INHIBITION TO THE UNFAMILIAR

Reference

Companion Document
Inhibition Administration & Coding Manual

Description
Inhibition to the Unfamiliar is a 15-minute procedure in which the child is observed for 5 minutes in free play and then in seven episodes involving unfamiliar stimuli and events. The mother is in the room, but uninvolved with the child. During the free play period immediately following entry to the room, the child is free to explore the objects in the room, such as a cloth tunnel, ladder, large black box, trampoline, slide, and other toys. Following this 5-minute period, an experimenter enters the room and tries to involve the child in risky events, described by Kochanska (1995) as mildly threatening situations. These risky events involve driving a Little Tyke car, jumping on a trampoline, reaching into a big black box to retrieve a hidden toy, allowing the experimenter to apply a toy blood pressure cuff to the child’s arm, petting a remote-controlled plastic dinosaur, trying on a gorilla mask, and playing with a clown.

Behavioral observations of the child’s fearfulness, or inhibition to the unfamiliar, are made from a videotape of the session. Additional information about the coding can be found in the Inhibition administration and coding manual.

- **Latency to explore:** The number of seconds that pass from the time the child enters the room until he or she first touches an object in the room.
- **Proximity to mother:** Scored from a time sample procedure in which the child’s proximity to mother is rated on a 3-point scale (0 = further than 1/3 of the room away from mother, 1 = further than the child’s arm’s reach but hovering close to mother, 2 = touching mother or within child’s arm’s reach) for each 30-second interval of the entire 15-minute procedure (free play + risky events).
- **Exploration:** Scored 0 = no exploration, 1 = explores objects for each 20-second interval of the 5-minute free play session. Extra credit points are given for various acts (2 = goes into tunnel, touches mask, slides down the slide; 1 = puts hand in box up to wrist, goes up at least two steps on ladder, steps onto trampoline).
- **Risky events:** Each of the seven risky events is coded in terms of the child’s fearfulness. Five events (car, trampoline, box, blood pressure cuff, dinosaur) are coded on a 5-point scale ranging from 0 to 4; two events (mask, clown) are coded on a 6-point scale ranging from 0 to 5. An additional point is scored for each risky event during which the child evidences distress, and an additional point is scored for the clown event if the child refuses to shake the clown’s hand. Higher scores represent greater inhibition.

Kochanska (1995) created a single **Risky Events** score from the individual events scores (Cronbach’s alpha = .80). He also standardized and aggregated all measures of inhibition or fearfulness (**Risky Events** score, latency to explore, immediate proximity to mother, and reversed exploration) to form a single **Observed Fearfulness** score (Cronbach’s alpha = .79).

**Administration: 36 months**
The inhibition to the unfamiliar procedure was administered to children \((n = 117)\) during a site-specific lab visit at 36 months. All segments were scored for 111 children. One child was scored...
for the car risk event only; three children were scored for all risky events but not proximity and exploration; and two children were scored for everything except the car risky event.

**Scoring: Kochanska (1995)**

**Latency to Exploration**
Number of seconds from child’s entry into room to first touching an object in the room; higher scores indicate a longer latency to touch.

\[
\text{INHLATEX} \\
N = 103, M = 24.11, SD = 68.86, \text{range} = 3-621
\]

**Proximity to Mother**
Number of 30-second intervals during entire inhibition procedure in which child was in immediate proximity to mother (coded 2, touching mother or within child’s arm’s reach). A maximum of 30 intervals was scored. Scores are adjusted frequencies: \# intervals in which 2 was coded / \# coded intervals, multiplied by 30. Higher scores represent greater proximity to mother throughout the procedure.

\[
\text{INHPROXM} \\
N = 113, M = 4.60, SD = 5.70, \text{range} = 0-27.93
\]

**Exploration**
Number of 20-second intervals during free play segment (first 5 minutes) in which the child explored the objects in the room. In Kochanska’s coding scheme, this was coded 0 or 1; in our study, 0, 1, or 2. A maximum of 22 intervals was scored, and extra credit points were scored for various acts as described by Kochanska. Adjusted frequencies were computed (\# intervals in which 1 or 2 was coded / \# coded intervals, multiplied by 22) and added to the sum of the extra credit points to create the Exploration score. Higher scores represent greater exploration of the objects in the playroom.

\[
\text{INHEXPLO} \\
N = 113, M = 24.22, SD = 5.97, \text{range} = 0-31
\]

**Individual Risky Event Scores**
Five risky events (car, trampoline, box, blood pressure cuff, dinosaur) were coded on a 5-point scale ranging from 0 to 4; two events (mask, clown) were coded on a 6-point scale ranging from 0 to 5. An additional point was scored if the child showed distress. The clown event also was scored if the child refused to shake the clown’s hand. Scores are sums of risk score + distress (+ refusal to shake clown’s hand for Clown event). Higher scores represent greater inhibition in response to the indicated risky event.

- **Car** = \text{INHCAR} (possible range = 0-5)  
  \[N = 115, M = 1.63, SD = 1.82, \text{range} = 0-5\]

- **Trampoline** = \text{INHTRAMP} (possible range = 0-5)  
  \[N = 111, M = 2.67, SD = 1.66, \text{range} = 0-4\]

- **Box** = \text{INHBOX} (possible range = 0-5)  
  \[N = 116, M = 1.47, SD = 1.70, \text{range} = 0-5\]

- **Blood pressure cuff** = \text{INHCUFF} (possible range = 0-5)  
  \[N = 115, M = 2.26, SD = 1.83, \text{range} = 0-5\]

- **Dinosaur** = \text{INHDINO} (possible range = 0-5)
\[ N = 114, \ M = 1.93, \ SD = 1.89, \ range = 0-5 \]

Gorilla mask = \textbf{INHMASK} (possible range = 0-6)
\[ N = 114, \ M = 3.53, \ SD = 2.07, \ range = 0-6 \]

Clown = \textbf{INHCLOWN} (possible range = 0-7)
\[ N = 115, \ M = 2.94, \ SD = 2.30, \ range = 0-7 \]

\textbf{Risky Events Summary Score}
An overall risky events score was computed as the mean of the seven individual event scores.

\textbf{INHRISK}
\[ N = 117, \ M = 2.32, \ SD = 1.27, \ range = 0-4.86, \ \alpha = .79 \]

\textbf{Observed Fearfulness}
An overall observed fearfulness score was computed as the mean of the standardized scores for latency to explore, proximity to mother, exploration (reversed), and overall risky events.

\textbf{INHFEAR}
\[ N = 117, \ M = -0.02, \ SD = 0.73, \ range = -1.83 \text{ to } 3.17, \ \alpha = .69 \]

\textbf{Confidence Ratings}
To account for variability in the experimenters’ execution of the procedure, camera technique, maternal behavior, and other factors, a rating was made of the coder’s confidence in the score for each videotaped risky event (1 = \textit{very low confidence}, 5 = \textit{strong confidence}). An average confidence rating was computed from the individual ratings. Further information about the confidence rating is included in the administration and coding manual. Users of these data may want to consider omitting cases with low confidence ratings from analyses.

Trampoline = \textbf{INTRCONF}
\[ N = 111, \ M = 4.23, \ SD = 0.76, \ range = 1-5 \]

Box = \textbf{INBXCONF}
\[ N = 116, \ M = 4.52, \ SD = 0.60, \ range = 3-5 \]

Blood pressure cuff = \textbf{INBPCONF}
\[ N = 115, \ M = 3.93, \ SD = 1.00, \ range = 1-5 \]

Dinosaur = \textbf{INDICONF}
\[ N = 114, \ M = 4.23, \ SD = 1.02, \ range = 1-5 \]

Gorilla mask = \textbf{INMACONF}
\[ N = 114, \ M = 4.31, \ SD = 0.68, \ range = 2-5 \]

Clown = \textbf{INCLCONF}
\[ N = 115, \ M = 4.03, \ SD = 1.00, \ range = 1-5 \]

Average confidence rating = \textbf{INAVCONF}
\[ N = 116, \ M = 4.21, \ SD = 0.47, \ range = 2.83-5 \]

\textbf{Flags}
Flags were included in the coding scheme to document potentially problematic procedure administrations (scored 0 = no, 1 = yes). The scored flags included omitted prompts, delivery of incorrect prompts, delivery of extra prompts, and problematic experimenter animation for each videotaped risky event. These data are included in the raw data set INRISK36. Users of these data may want to consider omitting flagged cases from analyses involving risky events variables.
Interrater Reliability

Two raters scored inhibition videotapes for purposes of calculating interrater reliability on proximity to mother, exploration, and all risky events except the car (which was conducted in the hallway between the lab and the playroom and was not videotaped). Reliability ratings were conducted for 31 of 113 (27%) tapes that were scored for proximity and exploration, and 26 of 116 (22%) tapes that were scored for risky events. One of two types of reliability statistics, Cohen’s kappa coefficient or intraclass correlation, was computed depending on the type of variable.

<table>
<thead>
<tr>
<th></th>
<th>Intraclass $r$</th>
<th>Linear-weighted kappa</th>
<th>Unweighted kappa</th>
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Analysis Data Set
SS36MO

Raw Data Sets (see appended variable lists)
Scoring: INHIB36
Proximity & exploration, primary: INPREX36
Proximity & exploration, reliability: INPRX36R
Car: INCAR36
Risky events, primary: INRISK36
Risky events, reliability: INRSK36R
### VARIABLE LISTS FOR RAW DATA SETS

**INPREX36**
- **TSTARTM**: Time child enters room, minutes
- **TSTARTS**: Time child enters room, seconds
- **TTOUCHM**: Time child first touches object, minutes
- **TTOUCHS**: Time child first touches object, seconds
- **EXPROOM**: Experimenter in room during first touch (0 = no, 1 = yes)
- **PROX1-30**: Proximity to mother in 30-second intervals (coded 0, 1, or 2)
- **EXPENTER**: Interval # when experimenter entered room
- **EXPLEAVE**: Interval # when experimenter left room
- **CLOWNENT**: Interval # when clown entered room
- **EXPL1-22**: Exploration in 20-second intervals (coded 0, 1, or 2)
- **TUNNELEC**: Extra credit for going into tunnel (0 = no, 2 = yes)
- **MASKEC**: Extra credit for touching mask (0 = no, 2 = yes)
- **SLIDEEC**: Extra credit for going down the slide (0 = no, 2 = yes)
- **BOXEC**: Extra credit for putting hand in box (0 = no, 1 = yes)
- **LADDEREC**: Extra credit for going down slide (0 = no, 1 = yes)
- **TRAMPEC**: Extra credit for stepping on trampoline (0 = no, 1 = yes)

**INCAR36**
- **CAR**: Car inhibition score
- **CARL**: Car – child leaves car (0 = no, 1 = yes)
- **CARD**: Car – child distress (0 = no, 1 = yes)

**INRISK36**
- **TRAMP**: Tramp inhibition score
- **TRCONF**: Tramp confidence rating
- **TRAMPD**: Tramp distress score (0 = no, 1 = yes)
- **TRPOMIT**: Tramp prompts omitted (0 = no, 1 = yes)
- **TRPINCOR**: Tramp, incorrect prompts delivered (0 = no, 1 = yes)
- **TRPEXTR**: Tramp, extra prompts delivered (0 = no, 1 = yes)
- **TRANIM**: Tramp, animation problematic (0 = no, 1 = yes)
- **BOX**: Box inhibition score
- **BOXCONF**: Box confidence rating
- **BOXD**: Box distress score (0 = no, 1 = yes)
- **BPOMIT**: Box prompts omitted (0 = no, 1 = yes)
- **BPINCOR**: Box, incorrect prompts delivered (0 = no, 1 = yes)
- **BPEXTR**: Box, extra prompts delivered (0 = no, 1 = yes)
- **BANIM**: Box, animation problematic (0 = no, 1 = yes)
- **CUFF**: Cuff inhibition score
- **CUFFCONF**: Cuff confidence rating
- **CUFFD**: Cuff distress score (0 = no, 1 = yes)
- **CPOMIT**: Cuff prompts omitted (0 = no, 1 = yes)
- **CPINCOR**: Cuff, incorrect prompts delivered (0 = no, 1 = yes)
- **CPEXTR**: Cuff, extra prompts delivered (0 = no, 1 = yes)
- **CANIM**: Cuff, animation problematic (0 = no, 1 = yes)
- **MASK**: Mask inhibition score
- **MASKCONF**: Mask confidence rating
- **MASKD**: Mask distress score (0 = no, 1 = yes)
<table>
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<th>Variable</th>
<th>Description</th>
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