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# Disordered Eating Habits and Theory of Mind in Undergraduate Students

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#### Disordered Eating Habits and Theory of Mind in Undergraduate Students

A Thesis

Presented to the Department of Psychology

College of Liberal Arts and Sciences

and

The Honors Program

of

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In Partial Fulfillment

of the Requirements for Graduation Honors

Stephanie Kuhlman

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#### Abstract

Theory of mind, the ability to ascribe mental states to oneself and others, has intimate connections with mental disorders like autism and schizophrenia. Recent research has suggested a connection between eating disorders and theory of mind ability, but these findings have been mixed. The idea that disorders lie along a continuum (Johns & van Os, 2001) leads to the hypothesis that people with disordered eating habits will have a lesser theory of mind ability than those without. Data was collected on 25 undergraduate students at Butler University. Results showed a positive correlation between theory of mind and negative eating attitudes. Although the sample size was small, the present results suggest that individuals with more negative eating attitudes are better at understanding others' mental states.

Disordered Eating Habits and Theory of Mind in Undergraduate Students

Recent research has shown a significant impairment in theory of mind (ToM), the ability to recognize and attribute mental states to others, in female patients with anorexia nervosa (Russell, et al, 2009). However, the research on patients with other eating disorders, such as bulimia and binge eating disorder has been limited. Even scarcer than that is the exploration of ToM in subjects with non-diagnostic disordered eating habits. This thesis looks into a relationship between individuals with disordered eating habits and their theory of mind ability.

Eating disorders are mental illnesses characterized by specific disturbances in eating behavior. Anorexia includes a disturbance in perception of one's body weight or shape, energy intake restriction, and intense fear of weight gain. Bulimia is marked by frequent episodes of binge eating followed by behaviors like self-induced vomiting to lose weight. Recurrent episodes of eating large amounts of food are classified as binge-eating disorder (American Psychiatric Association, 2013). Non-diagnostic eating disorders include a range of these symptoms and others.

Lifetime prevalence of eating disorders among adults in the US population is about 5% (Le Grange, et al., 2012). The incidence of disordered eating behaviors is much higher, exhibited by up to 65% of US women (UNC Chapel Hill, 2008). Disordered eating habits include a wide range of behaviors, many of which are shared with diagnosable eating disorders. Examples of these habits include obsessive calorie counting, dieting, skipping meals regularly, fasting, and basing self-worth on body shape and weight (Fairburn and Harrison, 2003). A study by Krahn, et. al. (2005) found that two-thirds of college women exhibited intense dieting behavior. Individuals with these behaviors can be at risk for developing a full-blown eating disorder and are more likely to have depression and/ or anxiety (Striegel-Moore, 1997).

There are many different risk factors for developing an eating disorder including biological, social, and psychological aspects. Psychosocial risk factors include stress, low selfesteem, and abuse or adverse experiences (Palmer, 2008). Research has found that greater social skills can be protective in adolescents against developing eating disorders (Uzunian & Souza Vitalle, 2015). Often, eating disorders co-occur with depression and anxiety (American Psychiatric Association, 2013). Research on social cognitive abilities in individuals with eating disorders has only recently emerged (Pereira de Sampaio, et al., 2013).

One such social cognitive ability, theory of mind (ToM), is the ability to ascribe mental states to oneself and others, and to use that knowledge to explain and predict the behaviors of others (Tager-Flusberg & Sullivan, 2000). ToM is used in our everyday social interactions, and is closely related to social intelligence. Research has frequently shown that there is more than one component to theory of mind. For example, Tager-Flusber and Sullivan (2000) argue that there is both a social-cognitive and social-perceptual component of ToM. The social-cognitive component reflects peoples' ability to pick up on subtle conversational hints, decode ironic conversation, and understand that others can hold different beliefs based on different knowledge. The social-perceptual factor is less related to cognitive abilities and more focused on person perception, including the ability to make quick judgments about people's mental states from their facial and body expressions.

Theory of mind deficits are well established in both autism and schizophrenia. A core feature of autism is difficulty in understanding other minds (Baron-Cohen, 2000), and as a universal feature it has been extensively studied. Deficits in schizophrenia include false belief understanding, the ability to understand that someone can hold a belief different from reality, and intention interfering - the ability to infer a person's intentions from information in a short story

(Sprong, et al, 2007).

While most schizophrenia and autism research have found ToM deficits, there is growing evidence that ToM is a cross-diagnostic risk factor. For example, ToM deficits have been uncovered in disorders as diverse as Social Anxiety (e.g., Hezel & McNally, 2014), Depression (e.g., Zwick & Wolkenstein, 2017), and Attention Deficit/Hyperactivity Disorder (e.g., Mary et al., 2015). Perhaps unsurprisingly, researchers have also found ToM deficits in patients with Eating Disorders, though these deficits have not been as consistently identified as in many other disorders. One of the earliest eating disorder investigations of ToM (Tchanturia et al., 2004) justified their study by noting that a subgroup of individuals with eating disorders also have autism spectrum disorders. Interestingly, they found that anorexia nervosa patients without autistic features still showed impairment in ToM.

Given Tchanturia et al.'s findings, other researchers began to study ToM in a number of different eating disorders. For example, Laghi, et al. (2013) investigated theory of mind in young women with Bulimia Nervosa or EDNOS (eating disorder not otherwise specified; typically patients who did not purge frequently enough to meet DSM-IV diagnostic criteria for Bulimia). The individuals with eating disorders performed worse on theory of mind measures than healthy control participants. They also found that these subjects scored higher than controls on all psychopathological dimensions including perfectionism, depression, anxiety, and hostility.

Of course, the literature does not speak with a singular voice. Other studies such as Kenyon, et al. (2012) and Adenzato, et al. (2012) have not found any significant difference in ToM ability between patients with eating disorders and healthy controls. Adenzato, et al. (2012) examined both theory of mind and emotional functioning in patients with anorexia nervosa, and they found that only emotional functioning was impaired. Similarly, Kenyon, et al. (2012)

looked specifically at bulimia nervosa because of the major focus on AN in theory of mind research. A sample of eighty-two adults with BN showed no impairment on ToM relative to healthy age-matched female controls.

Similarly, Pereiera de Sampaio, et al. (2013) found significant impairments in anorexia nervosa patients compared to healthy controls. They investigated ToM in Anorexia, Bulimia, and healthy individuals using measures of both affective/perceptual Tom (the Reading the Mind in the Eyes Test) and cognitive/social ToM (the Faux Pas Test). Deficits were found in both domains in the AN group, but no deficits were found in bulimic individuals relative to the healthy control group.

One can observe that much research on anorexia seems to uncover ToM deficits, while research on other eating disorders is more mixed. On possible reason for this is that anorexia has long been acknowledged as differing from bulimia quantitatively, not qualitatively (Fairburn & Harrison, 2003). In other words, rather than being separate categories, anorexia is seen as a more severe version of the underlying pathologic factors that result in any eating disorder.

Thus, it is conceivable that these mixed results are due to differing severities of eating disruption. To investigate this possibility, it is necessary to examine the correlation between disordered eating and ToM in the non-diagnosable population. Disordered eating occurs at a much higher rate than diagnosable eating disorders (UNC Chapel Hill, 2008). The suggestion that symptoms of a disease lie along a continuum, not in discrete classes, began with Rose and Barker (1978). This research was continued in the psychiatric field by Johns and van Os (2001), looking into the continuity of psychotic symptoms in the general population. They argue that people are likely to experience lesser states of a disorder when it is caused by multiple factors, thinking of these lesser states, or symptoms, as risk factors for the disorder. Similarly, it makes

sense to look at the entire spectrum of disordered eating symptoms and whether ToM varies on that continuum. I hypothesize that those with more disordered eating habits with demonstrate increasingly impaired Theory of Mind.

#### Methods

Twenty-five undergraduate students at Butler University participated in this study for extra credit in their psychology classes. They were recruited through an online participant management system. In total, there were 8 males and 17 females, and the average age was 20 years old. Nineteen of the twenty-five participants were Caucasian, 4 Asian, 1 Black, and 1 Multiracial. Three of the participants had been previously diagnosed with a mental disorder.

The following eight instruments were used to measure theory of mind, disordered eating attitudes, depressive symptoms, anxiety, and demographics.

*Hinting task* (Greig, Bryson, & Bell, 2004: see Appendix). The Hinting Task, originally developed by Corcoran, Mercer, & Frith (1995) and adapted for North American use by Greig et al., is a very commonly used Theory of Mind measure (Bora et al., 2009) and requires participants to make inferences about someone's intended meaning. The Hinting task measures the social-cognitive domain of ToM (Tager-Flusberg & Sullivan, 2000). The original Hinting task consisted of 10 brief vignettes describing interactions between two characters where one character provides a fairly obvious hint to the other character. Participants hear each vignette and are asked by the experimenter what the main character "really means." A correct answer at this point receives a score of 2. If the participant offers an answer other than the correct one, the experimenter offers a second prompt and a correct answer receives a score of 1. An incorrect response receives a score of 0. The version of the Hinting task that was used in the present study was adapted from the original to better assess ToM in a healthy population (Martin et al., 2016).

The first 10 items of the measure are the original Corcoran/Greig Hinting task; the remaining items were constructed by members of our research team or adapted from the items other researchers have appended to the original Hinting task. The new Hinting task is comprised of 42 items and has demonstrated good internal consistency (alpha = .73; Martin et al., 2016).

*Reading the Mind in the Eyes Test-Revised* (Eyes; Baron-Cohen, Wheelwright, Hill, Raste, & Plumb, 2001; see Appendix). The Eyes test is one of the most widely used Theory of Mind measures (Bora et al., 2009) and requires participants to decode complex mental states in others. Consisting of 36 photos, cropped to include only a person's eyes, it measures the social-perceptual domain of ToM (Tager-Flusberg & Sullivan, 2000). Participants are asked to choose from four adjectives surrounding each photo the one that best describes the mental state of the individual in the photo. Participants' answers are coded either correct=1 or incorrect=0, yielding a possible range of 0-36. The Eyes test has good reliability (KR-20 = .55 [Baron-Cohen et al., 2001]; test-retest r = .60 [Hallerback, Lugnegard, Hjarthag, & Gillberg, 2009]) and validity (Cohen's d distinguishing autistic patients from controls = .90 [Bora et al., 2009]; correlation with autism questionnaire scores = -.53 [Baron-Cohen et al., 2001]).

*Story Comprehension Task* (SCT; Langdon & Coltheart, 2004; see Appendix). The SCT taps a different dimension of ToM than either the Eyes or the Hinting tasks: the perception of indirect (metaphorical, ironic) communication. This measure is comprised of 96 brief (2-3 sentence) vignettes where the participant is asked to indicate whether one of the characters in the vignette says "something that a person might say in that situation." "Yes" responses may be either ironic, a figure of speech, or literally appropriate, while "no" responses are nonsense (see appendix for examples). The number of correct responses were summed to yield a total score (0-96) and scores on each of the dimensions (sarcasm, metaphor, literal – 0-16 each; nonsense 0-

48).

*Eating Attitudes Test* (EAT; Garner & Garfinkel, 1979; see Appendix). The EAT is a 40item scale that measures behaviors and attitudes that are characteristic of anorexia nervosa. This is used to assess individuals' negative attitudes toward food and eating. For each question, participants rate how often the statement is true for them on a scale of 1 *Always* to 6 *Never*. Questions cover a variety of eating attitudes and behaviors (e.g., "Like eating with other people" or "Eat diet foods"). This test was selected due to its high internal reliability, with an alpha of .94 (Garner & Garfinkel, 1979).

*Restraint Scale* (RS; Herman, 1978; see Appendix). The RS is a 10-item scale that measures efforts to control eating. There are various question types in this scale. Some questions ask participants to select a number range of their weight loss or gain (e.g., "What is your maximum weight gain within a week?"). Other questions assess how often the participants feel, think, or act in relation to specific eating situations on a scale of 0 *Never* to 3 *Always* (e.g., "Do you eat sensibly in front of others and splurge alone?"). This test was selected because it specifically targets the theme of controlling or restraining eating, which may be an indicator of dysfunctional attitudes toward food.

*Center for Epidemiologic Studies – Depression Scale* (CES-D; Radloff, 1977; see Appendix). The CES-D is a well-validated and widely used measure of depressive symptoms. It is a 20 item self-report measure with each Likert scale ranging from 0-3, yielding a possible range of 0-60. It is particularly useful for identifying a range of depressive symptoms in non-clinical samples (Edwards, Cheavens, Heiy, & Cukrowicz, 2010) and has shown strong reliability (Cronbach alpha = .85; Radloff, 1977). It was included in the present study because depressive symptoms are commonly correlated with disordered eating.

*Beck Anxiety Inventory* (Beck, 1988; see Appendix). The BAI is a 21-item scale that measures common symptoms of anxiety experienced over the past week. The items include symptoms like "unable to relax", "fear of the worst happening", and "difficulty breathing." Each symptom is measured on a scale from "not at all" to "severely". This measure is being included because anxiety is often correlated with disordered eating.

*Demographic Questionnaire* (see Appendix). Participants completed a demographic questionnaire assessing, among other variables, their age, race, gender, and psychiatric history.

*Procedure*. Following informed consent, participants completed the ToM measures (Hinting, SCT, Eyes) and the self-report measures of disordered eating (EAT, RS) and covariates (CES-D, BAI, Demographics). Following this, participants were thanked for their time and any questions they had about the study procedures were answered if possible. The entire study took approximately 60 minutes to run.

#### Results

*Preliminary Analyses* To evaluate the impact of demographic variables (including depressive and anxiety symptoms) on the constructs of disordered eating and Theory of Mind, a series of correlations and ANOVAs were conducted. There were no significant relationships, so demographic and depressive/anxious symptomology variables will not be considered as covariates in the ensuing analyses.

*Main Analyses* Table 1 shows that participants who scored higher on the Eating Attitudes Test (EAT) also scored higher on certain measures of Theory of Mind. The Eyes Test and the Story Comprehension Task (SCT) both show significant positive correlations with the EAT, suggesting that individuals with more negative attitudes toward food showed an increased ability on these two measures of ToM. The Eyes Test measures the ability to detect others' emotions,

and the SCT measures the ability to detect sarcasm and ironic communication. Individuals with more negative eating attitudes scored highest on the SCT Sarcasm component and somewhat higher on the Literal and Metaphor subscales. There were no significant results on the SCT Nonsense score, suggesting that high scorers on the EAT are no better or worse than low scorers in detecting conversational non-sequiturs. There was a nonsignificant positive trend between the Restraint Scale and the Hinting Task (r(24) = .280). Like the relationship uncovered with the EAT, more disordered eating habits were associated with increased ToM.

|                     | Eating Attitudes Test | Restraint Scale |
|---------------------|-----------------------|-----------------|
| Hinting Total Score | 0.059                 | 0.28            |
| Eyes Total Score    | .466**                | 0.132           |
| SCT Total Score     | .427**                | 0.179           |
| SCT Literal Score   | .453**                | 0.232           |
| SCT Metaphor Score  | .475**                | 0.376*          |
| SCT Sarcasm Score   | .522***               | 0.269           |
| SCT Nonsense Score  | 0.281                 | -0.101          |

Table 1. Correlations between disordered eating and theory of mind. (n=25).

Note \*p<.10, \*\*p<.05, \*\*\*p<.01. SCT = Story Comprehension Task

Because disordered eating habits occur differentially between males and females (Striegel-Moore, et al., 2009), I also examined the main hypothesis of this study using only data from female participants. When analyzing data from the female-only sample, a positive correlation between Restraint and ToM once again emerged (Table 2), though there were differences between the female-only sample and mixed-gender sample. Most prominently, the Restraint Scale – a measure of dietary restraint and dysfunctional eating behaviors – was most strongly associated with ToM. Significant positive correlations between the RS and the SCT emerged. All ACT subscales excepting Nonsense were significantly positively related to Restraint. Negative eating attitudes were still positively correlated with ToM, but only the SCT Literal component was significantly related.

|                     | Eating Attitudes Test | Restraint Scale |
|---------------------|-----------------------|-----------------|
| Hinting Total Score | -0.055                | 0.23            |
| Eyes Total Score    | 0.33                  | 0.25            |
| SCT Total Score     | 0.272                 | .469*           |
| SCT Literal Score   | .415*                 | .569**          |
| SCT Metaphor Score  | 0.29                  | .516**          |
| SCT Sarcasm Score   | 0.381                 | .459*           |
| SCT Nonsense Score  | -0.083                | 0.037           |

Table 2. Correlations between disordered eating and theory of mind in a female-only sample (n=17)

Note \*p<.10, \*\*p<.05, \*\*\*p<.01. SCT = Story Comprehension Task

#### Discussion

The present study was an examination of the relationship between dysfunctional attitudes toward eating and Theory of Mind. I hypothesized that individuals with more disordered eating habits would have a more impaired ToM. In fact, the opposite was found: individuals with more negative attitudes toward food had a heightened ToM ability. Individuals with more negative eating attitudes performed better on both perceiving emotions and decoding indirect

(metaphorical, ironic) communication.

One interpretation of these results stems from the idea that people with disordered eating habits think more about others' opinions. Disordered eating has a lot to do with body image, which is integrally related with how one thinks other people perceive them (Carey, et al., 2014). People with a negative body image spend time thinking about their own body in comparison to others, and they try to predict what others will think of their body. Along with the tendency toward perfectionism, passing so much time thinking about what others believe could lead to a higher ToM ability.

One problem with this interpretation is that, typically, individuals with eating disorders do not always correctly judge others' thoughts of them. Part of an eating disorder is the inappropriate perception of one's body (American Psychiatric Association, 2013). Theory of Mind does not measure how often one is thinking about others' opinions, but how well one is able to interpret thoughts and behaviors.

It has been shown that disordered eating is influenced by both perceived social norms and peer norms (Gerbasi, et al., 2014). Perceived dieting among one's friend group and within society increases the likelihood of disordered eating. Also, upward body comparison (comparison to someone more attractive) is correlated with disordered eating behavior (Pinkasavage, et al., 2015). Thus, eating attitudes and behaviors are obviously related to the thoughts and perceptions of others. There is a clear social aspect to disordered eating: the question is whether these individuals are more socially competent or not. The present results suggest they are.

It is also possible that significant theory of mind deficits only occur in patients with serious eating disorders, as found in some of the previously cited literature. As many disorders

occur along a continuum (Johns & van Os, 2001), and there is significant evidence that eating disorders in particular differ quantitatively from non-diagnosable disordered eating (Fairburn & Harrison, 2003), it is reasonable to look at ToM ability across a wide range of eating habits. However, it could be that less severely disordered eating is simply not related to theory of mind ability.

The measures of Theory of Mind used in this study each measure a different type of ToM. The Hinting Task measures the social-cognitive domain, which is how an individual's knowledge is related to their social interactions. The SCT measures perception of indirect (metaphorical, ironic) communication, or how well people can interpret unstated meanings in conversation. The Eyes Test measures the social-perceptual domain, which is how well an individual can perceive another person's thoughts or emotions from their expression. It is not clear why there were no significant results on the Hinting Task. It is possible that there was variation among the experimenters running the Hinting Task; it is read aloud, while all other measures are done on paper. It is also possible that this facet (social-cognitive) of ToM is not related to differences in eating attitudes. Obviously, such possibilities are speculative, and additional research is required to address them. The largest correlation between disordered eating and Theory of Mind was found on the Story Comprehension Task. This seems to be the least likely result with what has been said about disordered eating and social perception. People with eating disorders have misconceptions of themselves (American Psychiatric Association, 2013), which does not agree with the idea that these individuals have an increased perception of others.

The social-perceptual domain measured by the Eyes Test is closely linked to the idea that eating habits are related to social interactions. Studies have shown that eating habits change depending on the people an individual is eating with (Higgs & Thomas, 2015). For example, we

tend to eat less when others do. Because the Eyes Test primarily measures the quick perception of others' emotions, this could be relevant to an individual's eating habits in social situations. If individuals interpret others' emotions while eating, this could have an influence on how they think about food. Over a period of time this could lead to negative attitudes toward eating.

An alternative interpretation of the present results may have to do with potential unmeasured third variables. For example, individuals with eating disorders score higher on measures of perfectionism (Lahgi, et al., 2013). Because of the present study's surprising findings, it is relevant to revisit this idea. Because individuals with high levels of perfectionism are overly concerned with others' impressions of them (Sassaroli, et al., 2008), that might mitigate ToM impairment due to disordered eating. Because perfectionism was not measured in the present study, it is possible it affected these results. It is also possible that perfectionism was involved in the procedure of this study. The study ran at least an hour for each participant, and it could be that participants with more perfectionist tendencies spent more time on the measures (especially the 96 item SCT). Future research on this topic should include a measure of perfectionism in order to partial its effects out of the relationship between ToM and dysfunctional eating attitudes. Further, future research should also include other measures of the social aspect of ToM, specifically measuring ironic or indirect communication beyond the SCT.

One major future direction is the collection of more data. The current sample size is 25 undergraduate students, but as that increases the trends should become clearer. With this small of a sample, it is always possible that the results were due simply to random chance, and therefore not indicative of a "true" difference in the population. Given the central limit theorem, smaller samples from a population have greater probability of producing means that are discrepant from the "true" population mean. Therefore, it is possible that the present surprising results are an

artifact of the sample size and not due to a reliable effect in the population. Clearly, what is needed is a larger sample and therefore a greater probability of detecting the "true" underlying effect.

Another direction to look is in the population outside of undergraduate students. There is likely much more variation in eating habits in the general population compared to the group of students studied at Butler University. A bigger, broader sample would show us whether these results are generalizable to the whole continuum of eating attitudes and habits. Another future direction would be to look into the population of people with diagnosable eating disorders.

As correlation does not mean causation, we do not know if heightened Theory of Mind causes negative eating attitudes or vice versa. To study this, researchers could run a longitudinal study on individuals from childhood, measuring eating attitudes and theory of mind over time. For example, if ToM ability stays consistently high over time, and eating attitudes become negative in adolescence, we could draw the arrow from ToM to eating attitudes. There is much more to be researched in this field to discover the relationship between ToM and disordered eating habits. For now, we know that there is a possible positive relationship between ToM and negative eating attitudes.

#### References

- Adenzato, M., Todisco, P., Ardito, R. 2012. Social cognition in anorexia nervosa: evidence of preserved theory of mind and impaired emotional functioning. *PLOS.* 7(8).
- American Psychiatric Association. 2013. *Diagnostic and statistical manual of mental disorders* (5<sup>th</sup> ed.). Washington, DC: Author.
- Baron-Cohen. 2000. Theory of mind and autism: a review. *International Review of Mental Retardation*. 23, 169-184.
- Baron-Cohen, S., Wheelwright, S., Hill, J., Raste, Y., Plumb, I. 2001. The "reading the mind in the eyes" test revised version: a study with normal adults, and adults with Asperger syndrome or high-functioning autism. *J. Child Psychol. Psychiat.* 42: 241-251.
- Beck, AT., Epstein, N., Brown, G., Steer, RA. 1988. An inventory for measuring clinical anxiety: psychometric properties. *J Counsult Clin Psychol.* 56:893-893.
- Bora, E., Yucel, M., Pantelis, C. 2009. Cognitive endophenotypes of bipolar disorder: a metaanalysis of neuropsychological deficits in euthymic patients and their first-degree relatives. *J Affect. Disord.* 113: 1-20.
- Carey, RN., Donaghue, N., Broderick, P. 2014. Body image concern among Australian adolescent girls: The role of body comparisons with models and peers. *Body Image*, 11: 81-84.
- Corcoran, R., Mercer, G., Frith, CD. 1995. Schizophrenia, symptomatology, and social inference: investigating "theory of mind" in people with schizophrenia. *Schizophr Res.* 17: 5-13.
- Edwards, M.C., Cheavens, J.S., Heiy, J.E., Cukrowicz, K.C. 2010. A reexamination of the factor structure of the center for epidemiologic studies depression scale: is a one-factor model plausible? *Psychological Assessment*. 22:711-715.
- Fairburn, C., Harrison, P. 2003. Eating disorders. The Lancet. 361: 407-416.
- Garner, D.M., Garfinkel, P.E. 1979. The eating attitudes test: an index of the symptoms of anorexia nervosa. *Psychological Medicine*. 9: 273-279.

Gerbasi, M.E., Richards, L.K., Thomas, J.J., Agnew-Blais, J.C., Thompson-Brenner, H., Gilman,

- S.E., Becker, A.E. 2014. Globalization and eating disorder risk: peer influence, perceived social norms, and adolescent disordered eating in Fiji. *International Journal of Eating Disorders*, 47: 727-737.
- Greig, TC., Bryson, GJ., Bell, MD. 2004. Theory of mind performance in schizophrenia: diagnostic, symptom, and neuropsychological correlates. *J Nerv Ment Dis.* 192: 12-18.

- Hallerback. M., Lugnegard, T., Hjarthag, F., Gillberg, C. 2009. The reading the mind in the eyes test: test-retest reliability of a Swedish version. *Cognitive Neuropsychiatry*. 14:127-143.
- Herman, CP., Polivy, J., Pliner, P., Threlkeld, J., Munic, D. 1978. Distractibility in dieters and nondieters: an alternative view of "externality." *J Pers Soc Psychol.* 36: 536-548.
- Hezel, D.M., McNally, R.J., 2014. Theory of mind impairments in social anxiety disorder. *Behavior Therapy*, 45: 530-540.
- Higgs, S., Thomas, J. 2015. Social influences on eating. *Current Opinion in Behavioral Sciences*, 9: 1-6.
- Johns, L., van Os, J. 2001. The continuity of psychotic experiences in the general population. *Clinical Psychology Review*. 21: 1125-1141.
- Kenyon, M., Samarawickerma, N., DeJong, H., Van den Eynde, F., Startup, H., Lavender, A., Goodman-Smith, E., Schmidt, U. 2011. Theory of mind in bulimia nervosa. *International Journal of Eating Disorders*. 45: 377-384.
- Krahn, D., Kurth, C., Gomberg, E., Drewnowski, A. 2005. Pathological dieting and alcohol use in college women a continuum of behaviors. *Eating Behaviors*. 6: 43-52.
- Kulakowska, D. Biernacka, K. Wilkos, E., Rybakowski, F., Kucharska-Pietura, K. 2014. Neurocognitive and social cognitive deficits in patients with anorexia nervosa. *Psychiatr. Pol.* 48: 465-475.
- Kurth, CL, Krahn, DD, Nairn, K, Drewnowski, A. 1995. The severity of dieting and bingeing behaviors in college women: interview validation of survey data. *J Psychiatr Res.* 29: 211-25.
- Laghi, F., Cotugno, A., Cecere, F., Sirolli, A., Palazzoni, D., Bosco, F. 2013. An exploratory assessment of theory of mind and psychological impairment in patients with bulimia nervosa. *British Journal of Psychology*, 105: 509-523.
- Langdon, R., Coltheart, M. 2004. Recognition of metaphor and irony in young adults: the impact of schizotypal personality traits. *Psychiatry Res.* 125: 9-20.
- Le Grange, D., Swanson, S., Crow, S., Merikangas, K. 2012. Eating disorder not otherwise specified presentation in the US population. *International Journal of Eating Disorders*. 45: 711-718.
- Mary, A., Slama, H., Mousty, P., Massat, I., Capiau, T., Drabs, V., Piegneux, P. 2015. Executive and attentional contributions to theory of mind deficit in attention deficit/hyperactivity disorder (ADHD). *Child Neuropsychology*, 22:345-365.

- Palmer, B. 2008. Causes of eating disorders. In J. Morris (Ed.) *ABC of eating disorders* (pp. 5-7). Chichester, UK: Blackwell.
- Pereira de Sampaio, F., Soneira, S., Aulicino, A., Allegri, R. 2013. Theory of mind in eating disorders and their relationship to clinical profile. *European Eating Disorders Review*. 21: 479-487.
- Pinkasavage, E., Arigo, D., Schumacher, L. 2015. Social comparison, negative body image, and disordered eating behavior: The moderating role of coping style. *Eating Behaviors*, 16: 72-77.
- Radloff, LS., 1977. The CES-D Scale. A self-report depression scale for research in the general population. *Applied Psychological Measurement*. 1: 385-401.
- Rose, G., Barker, DJ. 1978. What is a case? Dichotomy or continuum? *British Medical Journal*. 2: 873-874.
- Russell TA, Schmidt U, Doherty L, Young V, Tchanturia K. 2009. Aspects of social cognition in anorexia nervosa: Affective and cognitive theory of mind. *Psychiatry Res.* 168: 181-185.
- Sassaroli, S., Lauro, L., Ruggiero, G., Mauri, M., Vinai, P., Frost, R. 2008. Perfectionism in depression, obsessive-compulsive disorder and eating disorders. *Behavior Research and Therapy*, 46: 757-765.
- Sprong, M., Schothorst, P., Vos, E., Hox, J., van Engeland, H. 2007. Theory of mind in schizophrenia. *British Journal of Psychiatry*. 191:5-13.
- Striegel-Moore, RH., Rosselli, F., Kraemer, HC. 2009. Gender difference in the prevalence of eating disorder symptoms. *The International Journal of Eating Disorders*, 42: 471-474.
- Striegel-Moore, RH. 1997. Risk factors for eating disorders. *Adolescent Nutritional Disorders; Prevention and Treatment.* 817: 98-109.
- Tager-Flusberg, H., Sullivan, K. 2000. Componential view of theory of mind: evidence from Williams syndrome. *Cognition*. 76: 59-90.
- Tchanturia, K., Happe, F., Godley, J. Treasure, J., Bara-Carril, N., Schmidt, U. 2004. 'Theory of mind' in anorexia nervosa. *European Eating Disorders Review*. 12: 361-366.
- UNC Chapel Hill. 2008. Three out of four American women have disordered eating.
- Uzunian, LG, Souza Vitalle, M. 2015. Social skills: a factor of protection against eating disorders in adolescents. *Ciencia & Saude Coletiva*. 20.
- Werden, D., Elikann, L., Liinster, H., Dykierek, P., Berger, M. 2008. Theory of mind and depression an explorative study including narrative ToM-performances. *Annals of*

General Psychiatry. 7.

- Woodward, TS. Jung, K., Hwang, H., Yin, J., Taylor, L., Menon, M., Peters, E., Kuipers, E.,
  Waters, F., Lecomte, T., Sommer, I., Daalman, K., van Lutterveld, R., Hubl, D., Kindler,
  J., Homan, P., Badcock, J., Chhabra, S., Cella, M., Keedy, S., Allen, P., Mechelli, A.,
  Preti, A., Siddi, S., Erickson, D. 2014. Symptom dimensions of the psychotic symptom
  rating scales in psychosis: a multisite study. *Schizophrenia Bulletin*. 40: S265-S274.
- Zwick, J.C., Wolkenstein, L. 2017. Facial emotion recognition, theory of mind and the role of facial mimicry in depression. *Journal of Affective Disorders*, 210: 90-99.

### **HINTING TASK**

#### Instructions:

I am going to read you a set of stories involving two people. Each story ends with one of the characters saying something. After I've read each story, I'm going to ask you some questions about what the character meant. Listen carefully to each story.

#### Scoring Criteria:

Score 2--If correct interpretation is given on first try. If incorrect response is give first, read the additional prompt. Score 1--If correct on second trial. Score 0-- if response is a paraphrase of what the character said. (Total possible score is 84)

#### TOTAL SCORE:

1. George arrives in Angela's office after a long and hot journey down the highway. Angela immediately begins to talk about some business ideas. George interrupts Angela saying: My, My! It was a long, hot journey down the highway. Question: What does George really mean when he says this?

| Prompt: | George goes on to say, | "I'm parched!" | Question: | What does | George want Angela to do? |  |
|---------|------------------------|----------------|-----------|-----------|---------------------------|--|
|---------|------------------------|----------------|-----------|-----------|---------------------------|--|

Answer Key: 1. Long Journey: (George is tired and doesn't want to talk business immediately; --OR-- He'd like a little rest and something to drink).

SCORE: Response 1: Response 2:

2. Melissa goes to the bathroom to take a shower. Anne has just had a bath. Melissa notices that the bathtub is dirty so she calls upstairs to Anne, "Couldn't you find the Ajax, Anne?" Question: What does Melissa really mean when she says this?

Prompt: Melissa goes on to say, "You're very lazy sometimes Anne." Question: What does Melissa want Anne to do?

Answer Key: 2. Dirty Bath: (Why didn't you clean the bathtub? --OR-- Please clean the bathtub).

SCORE: Response 1: Response 2:

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|   |                     | ID                 |
|---|---------------------|--------------------|
| Gordon goes to the supermarket with his mother. They arrive at the cookie aisle | . Gordon says, "Wow | ! Those Oreos look |
| delicious." Question: What does Gordon really mean when he says this?           |                     |                    |

3.

| -      | Answer Key: 3. Oreos: (Can you buy me some Oreos, Mom?OR I want Oreos).   |
|--------|---|
| 2      | SCORE: Response 1: Response 2:  |
|        |   |
|        | Paul has to go to an interview and he's running late. While he is cleaning his shoes, he says to his wife, "Jane, I want to that blue shirt but it's very wrinkled." <b>Question:</b> What does Paul really mean when he says this?     |
| F      | <b>Prompt:</b> Paul goes on to say, "It's in the ironing basket." <b>Question:</b> What does Paul want Jane to do?  |
| 1      | Answer Key: 4. Wrinkled Shirt (Would you iron my shirt for me?)   |
|        | SCORE: Response 1: Response 2:  |
|        | Lucy is broke but she wants to go out in the evening. She knows that David has just been paid. She says to him, "I'm f<br>broke!" "Things are so expensive these days." <b>Question:</b> What does Lucy really mean when she says this? |
|        | <b>Prompt:</b> Lucy goes on to say, "Oh well, I suppose I'll have to miss my night out." <b>Question:</b> What does Lucy want Da do?  |
| _      | Answer Key: 5. Flat Broke (Could you lend me some money?OR Would you take me out tonight)   |
|        | SCORE: Response 1: Response 2:  |
| [<br>r | Donald wants to run a project at work but Richard, his boss, has asked someone else to run it. Donald says, "What a p<br>not too busy at the moment." <b>Question</b> : What does Donald really mean when he says this?                 |
| -      | Prompt: Donald goes on to say, "That project is right up my alley." Question: What does Donald want Richard to do?  |

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Rebecca's birthday is approaching. She says to her Dad, "I love animals, especially dogs." **Question:** What does Rebecca really mean when she says this? 7.

8.

9.

10.

| Prompt:    | Rebecca goes on to say, | "Will the pet shop be | open on my birthday, | Dad?" | Question: | What does R | ebecca want |
|------------|-------------------------|-----------------------|----------------------|-------|-----------|-------------|-------------|
| her Dad to | o do?                   |                       |                      |       |           |             |             |

| Answer Key: 7. Birthday Present (Would you buy me a pupp  | y for my birthday?0           | DR I want a puppy for my birthday).    |
|---|-------------------------------|--|
| SCORE:  | Response 1:                   | Response 2:                            |
| Betty and Michael moved into their new house a week ago. Bet<br>you unpacked those shelves we bought, Michael?" <b>Question:</b> V          |                               |  |
| <b>Prompt:</b> Betty goes on to say, "If you want something you have to do?   | e to do it yourself!" Q       | uestion: What does Betty want Michael  |
| Answer Key: 8. Glassware (Could you put the shelves up?)  |                               |  |
| SCORE:  | Response 1:                   | Response 2:                            |
| Jessica and Max are playing with a train set. Jessica has the bl<br>don't like this train." <b>Question</b> : What does Jessica want Max to | ue train and Max has<br>o do? | s the red one. Jessica says to Max, "I |
| Prompt: Jessica goes on to say, "Red is my favorite color!" Qu  | estion: What does             | Jessica want Max to do?                |
| Answer Key: 9. Train Set (Can we trade trains?OR I want   | the red train).               |  |
| SCORE:  | Response 1:                   | Response 2:                            |
| Patsy is getting off the train with three heavy suitcases. John is suitcases are a nuisance." <b>Question:</b> What does Patsy mean v       |                               | . Patsy says, to John, "Gosh! These    |
|   |                               |  |
| <b>Prompt:</b> Patsy goes on to say, "I don't know if I can manage al   | I three. "Question: V         | Vhat does Patsy want John to do?       |
|   |                               |  |
| Answer Key: 10. Heavy Suitcases (Could you help me with th  | ese suitcases?)               |  |

| Steve is at a party hosted by Tim. Steve is talking to Tim, but Tim says very little. Tim keeps glancing around and picki trash. Tim keeps glancing toward the door, and says, "hey, let's keep talking about this." <b>Question:</b> What does Tim reamean when he said this? |
|--|
| Prompt: Tim goes on to say, "wow, is that the time?" Question: What does Tim want Steve to do?   |
|  |
| Answer Key: 11. Party (Leave because the party's over)   |
| SCORE: Response 1: Response 2:   |
| Jane and Trevor are going out to eat and Jane is driving. A song comes on the radio and Trevor sighs and says, "wow, a really great song." <b>Question:</b> What does Trevor want Jane to do?  |
| <b>Prompt:</b> Trevor goes on to say, "do you only have one song?" <b>Question:</b> What does Trevor want Jane to do?  |
|  |
| Answer Key: 12. Song (Change the song)   |
| SCORE: Response 1: Response 2:   |
| Julie is going on a job interview and she is wearing her best party dress. Julie sees her friend Kate on the way to the interview. Kate says, "well, they'll certainly remember you." <b>Question:</b> What does Kate mean when she says this?                                 |
| <b>Prompt:</b> Kate goes on to say, "are you sure you won't be cold?" <b>Question:</b> What does Kate mean when she says this?   |
| Answer Key: 13. Dress (Kate thinks Julie's dress is too revealing (inappropriate) for a job interview)   |
| SCORE: Response 1: Response 2:   |
| Shannon decided to bake cookies for a get-together. She gives her friend, Kim, a cookie to try before the party. After K takes a bite, she looks at the cookie and says, "What a distinct taste it has." <b>Question:</b> What does Kim mean when she this?                    |
| Prompt: Kim goes on to say, "Is it your own recipe?" Question: What does Kim mean when she says this?  |
|  |

15.

|    | rompt: Nicole begins to crunch on her chip  | os. Taylor takes and        | other deep sigh. Que     | stion: What does Taylor mean by t       |
|----|---|-----------------------------|--------------------------|---|
| A  | nswer Key: 15. Chips (Taylor finds Nicole   | e's eating to be dist       | racting)                 |   |
|    |   | SCORE:                      | Response 1:              | Response 2:                             |
| s  | arol and Ed are working on a final paper fo<br>tates, "If I don't do well on this paper I won't<br>ood at writing history papers?" <b>Question:</b> N | get into med schoo          | ol, but I have so little | time. Do you know anyone who is re      |
| P  | <b>rompt:</b> Ed goes on to say, "You're a histor   | ry major, right?" <b>Qu</b> | estion: What does E      | d really mean when he says this?        |
| A  | nswer Key: 16. Paper (Can you help me   | write my paper?)            |                          |   |
|    |   | SCORE:                      | Response 1:              | Response 2:                             |
| tł | Iden and Christian are roommates. Alden's<br>ne living room at Alden watching TV and say<br>ver." <b>Question:</b> What does Christian mear           | ys, "It's amazing ho        | w many dishes we go      |   |
| P  | <b>rompt:</b> Christian goes on to say, "I hope the christian really mean when he says this?  | ne dishes don't star        | t to smell if they aren  | t washed tonight." <b>Question:</b> Wha |
| -  |   | s in the kitchen)           |                          |   |
| A  | nswer Key: 17. Dishes (clean up the mes   | ,                           |                          |   |
| A  | nswer Key: 17. Dishes (clean up the mes   |                             | Response 1:              | Response 2:                             |
| А  | <b>Inswer Key</b> : <b>17. Dishes</b> (clean up the mesh<br>bby and Jane are getting ready to go out to<br>bby says, "my car is parked down at the ve | SCORE: the movie theater.   | They are going back      | and forth trying to decide who will o   |

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| 9. | Jack is a soccer player and Colgan is a football player, and the two of them are housemates. Jack is up late studying as Colgan is packing for an away game. Colgan's footsteps through the house prompt Jack to say, "I guess they don't pride you guys being light on your feet in football, huh?" <b>Question:</b> What does Jack mean when he says this? |
|    | <b>Prompt:</b> Colgan responds, "What do you mean?" Jack says, "I'm just trying to focus on my studying." <b>Question:</b> What does Jack mean when he says this?  |
|    |  |
|    | Answer Key: 19. Footsteps (be quiet)   |
|    | SCORE: Response 1: Response 2:   |
| 0. | Emma and Carol are roommates and each is getting ready for school. Carol's favorite shirt is missing, but she sees it on Emma's bed. Carol calls to Emma, "What do you plan on wearing today?" <b>Question:</b> What does Carol really mean when she says this   |
|    | Prompt: Carol goes on to say, "Funny how my clothes keep walking away." Question: What does Carol want Emma to do?   |
|    | Answer Key: 20. Shirt (Ask before borrowing her clothes)   |
|    | SCORE: Response 1: Response 2:   |
| 1. | Rose is studying in her room when Kara, her next-door-neighbor comes in and starts talking loudly. Rose says, "Say, is Katie home next door?" <b>Question:</b> What does Rose mean when she says this?   |
|    | <b>Prompt:</b> Rose goes on to say, "I sure have a lot of reading for tomorrow." <b>Question:</b> What does Rose want Kara to do?  |
|    | Answer Key: 21. Piss off (go away)   |
|    | SCORE: Response 1: Response 2:   |
| -  | Two customers are talking at the table after they finish eating dinner and paying the check at a restaurant. The server takes away their dishes away and is cleaning up the surrounding area. <b>Question:</b> What does the server want the customers to do?  |
|    | <b>Prompt:</b> The server goes on to say, "Would you like a to-go cup?" <b>Question:</b> What does the server want them to do?   |
|    | Answer Key: 22. Lingerers (leave the restaurant)   |

| Prompt:             | Sara goes on to say, "I really want to go, but I don't want to go alone." Question: What does Sara want Jake  |
|---------------------|---|
| Answer              | Key: 23. Party (ask her to go to the party)   |
|                     | SCORE: Response 1: Response 2:  |
|                     | nade some cupcakes for her coworkers, but she couldn't go to work because of the weather. Joel's office was bel asked, "Debbie, whatever will you do with all those cupcakes?" <b>Question:</b> What does Joel mean when he |
| Prompt:             | Joel goes on to say, "Are you sure they won't go bad?" Question: What does Joel want Debbie to do?  |
| Answer              | Key: 24. Cupcakes (give him the cupcakes to take to his office)   |
|                     | SCORE: Response 1: Response 2:  |
| Gerard a himself to | nd Luc are old friends finishing up their meals at a restaurant. Just before the two finish their last bite Gerard o<br>o the washroom. <b>Question:</b> What does Gerard want Luc to do?                                   |
| Prompt:             | Upon Gerard's return he says, "I seem to have misplaced my wallet" Question: What does Gerard want Luc  |
| Answer              | Key: 25. Frenchy (pay for dinner)   |
|                     | SCORE: Response 1: Response 2:  |
|                     | Tom are roommates and both are taking the same class in college. Jon says, "Hey Tom, are you going to cla <b>Question:</b> What does Jon mean when he says this?  |
|                     |   |

SCORE: Response 1: \_\_\_\_\_ Response 2: \_\_\_\_\_

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27.

|   | arol then pulls open the curtains  | s and says, "See?"   | uestion: What do   | es Carol want Rich to do?  |                                 |
|---|--|--|--|--|---------------------------------|
|   |  |  |  |  |                                 |
| Answerl   | ey: 27. Cheer up (Come outsid  | le with her)   |  |  |                                 |
|   |  |  | Response 1:  | Response 2:  |                                 |
|   | to her friend Addie, "I want to pa<br>Katie want Addie to do?  |  |  |  |                                 |
| Prompt:   | atie goes on to say, "You're pre   | tty crafty, aren't you?  | " Question: What   | does Katie want Addie to do  | ?                               |
| Answer I  | ey: 28. Paint (Help her pick pai   |  |  |  |                                 |
|   |  | SCORE:   | Response 1:  | Response 2:  |                                 |
|   | niking in the woods with his uncl<br>Ted really mean when he asks  |  | h, "what do you thir   | nk of those running watches?   | "Que                            |
| Prompt:   |  |  |  |  |                                 |
|   | ed goes on to say, "You have a   | birthday coming up,  | don't you?" Questi   | on: What does Ted really me  | ean wh                          |
| says this   | ed goes on to say, "You have a<br>ey: 29. Watch (Ted is thinking o   | of getting Josh a run  | ning watch but want  | s to make sure Josh wants o  |                                 |
| says this   |  | of getting Josh a run  |  | s to make sure Josh wants o  | one firs                        |
| says this' Answer I Jackie as                           |  | of getting Josh a runi<br>SCORE:<br>veekend are. Alissa s  | ning watch but want<br><b>Response 1:</b>  | s to make sure Josh wants o<br><b>Response 2:</b> ing to go to a concert, but I c                                    | one firs<br>an't fin            |
| Says this'  | ey: 29. Watch (Ted is thinking of some source of the sourc | of getting Josh a run<br>SCORE:<br>veekend are. Alissa s<br>et and join me." Que<br>wanting to see this b          | ning watch but want<br><b>Response 1:</b><br>ays, "well, I was go<br><b>stion:</b> What does A | s to make sure Josh wants o<br><b>Response 2:</b><br>ing to go to a concert, but I c<br>lissa really mean when she s | one firs<br>an't fin<br>says th |
| says this' Answer I Jackie as anyone w Prompt: Questior | ey: 29. Watch (Ted is thinking of some source of the way is a source of the source of  | of getting Josh a run<br>SCORE:<br>veekend are. Alissa s<br>et and join me." Que<br>wanting to see this b<br>o do? | ning watch but want<br><b>Response 1:</b><br>ays, "well, I was go<br><b>stion:</b> What does A | s to make sure Josh wants o<br><b>Response 2:</b><br>ing to go to a concert, but I c<br>lissa really mean when she s | one firs<br>an't fin<br>says th |

| 31. | A professor was getting to know a new class. The professor asked one student, "Do you go by Allie?" She | replied, "C | Ĵ٢ |
|-----|---|-------------|----|
|     | Allison." Question: What does she mean when she says this?  |             |    |

| Answer                  | Kev: 31. Nic                    | kname (She p                     | prefers to be                 | called Allison  | )           |            |              |   |                 |
|-------------------------|---------------------------------|----------------------------------|-------------------------------|-----------------|-------------|------------|--------------|---|-----------------|
|                         | <u></u>                         |                                  |                               |                 |             | onse 1:    |              | Response                                | 2:              |
|                         |                                 | al event, and<br>Sunday morni    |                               | mall talk, Erin | invited Ti  | ina to go  | to Erin's c  | hurch. Tina re                          |                 |
|                         |                                 | l, "We have a<br>I: What does    |                               |                 |             | ina replie | ed, "You're  | e kidding me - I                        | have to wor     |
| Answerl                 | <u> Հey</u> : 32. Chւ           | r <b>ch</b> (She doe             | sn't want to g                | -               |             |            |              |   |                 |
| Lisa is ab<br>need to g | out to leave t<br>o shopping, t | he house whe<br>ut it's so far a | n her father's<br>way and the | s car pulls up  | in the driv | veway. \   | When he e    | Response enters, she say sa really mean | s to him, "I re |
| Prompt:                 | Lisa goes on                    | to say, "It's or                 | nly five minut                | es in the car.' | ' Questio   | on: What   | does Lisa    | i want her fath                         | er to do?       |
| Answerl                 | <u>(ey</u> : 33. Car            | (She wants h                     | er father to d                | rive her to the | e store [go | o to the s | store for he | er])                                    |                 |
|                         |                                 |                                  |                               | SCORE           | : Respo     | onse 1:    |              | Response                                | 2:              |
|                         |                                 | sion and his w<br>hen she says   |                               | own to join hir | n. She sa   | ays, "The  | ere's a real | ly good movie                           | on HBO." Q      |
| Prompt:                 | Jill then says                  | "We talked a                     | bout seeing i                 | t when it was   | in the the  | eater." Q  | uestion:     | What does Jill                          | want Alan to    |

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| 35. | Sarah is spending the morning with her next-door neighbor Caroline, having coffee. They are talking about Sarah's upcoming |  |
|     | vacation when Sarah says, "I'm worried that all my plants will be dead by the time I get back." Question: What does Sarah  |  |
|     | mean when she says this?   |  |

| Anewor K              |  |
|-----------------------|--|
| Allswein              | ey: 35. Plants (water her plants while she's away)   |
|                       | SCORE: Response 1: Response 2:   |
|                       | is father are talking about the Colts. Jack says, "You know, they're at home this weekend. I'm sure it will b<br><b>lestion:</b> What does Jack mean when he says this?  |
| Prompt: J             | ack goes on to say, "I've never been to a live football game." <b>Question:</b> What does Jack mean when he sa   |
| Answer K              | ey: 36. Football Game (Jack wants his father to take him to the game)  |
|                       | SCORE: Response 1: Response 2:   |
| says this?            | se the shower. Jim says, "I have to open today and I'm running late." Question: What does Jim mean whe   |
| Prompt: J             | m goes on to say, "It won't take me very long to get ready." <b>Question:</b> What does Jim mean when he says  |
|                       | m goes on to say, "It won't take me very long to get ready." <b>Question:</b> What does Jim mean when he says  |
|                       |  |
| Answer K<br>Harry and | ey: 37. Shower (Jim wants Richard to let him use the shower first)         SCORE: Response 1:       Response 2:         Chris work together in the same office. One day Harry says to Chris, "I would really like an extra long lunch use I have to go to the post office. Will you be going out for lunch today?" Question: What does Harry metal |

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| 39. | One weekday evening, Martin goes to see his friend Lucy at home.        | He is trying to persuade her to go out for dinner, but she |
|     | says, "I'm really busy writing a report tonight. I don't even have time | to chat!" Question: What does Lucy mean when she           |
|     | says this?  |  |

| Answer K                      | ey: 39. No time  | (She wants Mar                        | tin to leave h                       | ier alone   | :)  |              |  |
|-------------------------------|------------------|---------------------------------------|--------------------------------------|---|---|--------------|--|
|                               |                  |                                       | S                                    | CORE:   | Response 1:   |              | Response 2:                                      |
|                               |                  |                                       |                                      |   |   |              | r. Emma says to Kati<br>s Emma mean when a       |
| Prompt: E                     | Emma goes on to  | say, "She would                       | ln't punish yc                       | ou thoug  | h." Question: V   | Vhat does E  | mma mean when she                                |
| Answer K                      | ey: 40. Dollgate | e (Emma wants I                       | Katie to say k                       | Katie bro   | ke the doll.)   |              |  |
|                               |                  |                                       | S                                    | CORE:   | Response 1:   |              | Response 2:                                      |
|                               |                  |                                       |                                      |   |   |              | through the list of gue<br>an when she says this |
|                               |                  |                                       |                                      |   |   |              |  |
| Prompt: /                     | lison goes on to | say, "I don't alor                    | ng with her ve                       |   |   |              | on mean when she sa                              |
|                               | _                | say, "I don't alor<br>party (She does | n't want Tony                        | ery well.'  | <b>Question:</b> Wh   |              |  |
| <b>Answer K</b><br>Brad is en | ey: 41. Dinner   | party (She does                       | n't want Tony<br>So<br>nd Garrett. ( | ery well.'<br>/ to invite<br><b>CORE:</b><br>Garrett is | <sup>2</sup> Question: Wh<br>e Jessica)<br>Response 1:<br>s about to buy se | at does Alis | on mean when she sa Response 2:                  |

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In this section you will be reading short stories and deciding whether what a story character says is something that a person might reasonably say in that situation. Here are some examples of the sorts of stories that you will see. Read each story at your own pace and circle Yes or No. For the practice stories, you'll receive some feedback.

Sometimes the correct answer is YES because the story character means exactly what he or she says:

P1) Michael is very disappointed. His girlfriend has just broken off their engagement. He tells his friend Jim what has happened. Jim sympathizes with poor Michael and says, "I'm sorry to hear that."

Is this something a person might say in this situation? Yes No

Sometimes the correct answer is YES because the story character is using a figure of speech:

P2) Jason is helping his mother set the table. She asks him to carry the dinner plates over to the table. He trips and drops all the plates. Jason's mother is annoyed and says, "You've got two left feet."

Is this something a person might say in this situation? Yes No

Sometimes the correct answer is YES because the story character doesn't really mean what is said:

P3) Helen has gone to watch a football game with her boyfriend Jim. Helen does not like football very much. The crowd behind Helen and Jim are noisy and someone spills a drink all over Helen. Jim has not seen what has happened. He asks Helen if she is having a good time. Helen replies, "Can't you see I'm having a great time."

Is this something a person might say in this situation? Yes No

Sometimes the correct answer is NO because no one would say what the story character says:

P4) During a fierce army battle, a group of soldiers have become trapped. Luckily, their sergeant has thought of a plan of escape. After explaining his plan to his men, one of the soldiers replies, "What bad manners!"

Is this something a person might say in this situation? Yes No

Try 2 more:

P5) Jim goes over to Clare's house. He wants to see Clare's new dog. When he arrives, the dog jumps up to greet him and licks him all over the face. Jim laughs loudly and says, "Wow, what a ferocious animal."

Is this something a person might say in this situation? Yes No

P6) Mr. Smith has just arrived home. He's had a bad day at work. He slams the front door and then yells at his children. His wife says, "I've lost the thread."

Is this something a person might say in this situation? Yes No

Now you know how to do them. You won't receive feedback on the stories that follow, but do them the same way: decide whether what a character says is something that a person might reasonably say in that situation and circle yes or no.

1. It is the first day of school vacation. Luke has been up since the crack of dawn and has already been out skateboarding. His mother is in the kitchen making breakfast when he arrives home again. He is singing loudly as he comes in the door. Luke's mother says, "Dear me, you're adding fuel to the fire."

Is this something a person might say in this situation? Yes No

2. Jill and her friend Gail are listening to music in Jill's bedroom. The music is quite loud and Jill's brother is trying to study. Jill's brother knocks on Jill's bedroom door and asks her politely to turn the music down. Jill screams at him to go away and throws a pillow at him. Gail is shocked by Jill's behavior and says, "This is a picture."

Is this something a person might say in this situation? Yes No

3. Janet is telling her friend Sarah about all the work she has to do. Sarah thinks that Janet is trying to do too much. Janet has four young children, a full-time job and she is also president of her Parents' and Teachers' Association. Sarah says, "Well, I was left with the baby."

Is this something a person might say in this situation? Yes No

4. A businessman finishes his meal at an expensive restaurant. The waiter who had been serving him is expecting a big tip. After all, the waiter had spent a lot of time making sure that the businessman had good service. But the businessman leaves no tip at all. The waiter says, "How generous!"

Is this something a person might say in this situation? Yes No

5. An accountant has just prepared a report on the future of the company. The company has many debts and may go bankrupt. The accountant gives his report to his boss. After reading the report, the boss says, "Her eyes are glued on him."

Is this something a person might say in this situation? Yes No

6. Mark and Karen are out on their first date. Karen is very quiet. Mark is trying to make her relax so that they can have a conversation. He asks her if there is anything she wants to know about him. Karen shakes her head and turns away. Mark says, "Did the cat get your tongue?"

Is this something a person might say in this situation? Yes No

7. Brenda meets her new neighbor Steve and tries to start a conversation so that she can get to know him better. But Steve is very shy. He hardly says a word. Brenda is getting frustrated and says, "Well, you are a beaver."

Is this something a person might say in this situation? Yes No

8. A nurse is visiting the local school to immunize the children against measles. She asks the children to line up so that she can give them an injection. Laura is scared of needles. She is hiding behind the cabinet. The teacher comes up to Laura and says, "So, want to be first, do you?"

Is this something a person might say in this situation? Yes No

9. Barbara works in the complaints section of a department store. She has learned how to handle difficult customers without getting angry. Today an unhappy customer is being very rude and shouts insults at Barbara. Barbara stays calm and treats the customer very politely. After the customer leaves, Barbara's friend says, "My, it takes a lot to upset you."

Is this something a person might say in this situation? Yes No

10. Angela has an exam tomorrow. Angela's mother tells her to go to her bedroom to study. Two hours later, Angela's mother pokes her head around the corner. Angela is lying on her bed listening to music. She hasn't even opened a book yet. Angela's mother says, "Well, you have been working hard."

Is this something a person might say in this situation? Yes No

11. Jane has invited her boyfriend, Brad, home for dinner. Jane really likes Brad. She hopes that Brad will get along with her family. Unfortunately Jane's father is not in a good mood. During dinner, Jane's father ignores Brad and then leaves the table without saying a word to Brad. When Brad leaves, Jane says to her father, "He sure knows how to keep a secret."

Is this something a person might say in this situation? Yes No

12. Kate, Jane and Anne are at the movies. Two rows in front of them, Kate spots her ex-boyfriend with another woman. Kate is still very angry with her ex-boyfriend because he had been cheating on her with other women. All through the movie Kate glares at the back of her boyfriend's head. Jane says to Anne, "It's obvious that she hates him."

Is this something a person might say in this situation? Yes No

13. Paul has just found out that he has won \$10,000 in a lottery. He rushes home to tell his family. He is very excited and bursts through the front door shouting, "Guess what, I've just had some terrible news."

Is this something a person might say in this situation? Yes No

14. Emma is not feeling very well. She came home from school early and spent the afternoon resting in bed. When dinner is ready she comes downstairs to eat with the family. But all through dinner she sneezes and coughs and coughs. Her father is concerned and says, "He let the cat out of the bag."

Is this something a person might say in this situation? Yes No

15. A young man has been convicted of theft. His lawyer has pleaded with the judge for mercy. The lawyer asked the judge to take into account that the young man was very poor and that this was his first crime. The judge sentences the young man to 10 years. The lawyer is shocked by the harsh sentence and says, "You're bound to be late at this rate!"

Is this something a person might say in this situation? Yes No

16. Angela needs to ask her professor some questions. She is nervous about speaking to him. He has a bad reputation for being rude to students. When Angela does go to see him, she is very timid and speaks so quietly that the professor can hardly hear her. He gets irritated and says, "You can stop whispering now."

Is this something a person might say in this situation? Yes No

17. Jane has invited her friend Gail to stay with her in her new house. Gail is looking forward to seeing Jane and the new house that Jane has told her so much about. Jane spends the week sewing new curtains and cleaning. When Gail arrives, she looks around the sparkling clean house and says, "My, what a quick temper you have."

Is this something a person might say in this situation? Yes No

18. Joe and Paul are having a party at their apartment tonight. So much has to be done - the apartment has to be cleaned, friends need to be invited, and someone has to buy the food and drinks. After discussing what needs to be done, Joe just goes off to the movies. Paul is left to do all the work alone. When Joe comes home again, Paul says, "You're full of questions."

Is this something a person might say in this situation? Yes No

19. Brian and his younger brother Peter are at a party. Brian is supposed to be looking after Peter. He is getting a little worried. Peter has been drinking a lot. He is a little wobbly on his feet and trips over a chair. Brian picks him up off the floor and says, "He has a lion's heart."

Is this something a person might say in this situation? Yes No

20. Len has invited his girlfriend Dianne over for a meal. When Dianne arrives she is disgusted by the state of the apartment. Len hasn't vacuumed. There are no curtains on the windows. Len has magazines and clothes all over the floor. The kitchen sink is full of dirty dishes. Dianne says, "What a hovel."

Is this something a person might say in this situation? Yes No

21. Paul has just started his first job after finishing a law degree. Paul is working as a law clerk in a famous law firm. He is talking to his father after his first week of work. Paul tells his father how exciting the work is and how he plans to become a partner in the firm one day. Paul's father says, "There's always room at the top."

Is this something a person might say in this situation? Yes No

22. An elderly man has fallen over at the mall. A kind woman goes over to help him. She helps him get up and then takes him over to a bench so she can call an ambulance. Two bystanders are watching. One says to the other, "There's someone who obviously doesn't give a damn about people."

Is this something a person might say in this situation? Yes No

23. Harry gives his friend Nick a tip for the stock market. He tells Nick to buy shares in a local insurance company. One week later, Harry calls Nick to tell him that they have made a huge profit. Nick says, "You're a goat."

Is this something a person might say in this situation? Yes No

24. Jill has won a part in a new play and tonight is opening night. This will be the first time that Jill has ever been on stage. She is very nervous. She paces up and down and breathes deeply to try to relax. One of the other actors says to the director, "My, she's going to attract all the boys."

Is this something a person might say in this situation? Yes No

25. Gary and Jim are in the same classes at school. Each morning, Gary walks to Jim's place and they go to class together. Today Gary is running late. When Gary finally does arrive at Jim's place, he says "How will we get to school? We're running late." Jim says, "You can stop shouting any time now."

Is this something a person might say in this situation? Yes No

26. Mary and Betty are at their high school reunion. It has been 20 years since they have all seen each other. Mary and Betty see Fay arriving. They are both shocked. Fay is huge. She has put on so much weight since when they were all at school together. Mary says, "So, plan to be last, do you?"

Is this something a person might say in this situation? Yes No

27. Jack owns a business and is planning to start exporting goods overseas. He has invested a lot of money advertising in Asia. Jack calls his head salesman in Asia. His head salesman tells Jack that their company has already won five big contracts and it looks like the business will have a big future in exporting. Jack says, "Well, our future does looks rosy."

28. Three friends are watching a football game. Peter and Steve are there because they like football. Their other friend, Cheryl, is there to watch her boyfriend play. Cheryl isn't really following the game. All Cheryl wants to do is watch everything that her boyfriend does. Peter says to Steve, "My, what a gloomy forecast."

Is this something a person might say in this situation? Yes No

29. Two reporters are investigating a World War II soldier who they suspect killed one of his own men. Frank is the only person alive who knows what really happened and he has not spoken about it for 70 years. The reporters interview Frank but Frank refuses to say anything about the incident. One reporter says to the other, "He sure knows how to keep a secret."

Is this something a person might say in this situation? Yes No

30. A teacher leaves his classroom to answer a phone call. While he is away his students decide to have some fun. The principal hears loud laughing and shouting and walks towards the classroom to see what's wrong. One of the students sees the principal coming and says, "They were sponges."

Is this something a person might say in this situation? Yes No

31. It's Greg's birthday. He will be five. His grandmother is coming over to give him a gift. Greg hopes that it will be a toy truck. When his grandmother arrives, Greg opens the present. It's a sweater, not a toy truck! Greg throws the sweater on the floor and runs out of the room. Greg's grandmother says to Greg's mother, "How clever!"

Is this something a person might say in this situation? Yes No

32. Peter has a date with Jane, a new girl at his high school. It's their first date. He's not supposed to meet Jane until 7pm. But he's so excited. He's already dressed and completely ready and it's only 5pm. He rushes down the stairs to grab his keys and nearly trips over the cat. His mother calls out, "There's someone who really cares about people."

Is this something a person might say in this situation? Yes No

33. Mr. Jones is a very generous man. He has just donated \$10,000 to the local hospital. When he tells his friend, Peter, what he has done, Peter says, "Guess what, I've got a bitter pill to swallow."

Is this something a person might say in this situation? Yes No

34. Jim and Bill have gone to watch their favorite band play. Unfortunately they weren't able to get in. The tickets were all sold out. However, they might still be able to see something through a window. Jim climbs up onto Bill's shoulders to try to reach the window. But Jim is huge. Poor Bill nearly collapses under Jim's weight. Bill says, "What a heavy-weight!"

Is this something a person might say in this situation? Yes No

35. Paul's parents have planned a big surprise for his 21<sup>st</sup> birthday. They bought him a new car. Paul's brother, Joe, knows all about the surprise. Joe has promised not to say anything, but two days before the birthday, Joe gives in and shows Paul a brochure about the new car. Paul's mother says to Paul's father, "Well, you didn't roll out the red carpet."

36. While Will and Greg are walking home, they see a woman standing beside her car. The car has a flat tire. Will offers to help change the tire. The woman is very rude and tells Will to leave her alone. Poor Will walks back to Greg. Greg says, "Look at the ox."

Is this something a person might say in this situation? Yes No

37. Wendy is complaining to her friend Jane about her ex-boyfriend. When Wendy's ex-boyfriend broke up with her, he told Wendy that she was no fun anymore and that he had found somebody much better looking. Jane says, "He's a snake."

Is this something a person might say in this situation? Yes No

38. Robyn has spent hours cooking a new recipe for the family dinner. She hopes everyone will appreciate the trouble that she has gone to. However, Robyn's son Thomas takes a very small serving and then hardly touches the food on his plate. Robyn says to Thomas, "Going too fast for you, am I?"

Is this something a person might say in this situation? Yes No

39. Jason is telling Ken about his plans for the future. Jason has decided to quit his job and move to another state. Jason plans to invest his life savings in a new business. Ken is worried that Jason is being too hasty and says, "Well, you really like to gossip."

Is this something a person might say in this situation? Yes No

40. A father is playing with his little one year-old daughter. She is very tiny for her age. To make her laugh, he lifts her high up over his head and twirls her around. He laughs and says, "You can't see daylight, can you?"

Is this something a person might say in this situation? Yes No

41. Barry is a computer programmer. He is very frustrated because the program he is trying to write will not run properly. Barry's boss has been keeping an eye on Barry's progress. He can see that Barry has run out of ideas and comes over to see if he can help. Barry says to his boss, "Well, he sure knew what he was talking about."

Is this something a person might say in this situation? Yes No

42. Jill has a new boyfriend. She is looking forward to telling Ruth all about him. But when she sees Ruth, Ruth starts to complain about everything. Ruth complains about the weather, about having a cold and then about sore feet. Poor Jill finally interrupts and says, "Here's the new broom."

Is this something a person might say in this situation? Yes No

43. Tom is setting up a new real estate business. He is trying to talk his friend Keith into investing money in his business. Keith says no! He doesn't think Tom has enough business experience. Tom thinks Keith is being too cautious and so he says, "You're really playing it safe."

Is this something a person might say in this situation? Yes No

44. Ted and Peter are watching the weight-lifting competition at the Olympics. The Russian contestant has just walked onto the stage. He is enormous with huge bulging muscles. Ted says, "She didn't take to you much."

45. Cheryl has had a lousy day at work. Her boyfriend Dave decides to cheer her up. He takes her roller-skating and makes her laugh at his silly tricks. Then he takes her to her favorite restaurant. All night he keeps Cheryl amused with funny stories. At the end of the night, Cheryl gives him a kiss and says, "You're a live wire."

Is this something a person might say in this situation? Yes No

46. John is filling out his income tax form. Unfortunately John is not very good at figures. He is confused and he's making lots of mistakes. Luckily his friend Bill arrives. Bill is an experienced accountant. Bill grabs a pen and starts filling in the form for John. With Bill's help, they've nearly finished. John says, "You've got this well under control."

Is this something a person might say in this situation? Yes No

47. It's Helen's birthday but it does not look like it's going to be a good day. Her roommates have forgotten. Nobody has said happy birthday. But then her boyfriend arrives, carrying a huge bunch of flowers and a gift. He tells her that he is taking her out to an expensive restaurant. Helen gives him a hug and says, "So, trying to ruin my day!"

Is this something a person might say in this situation? Yes No

48. A group of scouts are climbing a steep hill. About halfway up the hill, the scout leaders stop to check on the progress of the other scouts. They see that a new scout is not keeping up with the others. He is falling far behind and climbing very slowly. One of the leaders says, "You're the shy type, aren't you?"

Is this something a person might say in this situation? Yes No

49. Kate and Betty see a gang of men standing on the other side of the road. A man and woman walk by and the woman accidentally brushes against one of the gang members. He gets angry and swears at her and pushes her over. The man who is with her gets scared and runs away. Kate says, "What do you think of that weakling?"

Is this something a person might say in this situation? Yes No

50. Colin has just started college. His father is getting quite annoyed about how little work Colin does. Colin rarely goes to class. He is always out at parties. It is 11am on Monday morning and Colin has just gotten out of bed. Colin's father says, "Dear me, you don't have much on your plate."

Is this something a person might say in this situation? Yes No

51. An instructor has been teaching a class how to skydive. Today is the first time that they will jump out of a plane. The plane has reached the right height. The instructor opens the door and asks the jumpers to line up. Bill is very keen and rushes to the front. The instructor says, "My goodness, she's such a tiny thing now."

Is this something a person might say in this situation? Yes No

52. Jim and Bill are policemen. They have been invited to a high school to talk about road safety. Jim is trying to convince the students that speeding is dangerous. Unfortunately, the students are being rude. They talk among themselves and ignore what Jim has to say. After the talk, Bill says to Jim, "Bet they found that boring."

Is this something a person might say in this situation? Yes No

53. Rick is reading a newspaper article about a young mountain climber who has just reached the top of Mount Everest. Rick is telling Ted how much he admires this young climber. The climber has faced many dangers and survived a near fatal fall. Ted says to Rick, "I can tell you're having a dreadful time."

54. Bill and his older brother Luke are discussing politics. They have very different views and they disagree strongly. Bill is annoyed because Luke keeps butting in and speaking over the top of him. Luke has gotten louder and louder until he is shouting. Bill interrupts and says, "My, you've been dragging the chain."

Is this something a person might say in this situation? Yes No

55. Jason is in his final year of high school. He has just finished his mid-term exams. Jason brings his report card home to show his father. Jason has failed every subject. Jason's father is angry because he knows that Jason has not been studying or doing any homework. Jason's father says, "You have half a brain."

Is this something a person might say in this situation? Yes No

56. Kevin and his father are walking to the skating rink. Kevin has just been given new ice skates for his birthday. He is eager to try them out and so he runs ahead of his father. Then he rushes back and starts to pull his father along by the arm. His father says, "Do leave some for the others."

Is this something a person might say in this situation? Yes No

57. Jenny has been shopping in town. She has bought herself a new dress. She likes it very much and rushes home to show her husband. When her husband sees her in the dress, he says "That looks terrible on you!" Jenny replies, "You weren't just flying a kite."

Is this something a person might say in this situation? Yes No

58. Two teachers are taking their Grade 1 classes on a field trip to the museum. A guide is showing the children the dinosaur exhibit. All the children are fascinated. They listen carefully as the guide tells stories about what it was like when dinosaurs roamed the earth. After the talk, one of the teachers says, "He's the last person we wanted to see."

Is this something a person might say in this situation? Yes No

59. Sally rushes home from school. She has some exciting news to tell her family. Sally tells her brother that the teacher picked her to be on a television game show because she was the smartest in her class. Sally's brother says, "Well, he got up on the wrong side of the bed."

Is this something a person might say in this situation? Yes No

60. Harry is having a great time at a party and so he decides to entertain everyone with a song. He jumps up on a table so that everyone can see him, puts a lampshade on his head and then sings at the top of his voice. When he finishes the song, Sharon comes up to him and says, "My, he wants to impress."

Is this something a person might say in this situation? Yes No

61. Tom and his son David are driving in the country. Unfortunately their car breaks down miles from anywhere. They have to walk back along the highway to find a garage. After hours of walking, David starts to complain about how tired and thirsty he is. Tom says, "Come on, you're a soldier."

Is this something a person might say in this situation? Yes No

62. Kate has been on a diet for two months and has lost a lot of weight - 20 pounds! Today she is meeting her friends Jane and Alice for lunch. Jane and Alice have not seen Kate for months. When Jane sees Kate arrive, she is worried to see how much weight Kate has lost. Jane says to Alice, "My goodness, she's sure to split that dress."

63. Joe has a new job and wants to make a good impression with his boss. He is wearing a new suit. While walking to work, Joe stops outside a shop and looks at his reflection in the window. Two friends, Peter and Tom, walk by and see Joe combing his hair and staring at his reflection for ages. They are surprised by how vain he is. Peter says to Tom, "Have you always been the life of a party?"

Is this something a person might say in this situation? Yes No

64. A group of scouts have been camping but now it's time to pack up and go home. All the scouts but Will rush off to have their last swim. Will stays behind to help the scout leader. Will takes down the tents, packs the equipment and tidies up the grounds. The scout leader is impressed and says, "Thanks for lending a hand."

Is this something a person might say in this situation? Yes No

65. John arrives home from school. He has lots of homework to do. He walks straight into his bedroom and starts working on his homework. Two hours later, his mother opens the door of his bedroom and says, "Goodness, you do keep pulling the shutters down."

Is this something a person might say in this situation? Yes No

66. Dave is going out to a party tonight. He comes downstairs to ask his mother if he can borrow the car. Dave's mother is angry about the way he's dressed. Dave hasn't combed his hair. He's wearing a dirty t-shirt and ripped jeans. She says to Dave's father, "My, he's going to attract all the girls."

Is this something a person might say in this situation? Yes No

67. A computer salesman is trying to talk Jim and Keith into buying a new computer. Jim and Keith know a lot about computers and so they are not fooled by the stories the salesman is making up. Finally the salesman gives up and walks away. Jim says to Keith, "Well, that was all hot air."

Is this something a person might say in this situation? Yes No

68. Brett is planning his vacation to Florida. He is comparing how much it would cost to travel by plane or drive. His friend, Harry, sees all the travel brochures and asks Brett "How will you travel?" Brett answers, "Well, I'm thinking of going by plane or driving."

Is this something a person might say in this situation? Yes No

69. Carolyn sits next to an old lady on the bus. The old lady chats away for the whole trip and tells Carolyn all the details of her life - about being a nurse in the war, about having three husbands and about spending time in jail. Carolyn is fascinated by the old lady's story and says, "Goodness, you don't like talking about yourself!"

Is this something a person might say in this situation? Yes No

70. It is Christmas morning. Terry unwraps the big present that his parents have given him. It is a train set. He is so excited. It is just what he wanted. Terry's parents watch him as he happily plays with the train set. Terry's father says, "Well, he doesn't like it very much, does he?"

Is this something a person might say in this situation? Yes No

71. Frank is over at Jim's place. He is trying to set up new speakers for Jim's home theater. Frank cannot follow the instructions. He has pieces of equipment all over the floor. Jim looks at the mess and says to Frank, "You're a feather."

Is this something a person might say in this situation? Yes No

73. Dianne and Jane have met for lunch. Dianne is in a talkative mood and gabs for over an hour. Jane doesn't get a chance to say anything. Jane is getting very angry. She has some important news to tell Dianne but Dianne just keeps talking and talking. Finally, Jane interrupts Dianne and says, "Well, you really like to talk."

Is this something a person might say in this situation? Yes No

74. Tom is very disappointed. Tom's boss has just told him that he will not get the promotion that he wanted. His boss gave the job to someone else instead. Poor Tom walks over to tell his friend Joe what has happened. Tom says, "What big pockets!"

Is this something a person might say in this situation? Yes No

75. Jane has invited her friend Bill to her sorority formal. All the women are wearing evening gowns and all the men are wearing suits. Jane and her friend Jenny see Bill arrive. Instead of a suit, Bill is wearing torn jeans and a t-shirt. Jenny says, "My, look at this fish out of water."

Is this something a person might say in this situation? Yes No

76. Jane is going to her first formal dance. She has a new dress and new shoes and she's been to the hairdresser. She spends two hours putting on her make-up and getting ready. When she walks down the stairs, her parents are so proud of how beautiful she looks. Her father says to her mother, "Her heart is in her mouth, isn't it?"

Is this something a person might say in this situation? Yes No

77. Two women are sitting on a bench in the local park while their children play. They hear a lot of noise and look across to see what's happening. Their two sons are screaming at each other and rolling around on the grass fighting. One of the women says, "You are a bright spark."

Is this something a person might say in this situation? Yes No

78. Fred and Dave are having a drink in a bar. They hear laughing and look across the room. They see their friend Steve with his arms around a woman they have never seen before. Steve and the woman are talking non-stop and staring lovingly into each other's eyes. Fred says, "Looks like a fire starting over there."

Is this something a person might say in this situation? Yes No

79. John should be getting ready for school. It is already 7:30am and he has to catch the bus at 8am. He keeps playing with his toys and watching television instead of getting dressed. John's mother is worried that he will miss the bus. She says, "You don't need to be in such a rush."

Is this something a person might say in this situation? Yes No

80. Ken is a very experienced mechanic. When he comes home from work, his son gives him a toy truck to fix. All that has to be done is tighten a loose screw. Ken takes the truck from his son. He smiles at his wife who has been watching and says, "Well, this is a piece of cake."

81. Anna wants to know more about her new housemate Paul. She starts to ask him some very personal questions. She asks him whether he has a girlfriend and what he does for a job. Paul answers her questions and says, "He's sure to beat us to the top at this rate."

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Is this something a person might say in this situation? Yes No

82. Mark and Janice are at their friends' wedding reception. The food has been organized as a buffet so that all the guests can help themselves. Mark is enjoying the food. He is eating a lot. After his third trip to the buffet table, Janice looks at his heaping plate and says, "Don't starve yourself."

Is this something a person might say in this situation? Yes No

83. A famous scientist is visiting a University and gives a lecture to the students. The students are fascinated by what the scientist has to tell them. They ask many questions and the scientist is able to answer every one. After the lecture, one of the students says, "Well, this is quite a challenge."

Is this something a person might say in this situation? Yes No

84. A math teacher is explaining how to solve a problem. He tells his students to listen carefully as they have not studied this problem before. After writing out several examples on the board, the teacher turns around from the board. He sees all the confused faces of his students and says, "Going too slow for you, am I?"

Is this something a person might say in this situation? Yes No

85. Karen is very proud of herself. She got the best grade in her class. She got 100% on her History exam. When she tells her mother how well she did, her mother says, "They don't like each other much, do they?"

Is this something a person might say in this situation? Yes No

86. Tim has pestered his older sister to let him help her make a cake. She asks him to add eggs to the flour and sugar. Instead of breaking the eggs first, Tim puts the eggs in, shells and all! When his sister sees what he has done, she gets angry and says, "How clever!"

Is this something a person might say in this situation? Yes No

87. A company is in trouble. The manager is trying to keep these problems a secret in the hope that business will improve. One morning he opens his newspaper to read headlines about his company going bankrupt. He calls the newspaper editor to complain about the story being published and says, "This is so much what I wanted to happen!"

Is this something a person might say in this situation? Yes No

88. Janet has talked her husband Bill into coming to the Parents' and Teachers' Association meeting at their children's school. Bill hates these meetings. He gets bored because he is so tired in the evenings and he finds it hard to follow the discussions. When they arrive at the school, Bill says, "This is not my cup of tea."

Is this something a person might say in this situation? Yes No

89. A new salesman has joined the firm where Julie works. He's young and good-looking. Julie wants to know more about him. He's a friend of the firm's secretary, Anne. Julie makes Anne a coffee and tries to get some information out of her. Anne can tell what Julie's up to and avoids all of Julie's questions. Julie sighs and says, "You're a great risk-taker."

90. Frank has invited his boss home for dinner. During dinner, Lynn notices that Frank agrees with everything that his boss says. Frank also laughs loudly at every joke that his boss makes. Lynn does not like the way that Frank is behaving. When Frank's boss leaves, she says, "Well, you were trying to create a good impression."

Is this something a person might say in this situation? Yes No

91. Karen has just finished her GED. Today the mailman will deliver her results. Karen's parents keep looking out the window to see if the mail has come yet. They are more nervous than Karen is. Karen is still in bed. She really doesn't care one way or the other. Karen's mother says to her husband, "She's so anxious about it all, isn't she?"

Is this something a person might say in this situation? Yes No

92. Keith is an experienced rock-climber. Today he is climbing with Tom and Peter. Tom and Peter have only just started rock-climbing. They are going very slowly. Keith is much faster. Tom looks up to see that Keith is about 20 yards ahead of them. Tom says to Peter, "He has wings on his heels."

Is this something a person might say in this situation? Yes No

93. The new owner of a company calls a staff meeting to tell his workers about the big changes he is planning. The workers are anxious to find out how their jobs will be affected. Before the meeting, Greg and Frank are anxiously waiting outside the staffroom. Frank sees the new owner coming down the hall and says, "You're a wet blanket."

Is this something a person might say in this situation? Yes No

94. This is Brad's first day working at a new firm. He meets his boss Jane. Jane spends the morning showing Brad around the office and introducing him to everyone. Then she takes him to lunch as a welcoming gesture. After they return from lunch, one of the other workers says to Brad, "She took a real liking to you."

Is this something a person might say in this situation? Yes No

95. Fred is telling Tim how fed up he is with his job. Fred thinks that the work he does is boring and dumb and he doesn't like any of his co-workers. Fred asked his boss if he could move to another section but his boss said no! Fred complains a lot to Tim. Tim listens to all of Fred's complaining and says, "You have a frog in your throat."

Is this something a person might say in this situation? Yes No

96. Paul and Ken are at a party. It's a very boring party. There are no interesting people. Paul sees their friend Bill arrive. Paul and Ken weren't expecting Bill but they're very glad to see him arrive. The party should pick up now. Bill is great fun to have around. Paul says, "Just the person we needed to see."



#### Adult "Reading the Mind in the Eyes" Test--Revised

PsycTESTS Citation: Baron-Cohen, S. (2001). Adult "Reading the Mind in the Eyes" Test--Revised [Database record]. Retrieved from PsycTESTS. doi: 10.1037/t00387-000

Test Shown: Full

Test Format: This test uses photographs-description matching.

Source: Supplied by author.

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practice

jealous

## panicked



arrogant

hateful

### **Eating Attitudes Test**

Please indicate on the line at left the answer which applies best to each of the numbered statements. All of the results will be *strictly* confidential. Most of the questions directly relate to food or eating, although other types of questions have been included. Please answer each question carefully. Thank you.

| 1      | 2          | 3     | 4         | 5      | 6     |
|--------|------------|-------|-----------|--------|-------|
| Always | Very Often | Often | Sometimes | Rarely | Never |

- \_\_\_\_1. Like eating with other people.
- \_\_\_\_\_2. Prepare foods for others but do not eat what I cook.
- \_\_\_\_\_3. Become anxious prior to eating.
- \_\_\_\_\_4. Am terrified about being overweight.
- \_\_\_\_ 5. Avoid eating when I am hungry.
- \_\_\_\_\_6. Find myself preoccupied with food.
- \_\_\_\_\_7. Have gone on eating binges where I feel that I may not be able to stop.
- \_\_\_\_\_ 8. Cut my food into small pieces.
- \_\_\_\_9. Aware of the calorie content of foods that I eat.
- 10. Particularly avoid foods with a high carbohydrate content (e.g. bread, potatoes, rice, etc.)
- \_\_\_\_ 11. Feel floated after meals.
- \_\_\_\_\_12. Feel that others would prefer if I ate more.
- \_\_\_\_\_13. Vomit after I have eaten.
- \_\_\_\_\_14. Feel extremely guilty after eating.
- \_\_\_\_\_15. Am preoccupied with a desire to be thinner.

- \_\_\_\_\_16. Exercise strenuously to burn off calories.
- \_\_\_\_\_17. Weigh myself several times a day.
- \_\_\_\_\_18. Like my clothes to fit tightly.
- \_\_\_\_\_19. Enjoy eating meat.
- \_\_\_\_ 20. Wake up early in the morning.
- \_\_\_\_\_21. Eat the same foods day after day.
- \_\_\_\_\_22. Think about burning my calories when I exercise.
- \_\_\_\_\_23. Have regular menstrual periods.
- \_\_\_\_\_24. Other people think that I am too thin.
- \_\_\_\_\_25. Am preoccupied with the thought of having too much fat on my body.
- \_\_\_\_\_26. Take longer than others to eat my meals.
- \_\_\_\_ 27. Enjoy eating at restaurants.
- \_\_\_\_ 28. Take laxatives.
- \_\_\_\_\_ 29. Avoid foods with sugar in them.
- \_\_\_\_ 30. Eat diet foods.
- \_\_\_\_\_ 31. Feel that food controls my life.
- \_\_\_\_\_ 32. Display self-control around food.
- \_\_\_\_\_ 33. Feel that others pressure me to eat.
- \_\_\_\_\_ 34. Give too much time and thought to food.
- \_\_\_\_ 35. Suffer from constipation.
- \_\_\_\_\_ 36. Feel uncomfortable after eating sweets.
- \_\_\_\_\_ 37. Engage in dieting behavior.
- \_\_\_\_\_ 38. Like my stomach to be empty.
- \_\_\_\_\_ 39. Enjoy trying new rich foods.
- \_\_\_\_\_ 40. Have the impulse to vomit after meals.

#### **Restraint Scale**

Please answer the following items by circling the alternatives below the question.

1. How often are you dieting? c. Sometimes d. Often a. Never b. Rarely e. Always 2. What is the maximum amount of weight (in pounds) that you have ever lost in one month? a. 0-4 b. 5-9 c. 10-14 d. 15.19 e. 20+ 3. What is your maximum weight gain within a week? b. 1.1-2 a. 0-1 c. 2.1-3 d. 3.1-5 e. 5.1+ 4. In a typical week, how much does your weight fluctuate? a. 0-1 b. 1.1-2 c. 2.1-3 d. 3.1-5 e. 5.1+ 5. Would a weight fluctuation of 5 pounds affect the way you live your life? a. Not at all b. Slightly c. Moderately d. Very Much 6. Do you eat sensibly in front of others and splurge alone? a. Never b. Rarely c. Often d. Always 7. Do you give too much time and thought to food? a. Never b. Rarely c. Often d. Always 8. Do you have feelings of guilt after overeating? a. Never b. Rarely c. Often d. Always 9. How conscious are you of what you are eating? a. Not at all b. Slightly c. Moderately d. Extremely 10. How many pounds over your desired weight were you at your maximum weight? a. 0-1 b. 1-5 c. 6-10 d. 11-20 e. 21+

ID#:

#### **CES-D**

Using the scale below, indicate the number which best describes how often you felt or behaved this way <u>DURING THE PAST WEEK</u>.

| 0  | 1   | 2   | 3  |
|--|---|---|--|
| Rarely or none<br>of the time<br>(less than 1 day) | Some or a little<br>of the time<br>(1-2 days) | Occasionally or<br>a moderate<br>amount of time<br>(3-4 days) | Most or all of<br>the time<br>(5-7 days) |

#### During the past week:

- 1. \_\_\_\_\_ I was bothered by things that usually don't bother me.
- 2. \_\_\_\_\_ I did not feel like eating; my appetite was poor.
- 3. \_\_\_\_\_ I felt that I could not shake off the blues even with help from my family or friends.
- 4. \_\_\_\_\_ I felt that I was just as good as other people
- 5. \_\_\_\_\_ I had trouble keeping my mind on what I was doing.
- 6. \_\_\_\_\_ I felt depressed.
- 7. \_\_\_\_\_ I felt that everything I did was an effort.
- 8. \_\_\_\_\_ I felt hopeful about the future
- 9. \_\_\_\_\_ I thought my life had been a failure.
- 10. \_\_\_\_\_ I felt fearful.
- 11. \_\_\_\_\_ My sleep was restless.
- 12. \_\_\_\_\_ I was happy
- 13. \_\_\_\_\_ I talked less than usual.
- 14. \_\_\_\_\_ I felt lonely.
- 15. \_\_\_\_\_ People were unfriendly.
- 16. \_\_\_\_\_ I enjoyed life
- 17. \_\_\_\_\_ I had crying spells.
- 18. \_\_\_\_\_ I felt sad.
- 19. \_\_\_\_\_ I felt that people disliked me.
- 20. \_\_\_\_\_ I could not get "going."

# $BAI^{\circ}$

ID #:

Below is a list of common symptoms of anxiety. Please read each item in the list carefully. Indicate how much you have been bothered by each symptom during the **PAST WEEK, INCLUDING TODAY** by filling in the circle in the column next to each symptom. <u>Do not</u> fill in more than one circle for each symptom and <u>do not</u> leave any symptom blank.

|    |                                      | Not at all | Mildly, it did<br>not bother me<br>much | Moderately, it was<br>very unpleasant but I<br>could stand it | Severely, I<br>could barely<br>stand it |
|----|--------------------------------------|------------|---|---|---|
| 1  | Numbness or tingling                 | 0          | 0                                       | 0   | 0                                       |
| 2  | Feeling hot                          | 0          | 0                                       | 0   | 0                                       |
| 3  | Wobbliness in legs                   | 0          | 0                                       | 0   | 0                                       |
| 4  | Unable to relax                      | 0          | 0                                       | 0   | 0                                       |
| 5  | Fear of the worst happening          | 0          | 0                                       | 0   | 0                                       |
| 6  | Dizzy or lightheaded                 | 0          | 0                                       | 0   | 0                                       |
| 7  | Heart pounding or racing             | 0          | 0                                       | 0   | 0                                       |
| 8  | Unsteady                             | 0          | 0                                       | 0   | 0                                       |
| 9  | Terrified                            | 0          | 0                                       | 0   | 0                                       |
| 10 | Nervous                              | 0          | 0                                       | 0   | 0                                       |
| 11 | Feelings of choking                  | 0          | 0                                       | 0   | 0                                       |
| 12 | Hands trembling                      | 0          | 0                                       | 0   | 0                                       |
| 13 | Shaky                                | 0          | 0                                       | 0   | 0                                       |
| 14 | Fear of losing control               | 0          | 0                                       | 0   | 0                                       |
| 15 | Difficulty breathing                 | 0          | 0                                       | 0   | 0                                       |
| 16 | Fear of dying                        | 0          | 0                                       | 0   | 0                                       |
| 17 | Scared                               | 0          | 0                                       | 0   | 0                                       |
| 18 | Indigestion or discomfort in abdomen | 0          | 0                                       | 0   | 0                                       |
| 19 | Faint                                | 0          | 0                                       | 0   | 0                                       |
| 20 | Face flushed                         | 0          | 0                                       | 0   | 0                                       |
| 21 | Sweating (not due to heat)           | 0          | 0                                       | 0   | 0                                       |

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| Gender:  | Male             | Female          |        |                     |         |
|--|------------------|-----------------|--------|---------------------|---------|
| Age:   |                  |                 |        |                     |         |
| Marital Status   | : Single         | Married Div     | vorced | _ Separated         | Widowed |
| Race/Ethnic B  | ackground:       | White           | A      | frican American or  | Black   |
|  |                  | Asian           | H      | ispanic or Latino _ |         |
|  |                  | American Indian | M      | ultiracial          |         |
|  |                  | Other           | Pr     | refer not to answer |         |
|  |                  | (please specif  | fy)    |                     |         |
| Religion:  |                  |                 |        |                     |         |
| Are you a full   | time student?    | Yes No          |        |                     |         |
| If no, what is your occupation?  |                  |                 |        |                     |         |
| Year in colleg   | e: First year    | Sophomore       | Junior | Senior O            | ther    |
| Major:   |                  |                 |        |                     |         |
| What is your a   | approximate cu   | mulative GPA?   |        |                     |         |
| Have you ever been diagnosed with a psychological or learning disorder? Yes No           |                  |                 |        |                     |         |
| If yes,  | please list diag | noses:          |        |                     |         |
| Are you currently taking any medication for the treatment of any psychological disorder? |                  |                 |        |                     |         |
| Yes  | No               |                 |        |                     |         |