

Adverse Childhood Experiences International Questionnaire (ACE-IQ)

Guidance for Analysing ACE-IQ

Context The ACE-IQ is designed to be integrated within broader health surveys to allow analysis of associations between adverse childhood experiences and subsequent health outcomes and health risk behaviours. This means that there are some key aspects of its design which need to be understood so that it is applied properly, and so that the data generated is useful.

Coding

Question codes

As a standalone questionnaire the question numbers run from Q0 - Q8. However, as these questions will most often be integrated into other surveys we have coded them into six groups (C, M, P, F, A, V) to allow cross-referencing for researchers. Hence, whatever numbers are given to the questions when included within your own survey, please keep the letter codes present as well so that it's possible to easily refer between questionnaires.

Question codes:

Core questions: C

Marriage questions: M

Parents/guardian questions: P

Family questions: F

Abuse questions: A

Violence questions: V

Response codes

A numerical code has been ascribed to each possible response for a question. This number has been placed within square brackets [] and is there to allow the data to be entered and more easily processed within a spreadsheet for data analysis.

Note: in all cases, [66] is the code for "not applicable"; [77] is the code for "don't know/not sure" and [88] is the code for "refused".

Analysis

As the development of the ACE-IQ is at the pilot stage, we would like to adopt two methods of analysis to allow us to ascertain the most appropriate approach to determine an accurate overall ACE score for a participant. The first we'll call the binary version, the second the frequency version. In both cases the questions from the ACE-IQ about childhood experience have been sorted into 13 categories: emotional abuse; physical abuse; sexual abuse; violence against household members; living with household members who were substance abusers; living with household members who were mentally ill or suicidal; living with household members who were imprisoned; one or no parents, parental separation or divorce; emotional neglect; physical neglect; bullying; community violence; collective violence.

To calculate the ACE score using the binary version, check the participant's answers against Table 1 in "Calculating the ACE score from the ACE-IQ" (see below). If the participant answered in the affirmative (whether with once, a few times, or many times)

then that counts as a yes, and so that response should be circled, and a 1 placed in the final column. Once completed you will get an answer from 0 to 13. This is the ACE (binary) score for that individual.

To calculate the ACE score using the frequency version check the participant's answers against Table 2 in "Calculating the ACE score from the ACE-IQ" (see below). This time, only circle yes if the participant's answers **exactly match** the written question in the table (you'll note that for some questions only certain frequencies are included). As before, once completed you will get an answer from 0 to 13. This is the ACE (frequency) score for that individual.

Once you've calculated the two ACE scores, you can then look at the relationship between the ACE scores and the health outcome or health risk behaviour you're interested in by plotting a dose-response curve, or rather exposure (ACE score) - behaviour/health outcome curve. One important area to examine at this pilot stage is whether a relationship is seen between (binary) ACE score and health outcome/behavior or whether a relationship is only seen between ACE score and health outcome/behavior when the *frequency* ACE score is used (it is this latter phenomenon which is seen in the original ACE studies).

If you look at the Centre for Disease Control (CDC) website for the ACE study, you can see the different ways that the data generated can be analysed. Not only can you generate the dose-response curves discussed above, but you can also generate data on demographics and prevalence within certain populations from the ACE-IQ responses. See <http://www.cdc.gov/ace/data.htm>

Further details of health outcomes and behaviours which have been analysed to determine their relationship with exposure to ACEs can be found here: <http://www.cdc.gov/ace/outcomes.htm>

Calculating the ACE score from the ACE-IQ

Table 1: Calculating the ACE score from the ACE-IQ - BINARY VERSION

All questions are yes/no - if the participant entered **yes** for any of the categories, mark a 1 in the response column

| Category | Q | Written question | Response |
|---|----------------------|--|----------|
| Physical abuse | A3 A4 | Did a parent, guardian or other household member spank, slap, kick, punch or beat you up? OR Did a parent, guardian or other household member hit or cut you with an object, such as a stick (or cane), bottle, club, knife, whip etc? Yes No | |
| Emotional abuse | A1 A2 | Did a parent, guardian or other household member yell, scream or swear at you, insult or humiliate you? OR Did a parent, guardian or other household member threaten to, or actually, abandon you or throw you out of the house? Yes No | |
| Contact sexual abuse | A5 A6 A7 A8 | Did someone touch or fondle you in a sexual way when you did not want them to? OR Did someone make you touch their body in a sexual way when you did not want them to? OR Did someone attempt oral, anal, or vaginal intercourse with you when you did not want them to? OR Did someone actually have oral, anal, or vaginal intercourse with you when you did not want them to? Yes No | |
| Alcohol and/or drug abuser in the household | F1 | Did you live with a household member who was a problem drinker or alcoholic, or misused street or prescription drugs? Yes No | |
| Incarcerated household member | F3 | Did you live with a household member who was ever sent to jail or prison? Yes No | |
| Someone chronically depressed, mentally ill, institutionalized or suicidal | F2 | Did you live with a household member who was depressed, mentally ill or suicidal? Yes No | |
| Mother Household member treated violently | F6 F7 F8 | Did you see or hear a parent or household member in your home being yelled at, screamed at, sworn at, insulted or humiliated? OR Did you see or hear a parent or household member in your home being slapped, kicked, punched or beaten up? OR Did you see or hear a parent or household member in your home being | |

| | | | |
|--|-----------------------|--|--|
| | | hit or cut with an object, such as a stick (or cane), bottle, club, knife, whip etc.? Yes No | |
| One or no parents, parental separation or divorce | F4 F5 | Were your parents ever separated or divorced? OR Did your mother, father or guardian die? Yes No | |
| Emotional neglect | P1 P2 | Did your parents/guardians understand your problems and worries? OR Did your parents/guardians really know what you were doing with your free time when you were not at school or work? Yes No* * Note: for this question, it's the "no" answer which scores a "1". | |
| Physical neglect | P3 P4 P5 | Did your parents/guardians not give you enough food even when they could easily have done so? OR Were your parents/guardians too drunk or intoxicated by drugs to take care of you? OR Did your parents/guardians not send you to school even when it was available? Yes No | |
| Bullying | V1 | Were you bullied? Yes No | |
| Community violence | V4 V5 V6 | Did you see or hear someone being beaten up in real life? OR Did you see or hear someone being stabbed or shot in real life? OR Did you see or hear someone being threatened with a knife or gun in real life? Yes No | |
| Collective violence | V7 V8 V9 V10 | Were you forced to go and live in another place due to any of these events? OR Did you experience the deliberate destruction of your home due to any of these events? OR Were you beaten up by soldiers, police, militia, or gangs? OR Was a family member or friend killed or beaten up by soldiers, police, militia, or gangs? Yes No | |

Table 2: Calculating the ACE score from the ACE-IQ - FREQUENCY VERSION

All questions are yes/no - if the participant entered **yes** for any of the categories, mark a 1 in the response column

| Category | Q | Written question | Response |
|---|----------------------|--|----------|
| Physical abuse | A3 A4 | Did a parent, guardian or other household member spank, slap, kick, punch or beat you up many times ? OR Did a parent, guardian or other household member hit or cut you with an object, such as a stick (or cane), bottle, club, knife, whip etc many times ? Yes No | |
| Emotional abuse | A1 A2 | Did a parent, guardian or other household member yell, scream or swear at you, insult or humiliate you many times ? OR Did a parent, guardian or other household member threaten to, or actually, abandon you or throw you out of the house many times ? Yes No | |
| Contact sexual abuse | A5 A6 A7 A8 | Did someone ever touch or fondle you in a sexual way when you did not want them to? OR Did someone ever make you touch their body in a sexual way when you did not want them to? OR Did someone ever attempt oral, anal, or vaginal intercourse with you when you did not want them to? OR Did someone ever actually have oral, anal, or vaginal intercourse with you when you did not want them to? Yes No | |
| Alcohol and/or drug abuser in the household | F1 | Did you live with a household member who was a problem drinker or alcoholic, or misused street or prescription drugs? Yes No | |
| Incarcerated household member | F3 | Did you live with a household member who was ever sent to jail or prison? Yes No | |
| Someone chronically depressed, mentally ill, institutionalized or suicidal | F2 | Did you live with a household member who was depressed, mentally ill or suicidal? Yes No | |
| Mother Household member treated violently | F6 F7 F8 | Did you see or hear a parent or household member in your home being yelled at, screamed at, sworn at, insulted or humiliated many times ? OR Did you see or hear a parent or household member in your home being slapped, kicked, punched or beaten up a few times or many times ? OR Did you see or hear a parent or household member in your home being hit or cut with an object, such as a stick (or cane), bottle, club, knife, | |

| | | | |
|--|-----------------------|---|--|
| | | <p>whip etc. a few times or many times?</p> <p>Yes No</p> | |
| One or no parents, parental separation or divorce | F4 F5 | <p>Were your parents ever separated or divorced?</p> <p>OR</p> <p>Did your mother, father or guardian die?</p> <p>Yes No</p> | |
| Emotional neglect | P1 P2 | <p>Did your parents/guardians rarely or never understand your problems and worries?</p> <p>OR</p> <p>Did your parents/guardians rarely or never really know what you were doing with your free time when you were not at school or work?</p> <p>Yes No</p> | |
| Physical neglect | P3 P4 P5 | <p>Did your parents/guardians not give you enough food many times even when they could easily have done so?</p> <p>OR</p> <p>Were your parents/guardians many times too drunk or intoxicated by drugs to take care of you?</p> <p>OR</p> <p>Did your parents/guardians not send you to school many times even when it was available?</p> <p>Yes No</p> | |
| Bullying | V1 | <p>Were you bullied many times?</p> <p>Yes No</p> | |
| Community violence | V4 V5 V6 | <p>Did you see or hear someone being beaten up in real life many times?</p> <p>OR</p> <p>Did you see or hear someone being stabbed or shot in real life many times?</p> <p>OR</p> <p>Did you see or hear someone being threatened with a knife or gun in real life many times?</p> <p>Yes No</p> | |
| Collective violence | V7 V8 V9 V10 | <p>Were you ever forced to go and live in another place due to any of these events?</p> <p>OR</p> <p>Did you ever experience the deliberate destruction of your home due to any of these events?</p> <p>OR</p> <p>Were you ever beaten up by soldiers, police, militia, or gangs?</p> <p>OR</p> <p>Was a family member or friend ever killed or beaten up by soldiers, police, militia, or gangs?</p> <p>Yes No</p> | |