in outdoor spaces. What part(s) of these projects were you involved with?
Choose all relevant items.**

- (1) Primary investigator / project manager
- (2) Planning (been involved in the decision-making process and logistics)
- (3) Data collection (hands-on experience with the method)
- (4) Data analysis
- (5) Other _____

In the studies where you used behavioural mapping, was fixed play equipment (e.g., swings, climbing structures, slides, etc.) present in the outdoor spaces?

- (1) Yes, in all studies
- (2) Yes, in most studies
- (6) Yes, in about half of the studies
- (3) Yes, in some studies, but most did not have fixed play equipment
- (4) No
- (5) Don't know

Behavioural mapping (e.g. TOPO)

The purpose of the following questions is to gather valuable **learnings, recommendations and experiences** in relation to **behavioural mapping** when studying children and adolescent behaviour in outdoor spaces.

Behavioural mapping (e.g. TOPO)

Do you have examples from your own research where you used this method to study children and adolescent behaviour in outdoor spaces? Please share aim and study design.

Only share examples if you would recommend others to use this method for similar research.

For what age group(s) would you recommend others to use behavioural mapping?

- (1) 0-2 years
- (2) 3-5 years
- (3) 6-12 years
- (4) 13-18 years
- (5) I do not recommend others to use this method on children and adolescents

Please elaborate why:

In which outdoor play setting(s) would you recommend others to use behavioural mapping?

- (1) Public open space (E.g. parks, squares with public playgrounds)
- (4) School (E.g. primary, elementary, middle, secondary)
- (5) Early Childhood Education and Care (E.g. childcare, kindergarten, day-care, pre-school)
- (8) Housing associations
- (14) Play streets
- (11) Healthcare (e.g. hospitals, rehabilitations centers)
- (12) Other _____
- (13) I do not recommend others to use this method in play settings

Please elaborate why:

For which of the following outcomes (aspects of play) would you recommend others to use behavioural mapping?

- (1) Physical activity intensity
- (2) Activity type/behaviour
- (3) Play volume (total sum of play activity within a given time-frame and space)
- (4) Frequency
- (7) Time spent in the outdoor space
- (10) Number of users/visitors
- (5) Number of UNIQUE users/visitors
- (8) Social interaction
- (6) Other _____
- (9) In my opinion, this method is not good for measuring any quantitative aspects of play

Please elaborate why:

Behavioural mapping (e.g. TOPO)

What BENEFITS have you experienced when using behavioural mapping to study children and adolescents behavior in outdoor spaces?

Please select the top 3 benefits you experience with this method

- (1) Recruitment was easy
- (2) The method did not require any recruitment of participants
- (3) Cost was low (lower than other relevant methods we considered)
- (4) Equipment was easy to understand and use
- (5) Can easily be used under different outdoor weather conditions
- (6) Easy to use with children
- (7) Low participant burden
- (8) Requires limited working hours (lower than other relevant methods we considered)
- (9) Scalability
- (10) Easy to adhere to privacy and data protection regulations (incl. GDPR)
- (12) Data quality is high
- (13) No reactivity issues (e.g. change in participants' behavior due to awareness of researchers' presence and/or the use of equipment)
- (11) Other _____

Please elaborate why these were benefits, e.g. how it influenced your project and/or decisions?

What CHALLENGES have you experienced when using behavioural mapping to study children and adolescents behavior in outdoor spaces?

Please select the top 3 challenges you experience with this method

- (1) Recruitment
- (2) Cost was high
- (3) Equipment (e.g. loss, technical difficulties, broke, difficult to understand and use)
- (4) Sensitive to weather conditions
- (5) Not optimal to use with children
- (12) High participant burden
- (6) Data collection was time-consuming
- (7) Data processing was time-consuming
- (11) Scalability
- (10) Difficult to adhere to privacy and data protection regulations (incl. GDPR)
- (8) Data quality was low
- (9) Ethical issues
- (14) Reactivity (e.g., changes in participants' behavior due to awareness of researchers' presence and/or the use of equipment)
- (13) Other _____

Please elaborate why these were challenges, e.g. how it influenced your project and/or decisions:

Could the method be improved to enhance usefulness? How?

Behavioural mapping (e.g. TOPO)

Is there anything about the use of behavioural mapping that you haven't mentioned yet and would like to share?

Camera observations

In the following section, we would like you to consider the times you used **camera observations** to study children and adolescent behaviour in outdoor spaces.

Camera observations

For this method, do you consider yourself

(1) Expert user: Contributed to development of the method and/or analysis

- (2) Experienced user: Extensive experience using this method across multiple studies over many years
- (3) Regular user: Moderate experience using this method in more than one study
- (4) Beginning user: Limited experience using this method in one study

**Think about the project(s), where you have used camera observations in relation to children and adolescent behaviour in outdoor spaces. What part(s) of these projects where you involved with?
Choose all relevant items.**

- (1) Primary investigator / project manager
- (2) Planning (been involved in the decision-making process and logistics)
- (3) Data collection (hands-on experience with the method)
- (4) Data analysis
- (5) Other _____

In the studies where you used camera observations, was fixed play equipment (e.g., swings, climbing structures, slides, etc.) present in the outdoor spaces?

- (1) Yes, in all studies
- (2) Yes, in most studies
- (6) Yes, in about half of the studies
- (3) Yes, in some studies, but most did not have fixed play equipment
- (4) No
- (5) Don't know

Camera observations

The purpose of the following questions is to gather valuable **learnings, recommendations**

and experiences in relation to **camera observations** when studying children and adolescent behaviour in outdoor spaces.

Camera observations

Do you have examples from your own research where you used this method to study children and adolescent behaviour in outdoor spaces? Please share aim and study design.

Only share examples if you would recommend others to use this method for similar research.

For what age group(s) would you recommend others to use camera observations?

- (1) 0-2 years
- (2) 3-5 years
- (3) 6-12 years
- (4) 13-18 years
- (5) I do not recommend others to use this method on children and adolescents

Please elaborate why:

In which outdoor play setting(s) would you recommend others to use camera observations?

- (1) Public open space (E.g. parks, squares with public playgrounds)
- (4) School (E.g. primary, elementary, middle, secondary)
- (5) Early Childhood Education and Care (E.g. childcare, kindergarten, day-care, pre-school)
- (8) Housing associations
- (14) Play streets
- (11) Healthcare (e.g. hospitals, rehabilitations centers)
- (12) Other _____
- (13) I do not recommend others to use this method in play settings

Please elaborate why:

For which of the following outcomes (aspects of play) would you recommend others to use camera observations?

- (1) Physical activity intensity
- (2) Activity type/behaviour
- (3) Play volume (total sum of play activity within a given time-frame and space)

- (4) Frequency
- (7) Time spent in the outdoor space
- (10) Number of users/visitors
- (5) Number of UNIQUE users/visitors
- (8) Social interaction
- (6) Other _____
- (9) In my opinion, this method is not good for measuring any quantitative aspects of play

Please elaborate why:

Camera observation

What BENEFITS have you experienced when using camera observation to study children and adolescents behavior in outdoor spaces?

Please select the top 3 benefits you experience with this method

- (1) Recruitment was easy
- (2) The method did not require any recruitment of participants
- (3) Cost was low (lower than other relevant methods we considered)
- (4) Equipment was easy to understand and use
- (5) Can easily be used under different outdoor weather conditions
- (6) Easy to use with children
- (7) Low participant burden

- (8) Requires limited working hours (lower than other relevant methods we considered)
- (9) Scalability
- (10) Easy to adhere to privacy and data protection regulations (incl. GDPR)
- (12) Data quality is high
- (13) No reactivity issues (e.g. change in participants' behavior due to awareness of researchers' presence and/or the use of equipment)
- (11) Other _____

Please elaborate why these were benefits, e.g. how it influenced your project and/or decisions?

**What CHALLENGES have you experienced when using camera observation to study children and adolescents behavior in outdoor play spaces?
Please select the top 3 challenges you experience with this method**

- (1) Recruitment
- (2) Cost was high
- (3) Equipment (e.g. loss, technical difficulties, broke, difficult to understand and use)
- (4) Sensitive to weather conditions
- (5) Not optimal to use with children
- (12) High participant burden
- (6) Data collection was time-consuming
- (7) Data processing was time-consuming
- (11) Scalability

- (10) Difficult to adhere to privacy and data protection regulations (incl. GDPR)
- (8) Data quality was low
- (9) Ethical issues
- (14) Reactivity (e.g., changes in participants' behavior due to awareness of researchers' presence and/or the use of equipment)
- (13) Other _____

Please elaborate why these were challenges, e.g. how it influenced your project and/or decisions:

Could the method be improved to enhance usefulness? How?

Camera observation

Is there anything about the use of camera observation that you haven't mentioned yet and would like to share?

Proximity sensors (e.g. RFID)

In the following section, we would like you to consider the times you used **proximity sensors** to study children and adolescent behaviour in outdoor spaces.

Proximity sensors (e.g. RFID)

For this method, do you consider yourself

- (1) Expert user: Contributed to development of the method and/or analysis
- (2) Experienced user: Extensive experience using this method across multiple studies over many years
- (3) Regular user: Moderate experience using this method in more than one study
- (4) Beginning user: Limited experience using this method in one study

**Think about the project(s), where you have used proximity sensors in relation to children and adolescent behaviour in outdoor spaces. What part(s) of these projects were you involved with?
Choose all relevant items.**

- (1) Primary investigator / project manager
- (2) Planning (been involved in the decision-making process and logistics)
- (3) Data collection (hands-on experience with the method)
- (4) Data analysis
- (5) Other _____

In the studies where you used proximity sensors, was fixed play equipment (e.g., swings, climbing structures, slides, etc.) present in the outdoor spaces?

- (1) Yes, in all studies
- (2) Yes, in most studies
- (6) Yes, in about half of the studies
- (3) Yes, in some studies, but most did not have fixed play equipment
- (4) No
- (5) Don't know

Proximity sensors (e.g. RFID)

The purpose of the following questions is to gather valuable **learnings, recommendations and experiences** in relation to **proximity sensor** when studying children and adolescent behaviour in outdoor spaces.

Proximity sensors (e.g. RFID)

Do you have examples from your own research where you used this method to study children and adolescent behaviour in outdoor spaces? Please share aim and study design.

Only share examples if you would recommend others to use this method for similar research.

For what age group(s) would you recommend others to use proximity sensors?

- (1) 0-2 years
- (2) 3-5 years
- (3) 6-12 years
- (4) 13-18 years
- (5) I do not recommend others to use this method on children and adolescents

Please elaborate why:

In which outdoor play setting(s) would you recommend others to use proximity sensors?

- (1) Public open space (E.g. parks, squares with public playgrounds)
- (4) School (E.g. primary, elementary, middle, secondary)
- (5) Early Childhood Education and Care (E.g. childcare, kindergarten, day-care, pre-school)
- (8) Housing associations
- (14) Play streets
- (11) Healthcare (e.g. hospitals, rehabilitations centers)
- (12) Other _____
- (13) I do not recommend others to use this method in play settings

Please elaborate why:

For which of the following outcomes (aspects of play) would you recommend others to use proximity sensors?

- (1) Physical activity intensity
- (2) Activity type/behaviour
- (3) Play volume (total sum of play activity within a given time-frame and space)
- (4) Frequency
- (7) Time spent in the outdoor space
- (10) Number of users/visitors
- (5) Number of UNIQUE users/visitors
- (8) Social interaction
- (6) Other _____
- (9) In my opinion, this method is not good for measuring any quantitative aspects of play

Please elaborate why:

Proximity sensors (e.g. RFID)

What BENEFITS have you experienced when using proximity sensors to study children and adolescents behavior in outdoor spaces?

Please select the top 3 benefits you experience with this method

- (1) Recruitment was easy
- (2) The method did not require any recruitment of participants
- (3) Cost was low (lower than other relevant methods we considered)
- (4) Equipment was easy to understand and use
- (5) Can easily be used under different outdoor weather conditions
- (6) Easy to use with children
- (7) Low participant burden
- (8) Requires limited working hours (lower than other relevant methods we considered)
- (9) Scalability
- (10) Easy to adhere to privacy and data protection regulations (incl. GDPR)
- (12) Data quality is high
- (13) No reactivity issues (e.g. change in participants' behavior due to awareness of researchers' presence and/or the use of equipment)
- (11) Other _____

Please elaborate why these were benefits, e.g. how it influenced your project and/or decisions?

What CHALLENGES have you experienced when using proximity sensors to study children and adolescents behavior in outdoor spaces?

Please select the top 3 challenges you experience with this method

- (1) Recruitment
- (2) Cost was high
- (3) Equipment (e.g. loss, technical difficulties, broke, difficult to understand and use)
- (4) Sensitive to weather conditions
- (5) Not optimal to use with children
- (12) High participant burden
- (6) Data collection was time-consuming
- (7) Data processing was time-consuming
- (11) Scalability
- (10) Difficult to adhere to privacy and data protection regulations (incl. GDPR)
- (8) Data quality was low
- (9) Ethical issues
- (14) Reactivity (e.g., changes in participants' behavior due to awareness of researchers' presence and/or the use of equipment)
- (13) Other _____

Please elaborate why these were challenges, e.g. how it influenced your project and/or decisions:

Could the method be improved to enhance usefulness? How?

Proximity sensors (e.g. RFID)

Is there anything about the use of proximity sensors that you haven't mentioned yet and would like to share?

Survey

In the following section, we would like you to consider the times you used **survey** to study children and adolescent behaviour in outdoor spaces.

Survey

For this method, do you consider yourself

(1) Expert user: Contributed to development of the method and/or analysis

- (2) Experienced user: Extensive experience using this method across multiple studies over many years
- (3) Regular user: Moderate experience using this method in more than one study
- (4) Beginning user: Limited experience using this method in one study

Think about the project(s), where you have used survey in relation to children and adolescent behaviour in outdoor spaces. What part(s) of these projects were you involved with?

Choose all relevant items.

- (1) Primary investigator / project manager
- (2) Planning (been involved in the decision-making process and logistics)
- (3) Data collection (hands-on experience with the method)
- (4) Data analysis
- (5) Other _____

In the studies where you used survey, was fixed play equipment (e.g., swings, climbing structures, slides, etc.) present in the outdoor spaces?

- (1) Yes, in all studies
- (2) Yes, in most studies
- (6) Yes, in about half of the studies
- (3) Yes, in some studies, but most did not have fixed play equipment
- (4) No
- (5) Don't know

Survey

The purpose of the following questions is to gather valuable **learnings, recommendations and experiences** in relation to **survey** when studying children and adolescent behaviour in outdoor spaces.

Survey

Do you have examples from your own research where you used this method to study children and adolescent behaviour in outdoor spaces? Please share aim and study design.

Only share examples if you would recommend others to use this method for similar research.

For what age group(s) would you recommend others to use survey?

- (1) 0-2 years
- (2) 3-5 years
- (3) 6-12 years
- (4) 13-18 years
- (5) I do not recommend others to use this method on children and adolescents

Please elaborate why:

In which outdoor play setting(s) would you recommend others to use survey?

- (1) Public open space (E.g. parks, squares with public playgrounds)
- (4) School (E.g. primary, elementary, middle, secondary)
- (5) Early Childhood Education and Care (E.g. childcare, kindergarten, day-care, pre-school)
- (8) Housing associations
- (14) Play streets
- (11) Healthcare (e.g. hospitals, rehabilitations centers)
- (12) Other _____
- (13) I do not recommend others to use this method in play settings

Please elaborate why:

For which of the following outcomes (aspects of play) would you recommend others to use survey?

- (1) Physical activity intensity
- (2) Activity type/behaviour
- (3) Play volume (total sum of play activity within a given time-frame and space)
- (4) Frequency
- (7) Time spent in the outdoor space
- (10) Number of users/visitors

- (5) Number of UNIQUE users/visitors
- (8) Social interaction
- (6) Other _____
- (9) In my opinion, this method is not good for measuring any quantitative aspects of play

Please elaborate why:

Survey

What BENEFITS have you experienced when using survey to study children and adolescents behavior in outdoor spaces?

Please select the top 3 benefits you experience with this method

- (1) Recruitment was easy
- (2) The method did not require any recruitment of participants
- (3) Cost was low (lower than other relevant methods we considered)
- (4) Equipment was easy to understand and use
- (5) Can easily be used under different outdoor weather conditions
- (6) Easy to use with children
- (7) Low participant burden
- (8) Requires limited working hours (lower than other relevant methods we considered)
- (9) Scalability
- (10) Easy to adhere to privacy and data protection regulations (incl. GDPR)

(12) Data quality is high

(13) No reactivity issues (e.g. change in participants' behavior due to awareness of researchers' presence and/or the use of equipment)

(11) Other _____

Please elaborate why these were benefits, e.g. how it influenced your project and/or decisions?

What CHALLENGES have you experienced when using survey to study children and adolescents behavior in outdoor spaces?

Please select the top 3 challenges you experience with this method

(1) Recruitment

(2) Cost was high

(3) Equipment (e.g. loss, technical difficulties, broke, difficult to understand and use)

(4) Sensitive to weather conditions

(5) Not optimal to use with children

(12) High participant burden

(6) Data collection was time-consuming

(7) Data processing was time-consuming

(11) Scalability

(10) Difficult to adhere to privacy and data protection regulations (incl. GDPR)

(8) Data quality was low

(9) Ethical issues

(14) Reactivity (e.g., changes in participants' behavior due to awareness of researchers' presence and/or the use of equipment)

(13) Other _____

Please elaborate why these were challenges, e.g. how it influenced your project and/or decisions:

Could the method be improved to enhance usefulness? How?

Survey

Is there anything about the use of survey that you haven't mentioned yet and would like to share?

Other quantitative method

In the following section, we would like you to consider the times you used **another quantitative method** to study children and adolescent behaviour in outdoor spaces.

Other quantitative method

For this method, do you consider yourself

- (1) Expert user: Contributed to development of the method and/or analysis
- (2) Experienced user: Have extensive experience using this method across multiple studies over many years
- (3) Regular user: Moderate experience using this method in more than one study
- (4) Beginning user: Limited experience using this method in one study

**Think about the project(s), where you have used this quantitative method in relation to children and adolescent behaviour in outdoor spaces. What part(s) of these projects were you involved with?
Choose all relevant items.**

- (1) Primary investigator / project manager
- (2) Planning (been involved in the decision-making process and logistics)
- (3) Data collection (hands-on experience with the method)
- (4) Data analysis
- (5) Other _____

In the studies where you used this quantitative method, was fixed play equipment (e.g., swings, climbing structures, slides, etc.) present in the outdoor spaces?

- (1) Yes, in all studies
- (2) Yes, in most studies
- (6) Yes, in about half of the studies
- (3) Yes, in some studies, but most did not have fixed play equipment
- (4) No
- (5) Don't know

Other quantitative method

The purpose of the following questions is to gather valuable **learnings, recommendations and experiences** in relation to **this quantitative method** when studying children and adolescent behaviour in outdoor spaces.

Other quantitative method

Do you have examples from your own research where you used this method to study children and adolescent behaviour in outdoor spaces? Please share aim and study design.

Only share examples if you would recommend others to use this method for similar research.

For what age group(s) would you recommend others to use this quantitative method?

- (1) 0-2 years

- (2) 3-5 years
- (3) 6-12 years
- (4) 13-18 years
- (5) I do not recommend others to use this method on children and adolescents

Please elaborate why:

In which outdoor play setting(s) would you recommend others to use this quantitative method?

- (1) Public open space (E.g. parks, squares with public playgrounds)
- (4) School (E.g. primary, elementary, middle, secondary)
- (5) Early Childhood Education and Care (E.g. childcare, kindergarten, day-care, pre-school)
- (8) Housing associations
- (14) Play streets
- (11) Healthcare (e.g. hospitals, rehabilitations centers)
- (12) Other _____
- (13) I do not recommend others to use this method in play settings

Please elaborate why:

For which of the following outcomes (aspects of play) would you recommend others to use this quantitative method?

- (1) Physical activity intensity
- (2) Activity type/behaviour
- (3) Play volume (total sum of play activity within a given time-frame and space)
- (4) Frequency
- (7) Time spent in the outdoor space
- (10) Number of users/visitors
- (5) Number of UNIQUE users/visitors
- (8) Social interaction
- (6) Other _____
- (9) In my opinion, this method is not good for measuring any quantitative aspects of play

Please elaborate why:

Other quantitative method

What BENEFITS have you experienced when using this quantitative method to study children and adolescents behavior in outdoor spaces?

Please select the top 3 benefits you experience with this method

- (1) Recruitment was easy
- (2) The method did not require any recruitment of participants
- (3) Cost was low (lower than other relevant methods we considered)
- (4) Equipment was easy to understand and use
- (5) Can easily be used under different outdoor weather conditions
- (6) Easy to use with children
- (7) Low participant burden
- (8) Requires limited working hours (lower than other relevant methods we considered)
- (9) Scalability
- (10) Easy to adhere to privacy and data protection regulations (incl. GDPR)
- (12) Data quality is high
- (13) No reactivity issues (e.g. change in participants' behavior due to awareness of researchers' presence and/or the use of equipment)
- (11) Other _____

Please elaborate why these were benefits, e.g. how it influenced your project and/or decisions?

What CHALLENGES have you experienced when using this quantitative method to study children and adolescents behavior in outdoor spaces? Please select the top 3 challenges you experience with this method

- (1) Recruitment
- (2) Cost was high

- (3) Equipment (e.g. loss, technical difficulties, broke, difficult to understand and use)
- (4) Sensitive to weather conditions
- (5) Not optimal to use with children
- (12) High participant burden
- (6) Data collection was time-consuming
- (7) Data processing was time-consuming
- (11) Scalability
- (10) Difficult to adhere to privacy and data protection regulations (incl. GDPR)
- (8) Data quality was low
- (9) Ethical issues
- (14) Reactivity (e.g., changes in participants' behavior due to awareness of researchers' presence and/or the use of equipment)
- (13) Other _____

Please elaborate why these were challenges, e.g. how it influenced your project and/or decisions:

Could the method be improved to enhance usefulness? How?

Other quantitative method

Is there anything about the use of this quantitative method that you haven't mentioned yet and would like to share?

Future method development

The purpose of the following section is to gain insight into your dreams for future method development in relation to children and adolescent behavior in outdoor spaces.

These questions are not linked to specific methods.

Future method development

If anything was possible, what would your ideal measurement tool to measure children and adolescent behaviour in outdoor spaces be able to do?

Which outcomes (aspects of play) are you most interested in being able to capture in your future studies?

- (1) Physical activity intensity
- (2) Activity type/behaviour
- (3) Play volume (total sum of play activity within a given time-frame and space)
- (4) Frequency
- (7) Time spent in the outdoor space
- (9) Number of users/visitors
- (5) Number of UNIQUE users/visitors
- (8) Social interaction
- (6) Other _____

Thank you very much for participating and sharing your experience with us. We really appreciate you taking the time.

Can you recommend other colleagues with valuable insights, we should invite to participate?

If yes, please provide names or e-mails

Do you have links or DOIS to the project(s) you thought about while answering this survey?

If yes, please provide links below

**Are there other papers/reports you would recommend colleagues to read?
(E.g. methodological papers or papers relevant to people studying children
and adolescent behaviour in outdoor spaces).**

If yes, please provide titles or links below

Thank you very much for wanting to participate.

Unfortunately, your research methodology does not align with what we are seeking.

We really appreciate you taking the time.

**Thank you very much for participating and sharing your experience with us. We really
appreciate you taking the time.**

We would like to acknowledge all contributors.

**Please provide your name, if you would like to be mentioned in
the acknowledgements section**

Please provide your e-mail if we may contact you again (e.g. for follow-up questions or to share preliminary results before publication)

Thanks again for your participation!

Please complete your response by clicking 'FINISH'.