Effects of Trier Social Stress Test on Affect, Heart Rate and Beliefs: Pre-Analysis Plan

Amanda Starcev, Prachi Jain, and Johannes Haushofer

March 3, 2017

Abstract

This document describes the analysis plan for a randomized laboratory experiment examining the effects of the Trier Social Stress Test (TSST) on psychological and physiological states. Our study expects to include 60 subjects from the informal settlements in Nairobi, Kenya. Respondents are randomly assigned to either a treatment or control condition of the TSST, for either one single day or seven consecutive days. This plan outlines the design of the study, the outcomes of interest, and the econometric approach.

1 Introduction

The present project studies the effect of the Trier Social Stress Test (TSST) on measures of psychological state, heart rate, cortisol levels, and beliefs about performance ranking. Specifically, we test whether the treatment condition affects positive and negative affect, perceived stress, salivary cortisol, and heart rate, relative to control. In addition, we ask participants to rank their performance relative to the other members of the group. To test whether "acute" and "chronic" stress have different effects on these outcomes, we delivery the treatment or control version of the TSST for either 1 single day or 7 consecutive days, and compare responses of the single day vs. the seventh day. The stress literature has long distinguished between these two types of stress (McEwen, 2004), and it has recently been shown that risk aversion is affected by chronic but not acute stress (Kandasamy et al., 2014); however, little is known about the relative effects on other outcomes. We hasten to add that we cannot hope to mimic the effects of truly chronic stress (over years) with this manipulation; however, it has been shown that the effects of stress differ, both behaviorally and neurobiologically, even over short periods such as several hours (Henckens et al., 2010, 2011; Joëls et al., 2011) or weeks (Kandasamy et al., 2014; Rubio et al., 1989).

2 Design

2.1 Sampling Strategy

We study a sample of Nairobi residents registered as participants with the Busara Center for Behavioral Economics. To be registered in the Busara participant pool, respondents must be over the ages of 18 years old, have access to a mobile phone, and have access to MPesa, a mobile money system used for payment of respondents.

The study took place from November 2016 to February 2017 with a sample of 60 participants, with about half in each the treatment and control group. Among each treatment group, about half followed the single day protocol, while the other half participated in the seven day protocol. Prior to the full study, we completed pilots with a sample of 8 respondents to finalize the relatively complicated protocols, and identify potential difficulties in the main experiment. No data was collected during these logistical pilots.

Participants were screened for inclusion/exclusion criteria both over the phone and in person. We restricted our sample to respondents in the Busara participant pool

between the ages of 18 and 40 who had at least 8 years of education to ensure literacy.

To mitigate factors that might affect measurement of salivary cortisol, we asked that participants not drink alcohol, drink coffee, or smoke on the days of the study and the day before the study began. Also, we asked that participants not eat, drink liquids other than water, or engage in strenuous physical activity, including sexual activity, during the 2 hours before the study.

2.2 Treatment

We use a 2 x 2 design in which participants are randomized into either a stress or a control condition, and into either an acute or a chronic condition. The acute condition consists of completing the TSST or a control task on a single day (Day 1); the chronic condition consists of completing the TSST or a control task for 7 consecutive days. For this condition, the data of interest are those from Day 7, which will be compared to the data from the acute condition to identify the effects of chronic vs. acute stress. The protocols for Day 1 of the acute condition and Day 7 of the chronic condition are identical, while the protocol for days 1-6 of the chronic condition vary slightly.

The TSST is designed to induce stress using two socially evaluative situations – a speech task and a mental arithmetic task. The protocol as detailed below includes slight changes to the original TSST design.[1][2] Before the test begins, all participants are fitted with a heart rate measurement strap that is worn throughout the study.

For the treatment group, stress induction begins with a panel of two judges, dressed in white, entering the room and turning on the video camera. Throughout both tasks, the judges maintain neutral expression, remain stern, and provide little to no feedback. The speech task is a simulated job interview. The first five minutes is the anticipatory stress phase, during which the participants are instructed to prepare for a two-minute speech describing why he/she would be a good candidate for the job. Each

---

[1] Slight changes were made to the design to adapt to the Kenyan setting, and to develop a "chronic" condition in which the TSST is administered repeatedly over the course of a week. Each group consisted of four participants rather than five. The speech delivery was decreased from 5-minutes per participant to 2-minutes per participant with the addition of the question-answer phase. For the arithmetic task, instead of using the same start number and subtraction instructions, we randomized the start number for each participant and assigned different subtraction instructions per day to decrease the probability of learning effects.

[2] All protocols are available upon request.

participant delivers their 2-minute speech without the use of their notes, which is then immediately followed by a question-answer phase. Predesigned questions[3] are randomly posed to the four participants in a random order, such that each participant is asked on average 4-5 questions. Participants are given 60 seconds to answer each question. The judges exit the room for several minutes and return for the mental arithmetic task. For this task, participants are asked to count backward from a particular four-digit number (e.g. 4878, 4494, 3678) in steps of a specific number (varies based on day; see below) for two minutes. If a mistake is made, the participant must start again from the beginning. The given start number and order in which the participants perform are both randomized. Throughout all tasks, participants in the treatment group had a language restriction such that they were permitted to speak in English only. If they began speaking in Swahili, or another language, they were stopped and reminded of this requirement.

   For the control group, the test begins when a panel of two persons enters the room. Throughout both tasks, the panel maintains positive expression, provides friendly nonverbal feedback, and creates a comfortable environment. In the speech task, participants are asked to describe themselves, activities they enjoy, and their usual daily routine. The task begins with a five-minute preparation phase, followed by a two-minute speech. Participants are allowed to use their notes during their speech. The speech is followed by a 20-30 minute question and answer phase, during which predesigned questions are randomly posed to the participants. They are told if a question is difficult, they may use the 60-second answer period to talk about anything they like that would help the panel get to know him/her better. During the mental arithmetic task, the participants are asked to count forward from a particular number (e.g. 0, 5, 10) in steps of five for two minutes. The participants are neither stopped nor corrected for any mistakes made. The given start number and order in which the participants perform are both randomized. Throughout all tasks, participants in the control group have the flexibility to speak in whichever language they are most comfortable, English or Swahili. They are reminded of this fact throughout the study.

   In the acute condition for both the treatment and control groups, participants perform the test as written above, corresponding to their treatment condition, for one single day. In the chronic condition, participants prepare their speech on each of the seven days, however, only on the seventh day are they unexpectedly asked to deliver the speech to the panel. The question-answer phase occurs on all seven days. In addition, the math task instructions for the treatment group vary slightly depending on the day. These are listed below.

- Days 1 and 7: count backward in steps of sixteen

---

[3] See Appendix A for a complete list of questions.

- Days 2 and 5: count backward in steps of thirteen
- Days 4 and 6: count backward in steps of seventeen
- Day 5: count backward in steps of fourteen

At the conclusion of the study, a bonus of KES 4000 was paid in each of the four conditions (acute treatment, acute control, chronic treatment, and chronic control). The bonuses were split between two persons in each condition, such that person 1 received KES 2500 and person 2 received KES 1500. One of the two tasks, question-answer or mental arithmetic, was randomly chosen for payment of the bonus. The recipients of the bonus in the treatment conditions were determined based on performance of the randomly chosen task; in the control conditions, the recipients were determined randomly. This bonus was explained to all participants at the beginning of each day, and they were reminded of it several times during the sessions.

In the treatment conditions, each participant was given a score from 1 to 6 for their performance on each of the two tasks for each day of participation. For any day a participant did not show up, he/she received a score of zero for both tasks for that day. Once data collection was complete, we randomly chose one of the two tasks to be paid out such that the highest performance scores of the randomly chosen task received the monetary bonus.

In the control conditions, each participant was given a "ticket" for each task that was completed on each day of participation. For any day a participant did not show up, he/she did not receive a ticket for either task. Once data collection was complete, we randomly chose one of the tasks to be paid out such that the first two persons whose tickets were picked for the randomly chosen task received the monetary bonus.

2.3 Data Collection

We conducted laboratory sessions with 4 respondents per session, until we reached 60 respondents. Participants were randomly assigned to one of four conditions – either the control or treatment group, for either one or seven consecutive days. The sessions followed the schedule of tasks and treatments outlined below.

The tasks and questionnaires were administered using touch screen tablets to enable computer-illiterate respondents to participate. Enumerators read instructions to the respondents in Swahili for both treatment and control groups. Respondents received a cash compensation of 450 KES on each day, plus 50 KES for arriving on time. The eight participants who earned the monetary bonus received notification of their "win" by phone. Payment was transferred to the respondents via MPesa.

2.4 Schedule of Tasks and Treatments

Acute and Chronic days 1 and 7 (psychological and other self-reported outcomes are in *italics*):

1. Welcome
2. Consent[4]
3. Salivette 1 - Baseline
4. Connect Individual Heart Rate Measurements
5. Introduction to Computer Interface
6. *PANAS - Baseline*
7. Salivette 2 – Baseline
8. TSST Explanation and Instructions
9. TSST Preparation period
10. *Self-Reported Stress Question 1*
11. TSST "Interview" Task[5]
12. Salivette 3
13. *Self-Reported Stress Question 2*
14. TSST Mental Arithmetic Task
15. Salivette 4 (immediately after TSST concludes)
16. *PANAS*
17. Salivette 5 (exactly 15 minutes after TSST concludes)
18. Salivette 6 (exactly 30 minutes after TSST concludes)
19. Salivette 7 (exactly 45 minutes after TSST concludes)
20. Salivette 8 (exactly 60 minutes after TSST concludes)
21. Disconnect Individual Heart Rate Measurements
22. *Guessing Module*

---

[4] Consent is only taken on the first day of the study (acute and chronic day 1).
[5] For acute and chronic day 7, this task consists of both the speech and the question-answer phase. For chronic day 1, this task involves only the question-answer phase.

23. *PANAS*

24. *General Questionnaire*

25. Debrief

Chronic days 2-6:

1. Welcome

2. Connect Individual Heart Rate Measurements

3. *PANAS*

4. TSST Preparation period

5. *Self-Reported Stress Question 1*

6. TSST "Interview" Task

7. *Self-Reported Stress Question 2*

8. TSST Mental Arithmetic Task

9. *PANAS*

10. Disconnect Individual Heart Rate Measurements

11. *Guessing Module*

12. *PANAS*

13. *General Questionnaire*

14. Debrief

3 Econometric Approach

3.1 Main Treatment Effects

We begin by asking whether the TSST affects our outcomes of interest, separately for the acute and chronic treatments. To this end, we restrict the sample to Day 1 acute and Day 7 chronic, and test whether participants in the stressed treatment group respond differently on a variety of outcomes (to be described below) from participants in the control group, using the following specification:

$$y_{ig} = \beta_0 + \beta_1 T_{ig} + \varepsilon_{ig} \qquad (1)$$

Here, y_{ig} is the outcome of interest for respondent i and session g. Note that for some outcome variables, y_{ig} is measured in first differences (see below). T_{ig} is a treatment indicator that takes value 1 for respondents that were in the stress condition and 0 for respondents that were in the non-stressed condition. We will cluster standard errors at the session level. Thus, β_1 estimates the treatment effect of the stressful condition of the TSST on each outcome as compared to the control condition.

In addition, we want to examine whether chronic stress differentially affects behaviors relative to acute stress. We will use the following specification with data from day 1 of the acute group and day 7 of the chronic group:

$$y_{ig} = \beta_0 + \beta_1 T_{ig} + \beta_2 Chronic_{ig} + \beta_3 T_{ig} \cdot Chronic_{ig} + \varepsilon_{ig} \qquad (2)$$

where y_{ig} is the outcome of interest for respondent i in session g. T_i is a treatment indicator that takes value 1 for respondents that were in the stress condition and 0 for respondents that were in the non-stress condition (recall that treatment is constant across the week). *Chronic* is an indicator for the chronic group. Thus, β_1 estimates the treatment effect of the TSST on each outcome in the acute group, β_2 indicates whether there is a day fixed effect on outcomes, and β_3 estimates whether the TSST has a different effect on day 7 (chronic) than on day 1. Therefore, β_3 is our primary coefficient of interest in this specification. We will again cluster standard errors at the session level.

Note that if participants differentially show up to Day 7 sessions by treatment, the coefficient β_3 may be biased. For example, if the participants who were in the treatment group for 7 days and have a higher response to the stressor are less likely to show-up on Day 7, β_3 would be biased downwards. We therefore restrict the sample to participants who showed up for at least 5 days of the study and were present on day 7.

3.2 Outcomes of Interest

1. **Balance, integrity, and manipulation check**

   (a) **Randomization Check:** To determine whether randomization was successful, we estimate our main equations with a number of demographics as outcome variables, including age, gender, average earnings and earnings after spending per month, BMI, number of siblings and dependents, whether the respondent depended on someone else financially, current unemployment, whether

currently in debt, and perceived standing of the respondent in their community.

(b) Selection into Chronic Treatment: To test for differential attrition by treatment, we regress whether the participant was present on day 7 on treatment assignment, using equations [1] and [2].
Second, equation [3] assesses whether attriting individuals are different in terms of the demographics described above.

$$y_{ig} = \beta_0 + \beta_1 \text{attrit}_{ig} + \varepsilon_{ig} \qquad (3)$$

Standard errors are clustered at the session level. We will also estimate this equation using baseline levels of cortisol and their responses to the TSST treatment on day 1 as outcome variables.
Third, equation [4] measures whether the baseline characteristics of attriting individuals in the treatment group are significantly different from those in the control group. The sample in this regression is restricted to attrition households.

$$y_{ig} = \beta_0 + \beta_1 T_{ig} + \varepsilon_{ig} \qquad (4)$$

(c) Cortisol: We measure salivary cortisol at eight points during the sessions on single day acute, chronic day 1 and chronic day 7. The first salivette is taken before the equipment to measure heart rate is attached. The second salivette is taken immediately before the panel of two persons explains the tasks of the TSST to the participants. The third salivette is taken between the two tasks (after the speech task and prior to the mental arithmetic task). The fourth through seventh salivette samples are taken at 15-minute intervals after the conclusion of the TSST. Cortisol samples are analyzed by Lancet Labs in Nairobi. We compute the area under the curve before analysis, such that the eight measurements provided by each participant in each session are collapsed to one number. Because cortisol levels are noisy, we include specifications in which we winsorize the cortisol variable at the 95th percentile. In addition, cortisol levels are affected by time of day, smoking, consumption of food and drink, and exercise. We attempt to mitigate the influence of these factors by asking participants not to smoke, not to drink alcohol, tea, or coffee; and we ask participants not to eat or drink, nor to performance intense exercise within 2 hours of the sessions. However, participants may not always follow these

9

rules; we therefore survey them on whether they did these activities, and include specifications control variables for these activities on the right-hand side. Thus, we will analyze four versions of the cortisol variable: with and without winsorization, crossed with inclusion or omission of control variables. **Time Path of Cortisol:** To examine the time path of cortisol in more detail, we restrict the sample to either Day 1 acute or Day 7 chronic and use the following specification:

$$y_{ig} = \sum_{s \in \{1...8\}} \gamma_s \cdot 1 \, (\text{Sample} = s) + \sum_{s \in \{1...8\}} \beta_s T_{ig} \cdot 1 \, (\text{Sample} = s) + \varepsilon_{ig} \tag{5}$$

where y_{ig} is the measure of salivary cortisol for respondent i in saliva sample s. T_i is a treatment indicator that takes value 1 for respondents that were in the stress condition and 0 for respondents that were in the non-stress condition (recall that treatment is constant across the week). *Sample* indicates the number of the saliva sample (1-8).

2. Main Outcomes

In the following, we describe the main outcome variables of interest. Outcome variables we consider primary and which will enter the correction for multiple comparisons are marked with asterisks.

a. **PANAS*:** To measure positive and negative general affect states, we generated a Kiswahili version of the PANAS (Positive and Negative Affect Schedule). On a scale of 0-100, respondents indicated how they felt in the present moment for each of 20 emotions. We asked this series of the questions at least once on each day (days 1 through 7) of the experiment. On single day acute and chronic days 1 and 7, respondents completed the PANAS twice: before the start of the TSST, and at the conclusion of the TSST. These variables will be analyzed in first differences. We will analyze each of the 20 items individually, and create overall scores for positive and negative affect.

b. **Guessing performance:** In a guessing module, participants were asked to rate their performance for each individual TSST task on a scale of 1st to 4th relative to the other members of their group. In addition, they were asked to indicate how confident they were in their rating of their own

10

performance. The outcome of interest is whether the respondent placed themselves in the correct half of the group (top vs. bottom).

c. **Heart Rate:** Heart rate is measured in one-second intervals throughout the duration of the experiment using Polar Heart Rate Straps. We will separate data into the following phases: preparation phase, delivery of speech, question-answer phase, mental arithmetic task, and at time of salivettes 4-8. For each phase, two variables will be computed, one for heart rate levels and one for heart rate variability. We will also compute the area under the curve for heart rate levels to obtain a single measure for the entire session, and variability for the entire session.

3.3 Dimensions of heterogeneity

We will estimate heterogeneous treatment effects using versions of our main estimating equations in which we add a main effect and interaction terms for a binary interaction of interest. We consider the following dimensions of heterogeneity:

1. Gender
2. Above median baseline self-reported stress level
3. Above median baseline cortisol level
4. Above median baseline heart rate
5. Above median baseline heart rate variability

3.4 Accounting for multiple inference

We will correct across the outcomes marked with asterisks above using the false discovery rate (FDR) following Anderson (2008).

References

[1] Anderson, Michael L. 2008. "Multiple Inference and Gender Differences in the Effects of Early Intervention: A Reevaluation of the Abecedarian, Perry Preschool, and Early Training Projects." *Journal of the American Statistical Association,* 103 (484): 1481-1495.

[2] Henckens, Marloes J.A.G., Guido A. van Wingen, Marian Joëls, and Guillén Fernández. 2010. "Time-dependent effects of corticosteroids on human amygdala processing." *The Journal of Neuroscience,* 30 (38): 12727-12732.

[3] Henckens, Marloes J.A.G., Guido A. van Wingen, Marian Joëls, and Guillén Fernández. 2011. "Time-dependent corticosteroid modulation of prefrontal working memory processing." *Proceedings of the National Academy of Sciences,* 108 (14): 5801-5806.

[4] Joëls, Marian, Guillén Fernández and Benno Roozendaal. 2011. "Stress and emotional memory: a matter of timing." *Trends in Cognitive Sciences,* 15 (6): 280-288.

[5] Kandasamy, Narayanan, Ben Hardy, Lionel Page, et al. 2014. "Cortisol shifts financial risk preferences." *Proceedings of the National Academy of Sciences*, 111 (9): 3608-3613.

[6] McEwen, Bruce S. 2004. "Protection and Damage from Acute and Chronic Stress: Allostasis and Allostatic Overload and Relevance to the Pathophysiology of Psychiatric Disorders." *Annals of the New York Academy of Sciences,* 1032: 1-7.

[7] Rubio, C.A. M. Sveander, A. Duvander. 1989. "A model to evaluate acute and chronic stress in the colonic mucosa of rats." *Annals of the New York Academy of Sciences*, 32 (1): 26-29.

Appendix A

Treatment condition questions:
- Tell me a little bit about yourself.
- Why do you want this job?
- Where do you see yourself in five years?
- Where do you expect to be in ten years?
- Describe your dream job.
- How much do you expect to get paid? And why do you deserve that amount?
- Why should we hire you?
- What are you looking for in a new position?
- Why are you the best candidate for this job?
- Why do you consider yourself qualified for this job?
- Why do you think you are more qualified than the other applicants?
- Can you please explain why you've been unemployed for so long?
- What are your career goals?
- What is your personal mission statement?
- What is your greatest fear?
- Why are you leaving your present job?
- List five words that describe your character
- What professional experience have you had?
- How would your previous work or life experience relate to this job?
- How has your education prepared you for this job?
- What is the most important thing you learned in school?
- What are your greatest professional strengths?
- What is your greatest professional achievement?
- What type of work environment would you best work in?
- Explain a time you exercised leadership.
- What good do you see yourself bringing to the company?
- What can you offer me that another person cannot?
- What special quality do you have and why do you find it so special?
- If you had to choose one, would you consider yourself a big-picture person or a detail-oriented person?
- What do you consider to be your weaknesses?
- What type of work environment would you be least suited for?
- What do you think you could do better or differently?
- What is your greatest weakness?
- How do you turn your weaknesses into strengths?
- What do people most often criticize about you?
- What has been the greatest disappointment in your life?
- What would your family or friends say is your worst quality?
- Tell me about a mistake you've made in the past.

- What negative things would your last boss say about you?
- Tell me about a challenge or conflict you've faced at work, and how you dealt with it.
- What's a time you disagreed with a decision that was made at work?
- How do you deal with pressure or stressful situations?
- What do you do if you catch a co-worker stealing?
- Your boss gave you credit for a project on which a colleague did most of the work. Do you accept the praise?
- Your boss asks you to cover for him on his expense report by saying you were at a meal when you were not. Do you cover for him?
- Would you consider it stealing to take pens from the office?
- You manage a group of people and your most productive employee frequently causes conflict with the rest of the team. How do you correct the situation?
- Tell me about a time when you handled a major crisis.
- Give us a work-related example of how you've handled rejection.
- How would you feel working for someone who knows less than you?
- What kind of personality do you work best with and why?
- How do you handle working with people who annoy you?
- If you find out that your company was doing something against the law, like fraud, what would you do?
- How do you work with people from different cultures?
- How do you manage your time and make realistic deadlines?
- How do you prioritize tasks?
- Tell me about a time you failed and explain how you handled it.
- Describe a situation that required a number of things to be done at the same time. How did you handle it? What was the result?
- What's your management style?
- Do you prefer to work on your own or with others?
- When solving a problem, do you prefer input from your co-workers or to solve it on your own?
- Tell me about a time you failed and explain how you handled it.
- Give an example of a time when you showed initiative.
- Do you think it is important in business to be fair or to just win?
- Is it better to win or play fair?
- Give me an example of a time that you worked well under pressure.
- What kind of people might struggle to work with you?
- What was the last project you led, and what was the outcome?
- What is your salary history?
- How would you go about establishing your credibility quickly with the team?
- What is your definition of work ethic?
- Tell me about a time you went above and beyond in a job?
- What do you consider to be your most important work ethic?
- How would your boss and co-workers describe you?

- How would your peers describe you?
- What do you want me to know about you?
- What makes you angry?
- What motivates you?
- Please talk to about your non-professional qualities. Are you a good person?
- Which leadership qualities do you possess?
- What were your responsibilities about your last position?
- How do you adapt to new environment?
- In your opinion, what is the best way to lead and motivates subordinates?
- What measures will you use to assess your career progress?
- How do you define success?
- How do you define failure?
- What makes someone a good person?
- What makes someone a bad person?
- Do you believe we should rely on each other or stand independently?
- If you had to live your life over again, what one thing would you change?
- What is the one question you were hoping I wouldn't ask?
- What is the worst thing you have gotten away with?
- What do you know about this company?
- What are you looking for in terms of career development?
- Tell us the difference between good and exceptional?
- What attracted you to this company?
- How do you feel about taking no for an answer?
- Under what circumstances do you think it is appropriate to fire someone? How would you fire the person?

Control condition questions:
- Which part of your day is your favorite and why?
- What activities do you enjoy doing?
- If you could imagine an ideal day, what would it look like?
- Do you like spending your days alone or with company?
- Who do you most like sharing your days with and why?
- Are most of your days spent about the same, or are some days different?
- What kind of food do you like to eat most during a common day and why?
- What is your favorite place to visit during a common day and why?
- Where do you spend most of your time during a common day?
- What would be your "perfect day"?
- What animal best represents you and why?
- If you had to choose to live without one of your five senses, which one would you give up?
- What type of music do you enjoy listening to?
- If you could travel anywhere in the world, where would it be?
- What is one thing you cannot go a day without?

- If you could have one superpower, what would it be and how would you use it?
- If you could time travel, would you go to the past or the future?
- What makes you happiest?
- Who is your favorite musical artist?
- Who is your personal hero?
- Would you rather explore a new planet or the deepest parts of the ocean? Why?
- What is your ideal weather?
- What is your favorite animal?
- What is your favorite color?
- What is your favorite food?
- What is your favorite time of day?
- What is your favorite day of the week?
- What do you like to do on a rainy day?
- What is your best friend's name? What do you share in common?
- Do you prefer to spend Christmas in the city or back in your home village?
- What is your favorite fruit?
- What is your opinion about drinking alcohol? Is it good or bad? Why?
- Would you prefer to be employed or self-employed? Why?
- When going to a special event, what would be your perfect wear? Why?
- Would you rather watch a TV or read a book? Why?
- Would you rather live in the city or in your rural home?
- Would you rather win a lottery or find a perfect job?
- If you could speak any other language, what would it be and why?
- How would your best friend describe you?
- What is your favorite holiday? Why?
- What is your best childhood memory?
- What do you miss about being a child?
- If your house was burning and you could save only one item, what would it be and why?
- If you could change your first name, what would it be and why?
- If you had to describe yourself as an animal, what animal would it be and why?
- What was your very first job? Did you like it or disliked it very much?
- What is that one item you have kept in your house for the longest time?
- Do you like animals? If you could, what animal would you want to be?
- How would you like to grow old?
- Do you like spending more time alone or more time around people?
- Do you like to cook? What type of food do you like to cook? How do you prepare it?
- How many times did you move home as a child?
- Do you get along with your next-door neighbor?
- If you could only have one meal for the rest of your life, what would it