



Viewing children's food environments

Project 4
Dietary Interventions: Evidence and Translation
(A Health Research Council-funded Research Programme Ref 13/724)

Methods Protocol

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Funding

Health Research Council of New Zealand Programme Grant (#13/724)

University of Otago, Wellington, Equipment Fund

Study objectives

To examine the frequency and nature of New Zealand children's everyday exposure to food and beverage marketing across multiple media and settings, and explore ethnic and socioeconomic differences.

Study design

This study uses a mixed methods design. Using Autographers¹, the most current wearable camera technology (pictured in Figure 1) children's everyday environments will be recorded, and separate GPS recorders² (Figure 22) will record their everyday movements. From the data collected by these devices, the location, type and frequency of children's exposure to food and beverage marketing can be determined. Demographic information will also be collected so that variations of those outcomes by children's ethnicity and socioeconomic status can also be determined. Foods will be classified as either permitted (core) or not permitted (non-core) to be marketed to children based on the WHO Regional Office for Europe Nutrient Profiling Model, with some modifications (e.g. a 'fast food' category was added which included all commercially prepared food products sold at quick service restaurants).



¹ www.autographer.com

² <http://www.qstarz.com/Products/GPS%20Products/BT-Q1300ST-F.htm>

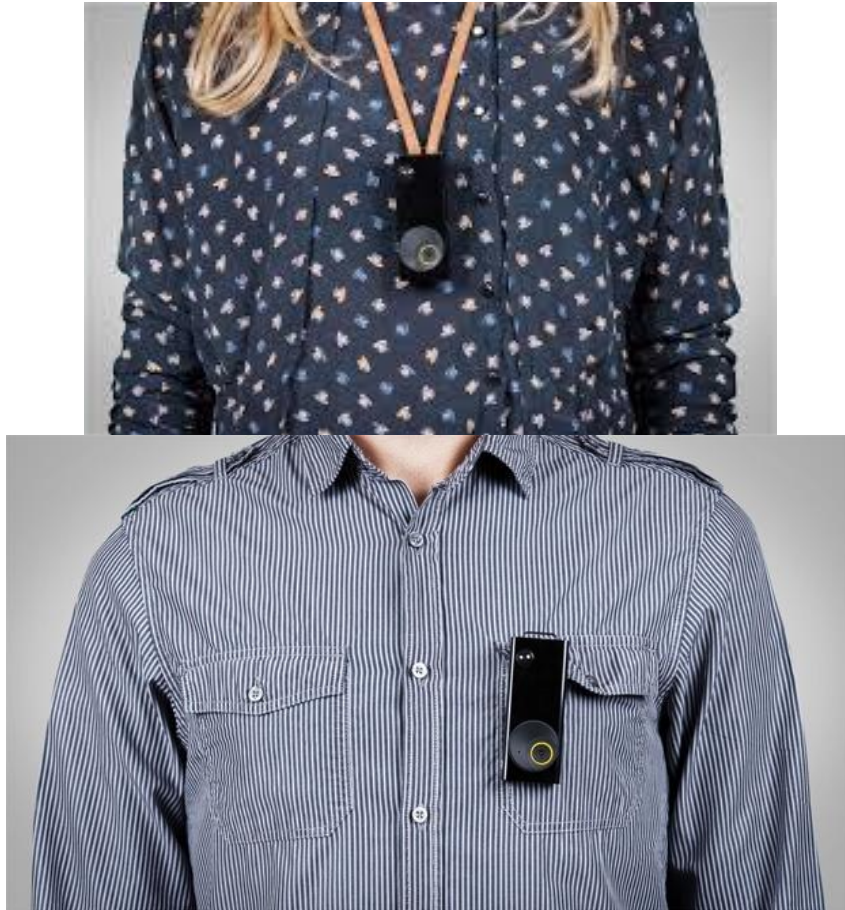


Figure 1 Autographer



Figure 2 GPS Recorder

Research Questions

The research questions for Kids'Cam are broadly classed below as *estimation questions* and *comparative questions*.

Estimation questions are concerned with reporting on the level of exposure to food advertising (frequency of exposure). Reporting will be further sub-divided according to food classification (e.g. healthy/unhealthy status of product advertised) and also by setting of

exposure (e.g. reporting exposure outside at school, at home, and outside of these two environments [for example, when in transit between home and school.])

These estimates will be produced for the sub-groups of children of interest (with a particular focus on Māori³, and looking across the spectrum of socioeconomic status.) The sampling frame (by school decile and child ethnicity) is being designed to allow us to calculate overall levels of exposure, as well as estimates that are specific to these sub-group (see sampling frame discussion below.)

Results for these analyses will be presented as point estimates (e.g. mean duration of exposure to unhealthy food advertising per day) with confidence intervals.

Comparative questions include more formal comparisons of the two dimensions of most interest: firstly, differences in levels of exposure according to ethnicity (comparing Māori , Pacific and NZ European children); and secondly, across the school decile profile (see sampling frame below: we are planning to sample according to school *tertiles* rather than deciles but the principle remains the same.)

These results will be covered in the *estimation* part of the data analysis, but will also be subject to some more formal hypothesis testing (and reporting of estimated differences in mean levels of exposure, with confidence intervals.)

The following section provides a detailed account of the study methods.

Study methods

School and participant recruitment

Year 8 children (aged 11-13 years) will be recruited through schools in the Wellington region, having been selected according the sampling strategy described in the following section. Recruitment will fit with the school terms and occur over the course of a full school year to allow for seasonal variations in children's exposure to food and beverage marketing. The selected schools will be approached to participate in the study. The principal investigator and lead researcher will initially discuss the project with principals and facilitating teachers at interested schools and seek permission to conduct the project and assist with participant recruitment. Written agreement from the participating schools will be obtained. A follow-up email containing details of the project will be sent to those schools that agree to participate. The teachers will be briefed on the project at a staff

^{3 3} We are planning on exploring the feasibility of recruiting sufficient numbers of Pacific children to be able to get reasonable estimates of exposure for these children: it seems likely that we may struggle to recruit enough children of Pacific ethnicity in the Wellington region (spread across the school deciles.) At the time of writing (prior to the piloting stage) the plan is to recruit equal numbers of Māori, Pacific, and non-Māori/non-Pacific children.

meeting on the day the children are invited. The protocol for school recruitment and information sheet for schools are in Appendix 1.

Information and consent forms (Appendix 2) will be distributed to selected participants and their parents by teachers (and/or the researcher) and returned to the teacher. Signed consent forms will be passed back to the researcher. Questions to determine ethnicity (self-identification based on 2013 NZ Census ethnicity question), deprivation (residential address and NZiDep), and gender will accompany the information sheet and consent form. The questionnaires will also be collected by the teacher and passed to the researcher.

Sampling strategy

Schools

A list of all schools in the Wellington region whose roll included Year 8 students will be obtained from the Ministry of Education (up to date as of 1st April 2014.) This list includes contact details, as well as numbers of Year 8 students (reported as a total for the school, and then summaries of numbers of students by total ethnicity.) The file is linked to a separate file with decile ratings for each of these schools.

This dataset will be restricted to schools in the Wellington, Porirua, and Hutt Valley regions (including Wainuiomata.) The Wairarapa is included in the “Wellington” administrative region by the Ministry of Education, but these schools will not be included in our sampling frame for pragmatic reasons. To be in the final sampling frame, the school needs to have an assigned Decile ranking. This will exclude one small school in the Hutt Valley area.

At the end of this process there will be a total of 93 schools in the sampling frame.

Schools will then be stratified into three decile groupings (as described above): low (deciles 1-3), medium (deciles 4-7) and high (deciles 8-10). All subsequent sampling steps will be performed separately for each decile grouping.

This first-stage sampling of schools (to differentiate from the second stage, where children will be sampled within each selected school) will be performed separately for each ethnic group (Māori, Pacific, European) in each of the three decile groups, giving a maximum of 12 schools (four for each ethnicity) in each decile group and thus an absolute maximum of 36 schools for the entire sample.

This means that for each ethnicity/decile combination, a total of four schools will be selected. As the sampling process is separate for each ethnic group, the same school might (for example) be selected for both Māori and Pacific students in a particular decile group. This is evident in that the total number of schools selected across all ethnic and decile groups was 24.

Sampling will be performed using SAS 9.4, using the PROC SURVEYSELECT procedure, with sampling using probability-proportional-to-size for school selection (with systematic selection within these strata.) See this description for details of the process; and the SAS documentation for implementation details.

The primary comparisons of interest will be the comparisons by ethnicity, and comparisons by SES. Ethnicity will be defined at the individual level: SES can be considered either at the individual level of NZiDep or NZDep (still technically an area-based measure for NZDep), or at the school level based on decile (along the lines of “does the average level of exposure differ across school deciles?”) Both of these comparisons are relatively easily implemented in the framework of a multilevel model.

Additional notes:

Private, state-integrated schools and kura will be included in the sampling frame. The only restriction for inclusion in the sampling frame is having school decile listed on the Ministry of Education files (this will rule out one very small school in Hutt Valley.)

Schools will be selected on the basis of *probability-proportional-to-size* sampling methods to give larger schools higher probabilities of being selected, within a given stratum.

Schools for Māori, Pacific, and European children will be selected separately because:

- a) it will be hard to find schools in each school decile grouping with a mix of children of each ethnicity sufficient to meet recruitment targets;
- b) children in such schools would not necessarily be representative of other children in the region (e.g. Pacific children in high-decile schools with lots of European children would be different from Pacific children in high-decile schools more broadly.);

And thus, restricting our sampling frame to such schools would mean a poor selection process for determining exposure levels according to ethnicity, and also according to the combination of ethnicity and deprivation.

Children

Sample size

Sample size estimates were for 168 participants; with allowance for dropout/incomplete data at 25%, gave a total sample size of 224 children to recruit. The original text from the application was:

Sample Size: As there is little available data on expected exposure to advertising across settings, sample size was determined based on an estimation accuracy approach for determining the mean number of adverts seen per day across children. It was assumed that children will see a mean of 60 adverts a day, and a standard deviation of 20 adverts (i.e. 95% of all children will see between 20 and 100 advertisements on a given day). A sample size of 28 children per study group (ethnicity/deprivation group: 168 children in total;

allowing for 25% dropout = 224 children) would produce a margin of error (i.e. half-width of a 95% confidence interval) of 7.5 adverts under these assumptions, and would also allow 80% power to detect differences in means between these groups of 15 adverts per day (based on t-test assumptions).

Subsequent refinements of the study design required accounting for the clustering of observations within schools, and sampling within school deciles organized into low, middle, and high strata.

Redistribution of the *a priori* sample size with consideration of the number of schools available in each decile grouping, and relative homogeneity of outcomes within schools, indicated that with four schools selected per ethnic group per school decile group, and at least four children recruited per school (final $n = 144$ children; with recruitment of six children per school, this allows for dropout of 33%), would give marginally worse estimation precision than in the original application. Based on adjustment of the sample size calculations presented above, this sampling design would have 80% power to detect a difference in means of 25 adverts per day between groups (allowing for clustering of outcomes within schools [homogeneous outcomes] with an ICC of 0.1.). The above selection process will be repeated to identify another school in the event an originally selected school declines an invitation to participate.

Recruitment

Each consenting school will be asked for their Year 8 roll, including the ethnicity of each child (according to Ministry of Education categorisation). Twenty children from each ethnic group will be randomly selected (using the R Package for Statistical Computing, <http://www.r-project.org/>). The list of selected children will be sent to the facilitating teacher or principal to confirm they do not meet the exclusion criteria (described in the next section). Any child that meets the exclusion criteria will be replaced with the next child on the randomised list. Two weeks prior to the scheduled briefing session, fifteen children selected will be given a brief explanation of the project, and their information sheets and consent forms. The first six children on the list who return completed consent forms by the Tuesday immediately prior to the briefing session will be accepted as participants.

The decision to over-invite children allows for declines and improves the chances of six children/ethnic group consenting. Also, only one round of recruitment is required, reducing the burden on the school and the project team.

Inclusion and Exclusion criteria

Inclusion Criteria

Child's expression of interest in participating in the study, provision of written consent, and commitment to attendance of multiple sessions at school either during class time, and during lunchtimes or before or after school. The provision of written parental consent to participate and to record images in the home environment.

Exclusion Criteria

No participant or parental consent or desire to participate. Children who are unable to collect data and deal with the demands of the study due to disability or circumstance.

Data collection

Session 1: Briefing

A briefing session will be held to collect signed participant and parental consent forms; discuss the ethical, legal and practical issues associated with using the various recording devices; to familiarise participants with the devices; and to discuss what they would be asked to do during data collection. Two researchers will conduct the briefing sessions. The selected participants will be divided into two groups of six.

At the beginning of this session the project will be explained to the children and to give them a sense of the type of data the camera collects, they will be shown some example image data. They will then be instructed on how to address ethical and privacy issues. Each child will be instructed to wear a camera and GPS recorder for 4 days, including two weekdays and two weekend days.

Participants will be told that they can remove the devices at any time for any reason, and they will be encouraged to remove them in situations where others may be uncomfortable with their presence. Additionally, they will be told to remove the camera before entering: changing rooms (school, club, and swimming pool); toilet or shower facilities; or in any other situation or location in which people could be partially clothed or would feel uncomfortable being photographed for example in healthcare facilities. Additionally, participants will be asked to either activate the privacy setting on the camera when using the bathroom or changing, or to turn off and remove the device. They will also be advised to remove the camera if entering retail outlets where signage advises that photography is not permitted.

Participants will also be briefed on how to handle any attention they may receive whilst wearing the camera. If approached, they will be advised to explain that they are participating in a study being conducted by researchers from the University of Otago, Wellington; that the project aims to document their environment; and that they are wearing a camera that automatically takes pictures continually throughout the day. Furthermore, they will be advised to say that they are not intentionally taking photographs of specific people or places. As an alternative, they will be provided with information cards outlining the project to hand out if approached by interested parties whilst wearing the camera. They will also be encouraged to tell interested parties to contact the researcher using the contact details given on the information card if they require additional information or have further questions.

The children will then be shown how to use the devices and have an opportunity to try them on. Information sheets detailing the children's tasks and written instructions for the devices will be given to the children at this session.

At the completion of the session, contact details for the researchers and the date for collection of the devices will be confirmed, and any other questions or concerns the children may have will be addressed. Children will be notified of the date for the review session, at which time some of them will be interviewed (about food marketing).

Participants' demographic information and questionnaire data will be recorded in a spreadsheet.

Session 2: Review and interview session

On the first week day following the children's four-day data collection period, the devices will be collected and data downloaded onto a laptop computer using purpose-designed software. The children will then be able to review their images and (in privacy) remove any sensitive/personal photographs. Their weight and height will also be measured and recorded using standardised and calibrated instruments.

As a token of appreciation, schools will be provided with book vouchers and a letter of thanks at the end of data collection in lieu of their time and assistance in recruiting and providing facilities for data collection. Participants will receive a certificate and voucher to thank them for their participation and time. The participants will not know they are receiving a voucher and certificate until completion of the final review session.

To ensure consistency in data collection, protocols have been developed. Protocols for the briefing and interview sessions are in Appendix 3; the Project Instruction Booklet is in Appendix 4; the templates for the schools' letter of thanks, certificate of participation, and template for voucher receipt are in Appendix 5; and templates for participant records and responses during data collection are in Appendix 6.

Analysis

There are three levels of data analysis in this study. The raw visual and GPS data will be initially processed and analysed to identify the food and beverage marketing the children were exposed to, the marketing medium and the location of those features. This data will then be quantitatively analysed according to the variables stated in the research questions.

Raw visual and GPS data

The visual and GPS data collected by the children will be analysed using project-specific processing and analysis software developed by Dublin City University (DCU) engineers. The software will be initially developed at DCU and then transferred to local machines at the University of Otago, Wellington. The core Wellington team members will be trained by members of the DCU team on how to store, process and analyse the data. The GPS data will be synchronized with the visual data. A coding schedule will be manually developed in the early stages of image analysis.

Quantitative analysis of visual data

Analysis of the annotated data will be conducted using multilevel regression models (also referred to as mixed models, or models with random effect elements.)

Most of the study outcomes are either continuous in nature (e.g. total duration of exposure to food advertising per day) or in the case of count data might well be approximated by a normal distribution (e.g. number of unhealthy adverts seen per day.)

Data analysis for these outcomes will be based on *linear mixed models*, with the sampling process accounted for in analyses (see section on weightings above.)

If exposure levels prove to be somewhat lower than anticipated (i.e. fewer adverts seen per day than postulated at this stage), or the data distributions appear to be non-normal, we will likely proceed with *generalized linear mixed models* where other data distributions (e.g. Poisson distribution for count data) can be incorporated in a similar framework to estimate e.g. ratios of rates of exposure between groups.

Training

A one-day training session was held on Tuesday 20 May 2014 for the training of all researchers who will be collecting data: Louise Signal, Michelle Barr, Moira Smith, Gabrielle Jenkin, Christina McKerchar and Tolotea Lanumata. The training consisted of:

- An overview of the project, including objectives, timeline and organization;
- Instructions on how to use the equipment;
- Step-by-step instruction on the Project Protocol;
- Practice implementing the protocols for the Briefing and Interview Sessions.

To familiarise the researchers with the equipment, all field researchers will be given Autographers and GPS recorders to use the week prior to the training day.

Data management

This project will generate a substantial amount of data which will require specific facilities for management and storage. Arrangements have been made with the University of Otago Data Centre to provide high level security (virtual and physical) data storage, as well as back-up and data recovery. Access to the data will be controlled through secure channels which will be in full compliance with all University policies about privacy and information security <http://www.otago.ac.nz/its/about/publications/otago030292.html> and the National Health IT Board Security Guidelines and the Health Information Privacy Code. Members of the research team from the University of Otago, Wellington will be responsible for data storage. All image data will remain the property of University of Otago, Wellington.

To anonymise the demographic data, each participant will be assigned a participant number. Only the participant number will appear alongside the demographic data. A master registration list with the participant name and number will be kept securely and

separate from the demographic data document, and will only be able to be accessed by those team members who need to contact participants.

Researchers who access the data in raw format will be informed that it is confidential information and should not be discussed with anyone outside the research team. All researchers will be advised of, and required to comply with, the data access guidelines for this project.

Ethical approval and consent

Ethical approval was granted by the University of Otago Human Ethics Committee to explore “the world children live in, their environment and how it impacts on them”.

All ethical, privacy and confidentiality issues have been addressed in the data collection and data management sections of this document. Extensive discussion has been held with the University’s legal advisors and the Chair of the University’s ethics committee.

Maori Consultation

Māori oversight will be provided by Toi Tangata through their role on the Programme Advisory Group. They will also provide Māori advice and guidance on Kids’Cam. In accordance with the University of Otago policy on consultation with Māori, consultation with Ngāi Tahu was successfully conducted in August 2013.

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Appendix 1 Protocol for school recruitment and information sheet and consent form for schools

1. Contact principal to discuss and arrange a meeting time with them and a facilitating teacher
2. Email information sheets and consent forms to school principal; provide support material and/or arrange meeting times to assist with informing the school community
3. Arrange for a time for the briefing session.
4. Commence data collection

Points to raise at meeting with principal:

- Know that children's environments and the world they live in impact their health
- Know that children have valuable insights into their lives
- We have yet to capture those insights in a comprehensive way
- Describe the study; talk about the pilot studies and feedback from the participants and teachers; participant selection; show the equipment box
- Inform them that we will be able to provide them with findings
- Go through risk management issues; make sure that we convey that we have sought legal and ethical advice throughout
- Discuss that we will work with the school to schedule data collection during times that will be the least disruptive to the school day and the children's learning; individual class time the best, rather than lunchtime or group learning
- Talk about how important it is to inform the school community, ask how best to do that and offer whatever assistance we can
- Ask for the things we need the school to do for us: place to work, distribution of information sheets, Year 8 student list – also say that we will get back to them with the 12 children we have invited so that they can assess them for exclusion criteria
- Arrange times for:
 - Informing the school community
 - Our deadline for Year 8 student list
 - Drop-off of participant recruitment pack
 - Briefing and interview sessions

Make sure principal and facilitating teacher have signed school consent form before proceeding.



Kids'Cam: Viewing Young People's Environments

INFORMATION SHEET FOR PARTICIPATING SCHOOLS

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not you would like your school to participate. If you allow your school to participate we thank you. If not, we thank you for considering our request.

What is the project about?

This project aims to explore the world children live in, their environment and how it impacts them by documenting what children see and where they go throughout the day - while at home, at school and during most other activities (except personal activities). To directly and objectively capture the environment in which children live, we will be asking approximately 200 Wellington children to wear a GPS recorder, and a camera that hangs around the neck that automatically takes still photographs every 10 seconds. We will also be inviting 60 of the children to take part in a brief interview to determine what they think about their environment. This project is one of the first in the world to use these cutting-edge technologies to explore children's environments.

This study is funded by the Heath Research Council of New Zealand and led by researchers from the University of Otago, Wellington, in collaboration with researchers from the University of Auckland and Dublin City University, Ireland. It has been approved by the University of Otago Human Ethics Committee (13/220).

What are the benefits of taking part?

We know children have unique knowledge of the world and can provide valuable insights into our understanding of their lives and the environment in which they live and play. This project provides children with an opportunity to participate in research so that we may learn more about their world, what they think about it, and how it might be improved. To specifically inform Kids'Cam, we conducted two pilot studies, one in 2012 and another in April 2014, to explore the feasibility of using automated cameras and GPS recorders to capture children's worlds. The children who participated in those studies were keen to take part and said that it was "fun" and "exciting" to be involved in a research project, and that they felt "important" and "trusted". It was also an opportunity for them to learn about research. In addition, it may also be possible to incorporate the children's participation into elements of the curriculum – as the school involved in the feasibility study did. We received very positive feedback from the teachers and the school principal we worked with on those projects.

At the completion of the project, we will provide each participating school with a report of the overall findings. The findings from similar research projects have provided schools with information about children's activities within schools as well as those out-of-school factors which have a potential impact on school life. The findings have, on occasions, been used to inform school policy and practice.

What will the children be asked to do?

We will be inviting between 12 and 36 Year 8 children from your school to participate in this study, from which a total of 6 to 18 consenting children will be selected to participate. It is possible that some consenting children will not be selected to participate. We will be asking those who are selected to take part in the study to wear a camera (as shown in the pictures below) and small GPS recorder for 4 days (from Thursday to Sunday) to take pictures of the things they see and record the places they go during a typical day, including while they are at school.



The project involves two sessions with the children, conducted over one week. The first session (Wednesday) is a one-off group meeting of about 45 minutes. At this meeting all the children involved in the study will meet the researchers, learn about what they will be doing and how to use the equipment, and be briefed on the ethical issues associated with the use of cameras. During this session they will also be given an equipment kit containing their cameras, GPS recorder, chargers, plugboard and an information booklet. On the following Monday, a researcher will collect the equipment so that the information captured can be downloaded and stored securely on a University computer. The second session involves meeting with each child individually during that week so that they can review their images, which takes about 20-30 minutes, and to weigh them and measure their height.

We may also be briefly interviewing some children to determine what they think about their environments. A set of general questions we want to ask during the interview has been reviewed by the University of Otago Human Ethics Committee, but because this will be an open discussion they cannot review all of the questions that may come up as a result of the ideas raised during the interview. Notes will be taken during the interview, and it will also be recorded so that it can be analysed later. If the children feel uncomfortable answering any of the questions at any stage, they can choose to stop talking or leave the room. They will be told this at the start of the interview.

At the completion of the second session, each participant will be given a certificate of participation.

As well as asking the children to wear the equipment for 4 days, they will also be asked to charge the equipment each night. So that we can remind the children to wear, recharge and return their equipment kit, we will also ask each child and parent for a contact phone number. The equipment kit and its contents are the property of the University of Otago, Wellington and must be returned to the researchers at the completion of each data collection period. Your school will not be liable for any loss or breakage of equipment.

What will the school be asked to do?

First, we would seek your advice about the potential of undertaking the research at your school and in gaining consent from the school community. We would be available to answer any questions parents and children might have. We would also ask for your assistance with participant recruitment, including distributing and collecting participant and parental consent forms and information sheets in class. We would also require a quiet space somewhere in the school to meet with the children for their two sessions. As this project aims to document children's environments across a number of everyday settings, including while they are at school, we are asking the school to allow the children to wear the camera and the GPS recorder during the school day, on school grounds.

How will we keep the information safe?

We have several safeguards in place to protect the privacy of the participants and anyone who may appear in the images:

- To ensure control over the use and security of the information, only the researchers involved in the study will have access to the information collected. All researchers must abide by the confidentiality agreements of the Universities involved and the approved ethical protocol. Also, after each child has had the opportunity to view their images and delete those that are personal or sensitive, they will have no further access to the information they have collected. The data collected then becomes the property of the University of Otago, Wellington.
- In any published material, we will blur out the faces of anyone who is captured in the pictures and may be recognisable, including all staff and other students and any signage or other identifying features that would reveal which school the child attended or their home.
- The collected data will be stored on a secure server at the University of Otago, Wellington. Only members of the research team have access to this server. At the end of the project the recordings of the interview will be destroyed. The typed copies of the interview, the images and all other information collected will be kept in secure storage for five years and then destroyed (as per the requirements of the approved ethical protocol).
- The camera only takes still images (every 10 seconds). There is no audio recording. We are only interested in children's everyday surroundings not the people captured in the images.

If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph 03 479 8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.

You may withdraw your school from participating in the project at any time up until the data is analysed.

What will we do with the information?

The results of the project may be published and will be available in the University of Otago Library (Wellington). Any information published will have all identifying details, for example the name of your school and the names of the child participants removed. As noted previously, upon completion of the project you will be provided with a copy of the results.

If you have any questions about our project either now or in the future, please feel free to contact:

This study has been approved by the University of Otago Human Ethics Committee (Ref.13/220). If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph 03 479 8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.





Kids'Cam

Kids'Cam: Viewing Young People's Environments

CONSENT FORM FOR PARTICIPATING SCHOOLS

I have read the Information Sheet concerning this project and understand the purpose and aims of this study and what will be asked of the school. All my questions have been answered to my satisfaction. I recognise that I can ask for further information at any stage.

I acknowledge that:

1. The schools' involvement in this study is entirely voluntary.
2. This study aims to explore the world children live in, their environment and how it impacts them by documenting what children see and where they go throughout the day.
3. Our school can withdraw from this study at any time up until the data has been analysed.
4. I understand that not all the consenting children will be selected to participate.
5. Student participants will be using the cameras and GPS devices during school time, on school grounds and in other contexts.
6. The equipment kit, including the cameras and GPS devices are the property of the University of Otago, Wellington and will be returned to the research team following data collection.
7. Members of the research team will be meeting with the participants on school grounds, during school hours.
8. The results of the project, including images, and quotes from interviews may be published in journals, talked about at conferences, and will be available in the University of Otago Library (Wellington). Any information published will have all identifying details, for example your school name, and the names of staff and students removed. The camera will capture staff and students in the pictures it takes, but any identifiable faces will be blurred out in any photographs used subsequently in any publications from the study to protect the privacy of those who appear in the images.
9. Upon completion of the project, a copy of the results of the study can be provided if we would like them. ☐ Yes ☐ No
10. To thank them for their participation, participants will receive a certificate of participation, at the completion of the project.

I agree for our school to participate in this study

Facilitating Teacher

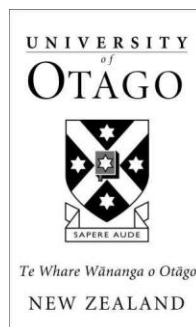
.....
Signed

.....
Date

School Principal

.....
Signed

.....
Date



This study has been reviewed and approved by the University of Otago Human Ethics Committee Ethics Approval (Ref. 13/220). If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph 03 479 8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.

Appendix 2 Parent and participant information sheets and consent forms

Ethics Approval 13/220



Kids'Cam: Viewing Young People's Environments

INFORMATION SHEET FOR PARENTS / GUARDIANS

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not you would like your child to participate. If you allow them to participate we thank you. If you decide that you do not want your child to take part there will be no disadvantage to you or your child and we thank you for considering our request.

What is the project about?

We know the world that young people live in impacts their health but we do not have a comprehensive picture of young people's environments. This project aims to explore the world children live in, their environment and how it impacts them. To do this, we will be asking approximately 200 young people from the Wellington region to wear a GPS device, and a camera that hangs around the neck that automatically takes still photographs every 10 seconds. We will also be inviting 60 of the children to take part in a brief interview to determine what they think about their environment. This project is one of the first in the world to use these cutting-edge technologies to explore young people's environments.

Your child has been randomly selected, along with several other children from their school, to be invited to take part in this project. We would like 6 children from your child's school to participate. Please note, it is possible that even though you and your child agree to take part, your child may not be selected in the final participating group.

This study is funded by the Health Research Council of New Zealand and led by researchers from the University of Otago, Wellington, in collaboration with researchers from the University of Auckland and Dublin City University, Ireland. It has been approved by the University of Otago Human Ethics Committee (Ref. 13/220).

What are the benefits of taking part?

This project provides children with an opportunity to participate in research so that we may learn about their world, what they think about it, and how it might be improved, from them. Two smaller studies were conducted in 2012 and April 2014 to inform Kids'Cam. These

studies explored the feasibility of using automated cameras and GPS devices to capture children's worlds. The children who participated in those studies were keen to take part and at their completion said that it was "fun" and "exciting", and that it made them feel "important" and "trusted" to be involved in a research project. It was also an opportunity for them to learn about research.

What type of participants are being sought?

The participants being sought for this study are intermediate school-aged young people in Year 8 who wish, and have consented, to participate. Your child's school has agreed to be involved in the study, and we have invited some Year 8 students from the school.

What will participants be asked to do?

If your child takes part in this project, they will be asked to wear a small camera and a GPS device for 4 days to take pictures of the things they see and record the places they go during a typical day. They will not be asked to change their behaviour or places they visit during the study. The project involves two sessions at school, conducted over one week. In the first session (which takes about 45 minutes and is held on a Wednesday) all the participants will be fully briefed about the project, given instructions on what to do and learn how to use the equipment. They will be given an equipment kit containing two cameras and a GPS device, chargers, plug board, and instruction booklet and information card. Participants will then be asked to wear a camera and GPS device for 4 full days (Thursday – Sunday inclusive) while at home, at school and during most other activities. They will be advised to take them off before doing vigorous sporting activities or personal activities (such as getting changed, and toileting). The camera only takes still images. There is no audio recording.

The camera is relatively discrete, but it may generate some interest from members of the public. If your child takes part in the study they will be provided with information cards that they can give to interested members of the public, if approached and asked about the device. These cards will outline the nature of the study and prompt interested people to contact the researchers at the University of Otago if they have any further questions about the study.

On the following Monday, a researcher will collect the equipment at school so that the information captured can be downloaded and stored securely on a University computer. The second session involves meeting with your child individually sometime during that week at school so they can review their images, and to weigh and measure their height. This session takes about 20-30 minutes.

If your child has been invited to be interviewed, the interview will also be conducted at this session and will take about 15-20 minutes. A set of general questions we want to ask during the interview has been reviewed by the University of Otago Human Ethics Committee, but because this will be an open discussion they cannot review all of the questions that may come up as a result of the ideas raised during the interview. Notes will be taken during the

interview, and it will also be audio taped so that it can be analysed later. If your child feels uncomfortable answering any of the questions at any stage, they can choose to stop talking or leave the room. They will be told this at the start of the interview.

As well as asking participants to wear the equipment for 4 days, they will also be asked to charge it each night. So that we can remind the participants to wear, recharge and return their equipment kit, we will ask you for a contact phone number. The equipment kits are the property of the University of Otago, Wellington and must be returned to the researchers. The participants, caregivers or the school will not be liable for any equipment loss or damage.

Along with the consent form, we have included a brief questionnaire for you to complete. This questionnaire will provide demographic information so that we can describe the group of participants. It will not be used to describe your child individually.

How will we keep the information safe?

It is important that we keep the information the young people gather secure and protect their privacy and that of anyone who may appear in the images.

To ensure control over the use and security of the information, only the researchers involved in the study will have access to the information collected. All researchers must abide by the confidentiality agreements of the Universities involved and the approved ethical protocol. Also, after your child has had the opportunity to view their images and delete those that are personal or sensitive, they will have no further access to the information they have collected. The data then becomes the property of the University of Otago, Wellington.

In any published material, we will blur out the faces of anyone who is captured in the pictures and may be recognisable, including all school staff and other students as well as any signage or other identifying features that would reveal which school your child attended or your home.

Any information that is provided to us including: the pictures taken by the camera, the interview recordings, and that from the demographic questionnaire, will be stored on a secure server at the University of Otago, Wellington. Only members of the research team have access to this server. At the end of the project the interview recording will be destroyed. The typed copies of the interview, the images and all other information collected will be kept in secure storage for five years and then destroyed (as per the requirements of the approved ethical protocol).

You may withdraw your child from participating in the project at any time and without any disadvantage. You may also withdraw any information that you or your child have already provided, up until the analysis of this information begins.

If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph 03 479 8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.

What will we do with the information?

The results of the project may be published and will be available in the University of Otago Library (Wellington), any published information will have all identifying details, for example your child's name and school, removed. You are most welcome to request a copy of the results of the project should you wish.

Do you have any Questions?

If you or your child have any questions about our project either now or in the future, please feel free to contact:

This study has been approved by the University of Otago Human Ethics Committee (Ref.13/220). If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph 03 479 8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.





Kids'Cam: Viewing Young People's Environments

CONSENT FORM FOR PARENTS / CAREGIVERS OF PARTICIPANTS

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I can ask for further information at any stage.

I know that:-

1. My child's participation in the project is entirely voluntary.
2. This study is looking at the world children live in, their environment and how it impacts them.
3. I am free to remove my child from the project at any time without any disadvantage.
4. I understand that my child may not be selected in the final participating group of children from their school.
5. My child will be asked to wear a camera and GPS device for 4 days and will be asked to recharge the equipment every night for 4 days.
6. The camera will be taking pictures of my child's environment at home, at school and during most other activities.
7. My child will not be asked to change their behaviour or the places they visit during the study.
8. My child will be briefed on situations where they will need to remove the camera and turn it off, to protect their privacy and the privacy of those around them.
9. My child can take off the camera and GPS device at any time if they do not feel comfortable.
10. My child may be interviewed about what they think about their environment.
11. If my child is interviewed, the research team knows the general areas that they want to cover but the exact questions, which will be asked, have not been determined in advance, and will depend on the ideas my child brings up.

12. If my child is interviewed, they do not have to answer any of the interview questions if they don't want to, and they can leave the interview at any time.
13. My child's height and weight will be measured.
14. I will be asked to provide a contact phone number to remind my child to wear, recharge and return the equipment.
15. My child will be provided with information cards about the project that can be given to members of the public in the event they are approached, and asked why they are wearing a camera. These cards will have the contact details of the researchers at the University of Otago, and will encourage interested parties to contact the researchers for further information about the project.
16. After my child has reviewed the photographs they have taken and removed any images they do not want the researcher to see, they will no longer have access to the photographs they have taken; they will become the property of the research team. This is to ensure that my child's privacy and the privacy of anyone that appears in the pictures are protected, and to ensure that the images do not enter the public domain.
17. The equipment kit, including the cameras and GPS device, are the property of the University of Otago, Wellington, and will be collected by the researcher after my child has worn the devices for 4 days. The participants, caregivers or the school will not be liable for any equipment loss or damage.
18. Typed copies of the interview recording, the photographs and other information will be kept in secure storage for at least five years and then destroyed.
19. The results of the project, including images from the camera, and quotes from interviews may be published in journals, talked about at conferences, and will be available in the University of Otago Library (Wellington). Any information published will have all identifying details, for example my child's name, removed.
20. I would be happy to be contacted within the next 18 months about the possibility of my child participating in other aspects of this research project? Saying yes to this question would not commit them to participating; it just means that we can contact you to ask.

☐ Yes I am happy to be contacted again

☐ No, don't contact me again

I would like to receive a copy of the key findings of this study

☐ Yes

☐ No

I agree for to take part in this project
(Child's name)

.....

(Signature of parent/guardian)

.....

(Date)



Kids'Cam

Kids'Cam Participant Demographic Information Sheet

1. Is your child?

- ☐ Male
☐ Female

2. What is your child's date of birth? _____

3. Which ethnic group does your child belong to? (*Mark all the spaces that apply*)

- ☐ New Zealand European
☐ Māori
☐ Samoan
☐ Cook Island Maori
☐ Tongan
☐ Niuean
☐ Chinese
☐ Indian
☐ Other such as DUTCH, JAPANESE, TOKELAUAN. Please
state:

4. What is your child's home address?

5. Please provide a telephone number so that we can contact you or your child to remind them to wear, recharge and return the devices.

Parent's number _____

Child's number _____

6. In the last 12 months have you personally been forced to buy cheaper food so that you could pay for other things you need? Yes / No

In the last 12 months have you personally have you been out of paid work at any time for more than one month? Yes / No

*No if retired and for full-time care-givers/homemakers

In the 12 months ending today did you yourself receive payments from any of these three benefits: Jobseeker Support, Sole Parent Support or Supported Living Payment? Yes / No

In the last 12 months have you personally put up feeling cold to save heating costs? Yes / No

In the last 12 months have you personally made use of special food grants or food banks because you did not have enough money for food? Yes / No

In the last 12 months have you personally continued wearing shoes with holes because you could not afford replacements? Yes / No

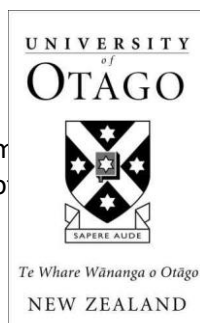
In the last 12 months have you personally gone without fresh fruit and vegetables, often, so that you could pay for other things you needed? Yes / No

In the last 12 months have you personally received help in the form of clothes or money from a community organisation (like the Salvation Army?) Yes / No

Thank you!

This study has been reviewed and approved by the University of Otago Human Ethics Committee Ethics Approval (Ref. 13/220). If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph 03 479 8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.

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Kids'Cam: Viewing Young People's Environments

INFORMATION SHEET FOR PARTICIPANTS

Hi, we are doing a study about all the things young people see in their everyday surroundings. Thank you for showing an interest in this project. Before you decide if you want to take part in this study please read this information sheet carefully because it is important that you understand why we are doing this study and what you might be asked to do. You do not have to take part in this study. If you decide to take part, talk to your parents or caregiver. If they agree that you can participate, please ask your parent or caregiver to complete the parent's consent form that says it's ok for you to be involved in the study and bring it back to school.

What is this project about?

Our project aims to learn about the world young people live in - the things they see in the different places they go, during a normal day. For example, we want to see what you see on the way to school, while you're at home or at school, and what you see when you're out in your community. To do this, we will be asking participants to wear a small camera that hangs around their neck and automatically takes a picture every 10 seconds throughout the day. Participants will also be asked to wear a small GPS device which will record where they go.

You, and several of your Year 8 classmates, have been invited to take part in this project. It is possible that we will have more children who want to participate than we need from your school. That means that even though you may agree to take part in the project, there is a chance that you may not be included in the final group of children who do take part.

This study is funded by the Health Research Council of New Zealand and is being run by researchers from the University of Otago in Wellington, as well as the University of Auckland and Dublin City University, Ireland.

Why have you been invited to take part?

Your school has agreed to be involved in this project. We are looking for approximately 200 Wellington students to take part in our study. We have invited some Year 8 students from your school, including you, to consider participating. You do not have to take part in this study if you do not want to.

If you take part in the study what will you be asked to do?

To take part in this study you will need to be able to attend two meetings which will be held at your school during one week.

You will be asked to wear a camera and GPS device for 4 days during all of your normal daily activities, except for during some physical activities and any personal activities like getting changed, or going to the toilet etc. You will have to recharge the camera and GPS device overnight, each night, for 4 days.

You can take off the camera and GPS device any time you don't want to wear it.

At the first meeting, which will be about 45 minutes long and held on a Wednesday, all those who are participating will meet the researchers, learn about the study and learn how to use the camera and GPS device. You will be given an equipment kit containing two cameras, GPS device, plugbaord and chargers. Starting from the next morning, you will be asked to wear a camera and GPS device on Thursday, Friday, Saturday and Sunday. On the following Monday, you will bring the devices back to school and the researcher will collect them and download all of the information you have collected onto a secure computer.

Later that week, we will come to the school for the other meeting, which will last about 45 minutes. You will be able have a look at all the images the camera recorded and delete any that you do not want the researcher to see, and measure your height and weight. We will also be inviting some of the participants to answer some questions about what they think about their everyday surroundings.

Can I change my mind and withdraw from the study?

If you decide to be part of the study, you can stop at any time and you don't have to give us a reason.

What data or information will be collected and how will you use it?

The pictures taken will be used to show us the sorts of things you see in your everyday surroundings.

To keep all of the pictures taken and other information you collect safe and private, only the researchers will have access to the information you collect. Once you have looked at the pictures from the camera and deleted the ones you don't want anyone else to see, the researchers will look after them and all the other information you have collected. The researchers must keep everything confidential and they are not allowed to share the information with anyone else.

All your information will be kept on a secure computer protected with a password.

If any of the photos taken have people in them, for example your family and friends, or teachers, and we wish to use the photos in our reports, we will blur out their faces to protect their privacy. We will also blur out any signage or other features that would identify your school or home.

The camera only takes photographs. It doesn't record video, or your conversations.

If you have been invited to be interviewed, there will be a tape recorder on while we are talking, and we will write down some of the things you say. If you don't want to answer some of the questions, that's OK too, you don't have to answer any question that you don't want to.

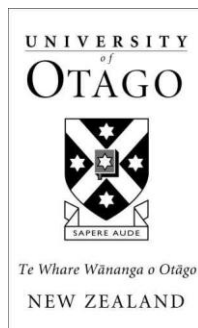
After the interview, we will type out the words on the recording and after we have finished writing the report we will delete the recordings. The typed out copies of the interview will only be seen by the researchers at Otago University. After we have finished writing up the study, the data collected and the typed copies of the interview will be stored securely for at least five years and then destroyed.

The results of this study will be used to help us write a report for the University and may be published in reports and journals, and might be talked about at conferences. We might publish some of your photographs and write about some of the things you have talked about during the discussion, but we will not use your name, or any of the information you give us to identify you in any way.

What if I have any questions?

If you have any questions now, during or after the study you can talk to us, on your own or with a parent or caregiver, please feel free to contact:

This study has been reviewed and approved by the University of Otago Human Ethics Committee Ethics Approval (Ref. 13/220). If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph 03 479 8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.





Kids'Cam

Kids'Cam: Viewing Young People's Environments

CONSENT FORM FOR PARTICIPANTS

I have been told about this study and understand what it is about.

I know that:

1. I don't have to take part in this research project if I don't want to.
2. Nothing will happen to me if I choose not to take part in the project.
3. I understand that I may not be included in the final group of participating children from my school.
4. The researchers will be asking me to wear a camera and a GPS device for 4 days during all of my normal daily activities, except for during private things like getting changed and going to the toilet. They might also be interviewing me about what I think about my everyday surroundings and the world I live in.
5. I will wear the camera and GPS device to the best of my ability for 4 days.
6. I can take off the camera and GPS device any time I don't want to wear it.
7. I will be able to delete any pictures that I don't want anyone else to see. But after I've looked through all of the pictures and deleted the ones I don't want anyone to see, I won't be able to access the pictures again. They will be given to the research team to look after.
8. The researchers will measure my height and weight.
9. The researchers will contact me or my parents to remind me to wear and recharge the camera and GPS device and to return them.

10. The equipment kit, including the cameras and GPS device, belong to the University of Otago and must be given back to the researcher after I have worn them for 4 days.
11. During the interview there are no right or wrong answers and I don't have to answer any questions if I don't want to.
12. The researcher team will write up the results from this study for University work. The results may also be written up in journals and talked about at conferences.
13. The research team will write about some of the pictures I took and some of the things I talked about, but won't use my name or anything that might identify me in any published material.
14. The recording of the interview and the written copy of the words on the recording will only been seen by the researchers at Otago University.
15. If I have any questions about any part of the study I can talk to the researchers about them.
16. I would be okay to be contacted again to see if I would like to do more research on this project. Saying yes does not mean that you would have to do it, it just means that you are okay with us asking you about doing more.
 - ☐ Yes I am happy to be contacted again
 - ☐ No, don't contact me again

I agree to take part in the study.

.....
Signed

.....
Date

Thank you!

This study has been reviewed and approved by the University of Otago Human Ethics Committee Ethics Approval (Ref. 13/220). If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph 03 479 8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.



Appendix 3 Protocols for briefing and review sessions



Take with you to the briefing:

- Participant list
- Laptop
- Equipment kits
- Box with spare equipment
- Information cards
- Spare information sheets and consent forms

Once you are at the school:

Before you start the briefing make sure that all consent forms / demographic questionnaires are signed and collected.

Briefing procedure:

1. Thank everyone for agreeing to take part in the Kids'Cam project
2. Introduce yourself and get the kids to introduce themselves
3. *Have you all read the information sheet and consent form? Does everyone understand what the project is about?*
4. Explain the project: *We are interested in finding out more about your everyday surroundings and the world you live in so we would like to document what you see and where you go throughout the day including what you see when you're at home, at school and during most other daily activities. Even if you think it is boring and uninteresting we want to know. So do this we are going to ask you to wear a camera like the one I am wearing and GPS device for the next four days: Thursday, Friday, Saturday, and Sunday. Show sample of Autographer data*
 - a. *This is the sort of images the Autographer collects.*
 - b. *As you can see the Autographer will take pictures of everything and everyone around you while you are wearing it.*
5. Make sure everyone is happy so far
6. Discussion of Ethical Issues

We want you to wear the equipment during most of your normal daily activities. We don't want you to change anything you do during the day, just go about your day as you

normally would if you were not wearing the camera. Even if you think what you doing or where you is boring.

But there are a number of places or times where you cannot wear your camera

Turn to page 9 in the instruction book

Walk through each point with the children

You can turn off or take off the Autographer anytime you don't feel comfortable wearing it.

You will need to turn off or take off the Autographer in the following places:

- Before going to the bathroom or getting changed.
- In public bathrooms and changing rooms and showers (including those at school, sports clubs, and swimming pools).
- Public swimming pools.
- Anytime you are around anyone that is not fully clothed.
- In hospitals, hospices, and doctors' offices.
- In shops, supermarkets and other buildings where there is a notice or sign that says you can't take photos.
- If on a marae, check with the person in charge to make sure it is okay to wear the camera.
- If someone asks you to take it off.
- Before playing contact sports (like rugby). You shouldn't need to take it off at lunchtime or break times, unless you are doing something you think might damage the Autographer.
- Before you go swimming. The Autographer is not waterproof.
- If it is raining really heavily and you think it might get wet while you are outside.

BUT PLEASE REMEMBER TO PUT IT BACK ON!

Don't worry if you forget to take it off - you will be the first person to see the photos and you will be able to delete anything you don't want us to see

Dealing with attention

It is noticeable and you will probably be asked about it. Most people will be fine, some will ask you questions and if they do this is what you say if there are any problems turn it off or ask them to call us.

If people ask you what it is you say:

"I am part of a study run by the University of Otago that is looking at my environments. I am wearing a camera that takes a picture every 10 seconds. But the camera is not deliberately taking pictures of individual people or places."

If at any time during the project you don't want to be part of the study anymore, that's fine, either you or your parent just need to contact a member of the research team and let us know.

Instructions on how to use the equipment

7. GPS device
 - a. Explain what it does – maps where you go, we can draw a map; uses the satellite to record; doesn't work inside buildings; only when you are outside; able to map your photos with where you go
 - b. Go through booklet instructions
 8. Autographer
 - a. Sensors – temperature, movement, light, and colour
 - b. Go through booklet instructions
 - c. Explain privacy dial
 - d. Get them to put it on – clip and around the neck – keeps it safe and stops it moving
 - e. Needs to be worn on top of your clothing, so that we can see what you see.
 - f. Change the Autographer at lunchtime – battery issues
 9. Show the rest of the kit – chargers and plug board – how to recharge
 10. Put everything back in the kits and distribute
 11. Answer questions
 12. Tell them about reminder texts
 - a. 7am and 7pm Thursday, each day
 - b. 1pm Saturday and Sunday
 - c. 7am Monday
 13. Confirm next visit – *when you will have the chance to look through their photos and we will be interviewing some of you about what in there is in their photos.*
 14. Make sure they are all happy and know how to contact one of the researchers
- Back at the office:
15. Complete spreadsheet
 16. Enter phone numbers into Web2Txt/phone



Review Session Protocol

Monday - Equipment Collection

1. Text children @ 7am to remind them to bring their equipment boxes
2. Collect suitcase from office
3. Collect all boxes, making sure that all the equipment is in them. Sign off each participant on school record sheet.
4. Arrange alternative collection with those who have forgotten
5. Download data

Tuesday / Wednesday – Interview sessions

Take with you:

- Scales
- Height measure
- Notebook
- Laptop and mouse
- Recorders x 4
- Hard copy of interview schedule and participant sheet
- Certificates of participation and vouchers
- Voucher registry

Review session

Thank you for taking part in Kids'Cam you did a great job for us and we really appreciated it. If at any time during this session you don't want to continue just let me know.

The first thing we'll do is get you to look through your pictures and delete any that you don't want us to see. This is going to take about 20 minutes. Ask if they wore the equipment every day and for how long; and if not, why.

Note answers on participant response sheet

- Open participant's images for them to review and show them how to delete, move through the images etc

When completed, *thank the participant.*

I would like to ask you a couple of questions about smoking

- a. Is there anyone in your family/household who smokes?*
- b. Do you regularly visit houses where there are smokers?*

Note answers on participant response sheet

If the child IS SELECTED for an interview, follow protocol for interview

If the child is NOT SELECTED for an interview proceed...

Now if it's ok with you I'd like to measure your height and weigh you.

- Measure participant's height and weight
 - c. Take two measures
 - d. Measure again if >1% difference
 - e. Note each reading in notebook

Give child (and school) certificate and voucher; get them to sign registry for voucher

Appendix 4 Project Instruction Booklet



Kids'Cam

Project Instruction Booklet

Project instructions

Welcome to Kids'Cam!

Thanks for being part of this exciting project.

We hope you have fun and enjoy being part of a world-leading research project about young people's lives.

If at any time during the project you don't want to be part of the study anymore, that's fine, either your parent or caregiver just need to contact a member of the research team and let us know.

In this booklet you will find:

- Project instructions – what you need to do
- Instructions on how to use the Autographer
- Instructions on how to use the GPS device
- Where and when you should turn off or take off the camera
- A checklist for the equipment kit for when you return it.

If you are having problems with the equipment or if you or your parents have any other questions please call:

Project Instructions

- Wear the camera and the GPS for 4 full days – Thursday to Sunday.
- Go about your day as normal. Don't change anything you do during the day. Even if you think it may be uninteresting and boring!
- The Autographer needs to be worn on top of your clothing.
- Hang the Autographer around your neck AND clip it to your clothing. It keeps it safe and is more comfortable to wear.
- Remember to put all the devices on to charge before you go to bed each night.
- On Monday please bring all of the equipment back to school so that we can collect it.

In the mornings:

- Turn on your morning Autographer – the one with a 'morn' sticker on it and an odd number - and start wearing it.
- Turn on your GPS and start wearing it.
- Make sure you have your information cards to give out.
- Take your second camera with you.
- Before you leave school, turn on your afternoon camera – the one with a 'aftern' sticker and even an even number – and start wearing it. On the weekends do this at 1pm.

During the day:

- check every now and then that the Autographer is working:
 - the blue circle will be blinking, or
 - press the top button once quickly - words will come up on the front of the camera. They will go off automatically.
- If it isn't working the battery may be flat, so put it on to charge and start using your second camera.

Before going to bed:

- Plug in both of the Autographers and the GPS device to charge.

Where and when should you take the Autographer off?

You can turn off or take off the Autographer anytime you don't feel comfortable wearing it.

You will need to turn off or take off the Autographer in the following places:

- Before going to the bathroom or getting changed.
- In public bathrooms and changing rooms and showers (including those at school, sports clubs, and swimming pools).
- Public swimming pools.
- Anytime you are around anyone that is not fully clothed.
- In hospitals, hospices, and doctors' offices.
- In shops, supermarkets and other buildings where there is a notice or sign that says you can't take photos.
- If on a marae, check with the person in charge to make sure it is okay to wear the camera.
- If someone asks you to take it off.
- Before playing contact sports (like rugby). You shouldn't need to take it off at lunchtime or break times, unless you are doing something you think might damage the Autographer.
- Before you go swimming. The Autographer is not waterproof.
- If it is raining really heavily and you think it might get wet while you are outside.

BUT PLEASE REMEMBER TO PUT IT BACK ON!

Don't worry if you forget to take it off - you will be the first person to see the photos and you will be able to delete anything you don't want us to see.

Instructions for camera



TEST BUTTON

ON / OFF

**PRIVACY
DIAL**



LENS

CHARGER GOES HERE

Instructions for camera

How do I turn it on?	Press and hold the ON / OFF button for 5 seconds until the blue words 'AUTOGRAPHER' and 'Hello' come on the front of the camera
How do I turn it off?	Press and hold the ON / OFF button for 5 seconds until the blue words 'Goodbye' come on the front of the camera and it turns off
How do I know it's working?	The blue light will blink or Press the TEST BUTTON ONCE; the blue words will show if on
What if it won't turn on?	The battery could be flat – put it on to charge and use the other camera
How do I know it's charged?	The 'battery' symbol will be solid

NOTE: If the privacy dial is turned to yellow or the lens is covered for more than 5 minutes the cameras will shut off. You will need to open the privacy dial and turn the camera on.

Instructions for GPS



How do I turn it on?

Press and hold the ON / OFF button for 5 seconds until the 4 symbols come on

How do I know it's working?

The GREEN symbol will be flashing

The ORANGE symbol will be flashing or on

How do I know it's fully charged?

The battery symbol will be flashing when plugged in for charging

Equipment Kit Checklist

1 x GPS device

2 x Autographers

3 x chargers

1 x 4-pin plugboard

Instruction booklet



Kids'
Cam

Appendix 5 Templates for schools' letter of thanks, certificate of participation and voucher register

Kids'Cam vouchers register

[illegible]

Printed on letterhead

School address

Date

Dear

Re: Kids'Cam Research Project, University of Otago, Wellington

I am writing to thank you very much for your school's participation in the Kids'Cam Project conducted by the Department of Public Health, University of Otago, Wellington.

We very much enjoyed meeting and working with the children over the last week. We hope they found it to be a fun and exciting project. We also truly appreciate the effort you have made to accommodate us throughout the project and hopefully we have not disrupted your daily timetable unduly.

In recognition of your contribution to Kids'Cam, please find enclosed a Certificate of Participation for your school and a \$100.00 book voucher for you to use for the school as you feel appropriate. We will also provide you with a summary of the findings from Kids'Cam when they become available.

Once again, I would like to thank you for assisting us with our research project and wish you well for the remainder of the school year.

Yours faithfully

Associate Professor Louise Signal
Principal Investigator Kids'Cam Project
Director
HePPRU: Health Promotion and Policy Research Unit
Department of Public Health
University of Otago, Wellington



Kids'Cam

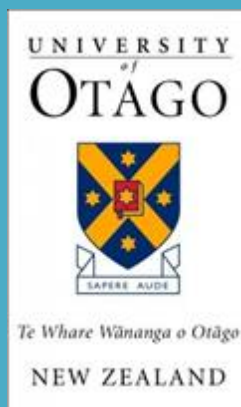
Certificate of Participation

Thank you for being part of **Kids'Cam**, we hoped you enjoyed the experience.

Your participation has contributed to valuable and exciting research about how young people's environments influence their health. By being in the pilot study you have also helped us to learn more about using the Autographer and how to run the project.

We could not have done it without your hard work and commitment!

A big thank you from all the **Kids'Cam** team.



Associate Professor Louise Signal

Principal Investigator Kids'Cam Project

Director

HePPRU: Health Promotion and Policy Research Unit

Department of Public Health

University of Otago, Wellington

Appendix 6 Participant record sheets and response forms

[illegible]



Kids'Cam

Participant number:

Date

Camera wearing experiences:

Smoking at home:

Smoking other places:

Height (2 measures)

Weight (2 measures)

Other notes:

