

Research Article

“Shame on You”: Father Parenting Impacts Guilt, Morality, and Stress During Shaming

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Abstract: This paper explores a connection between father parenting traits, guilt and shame proneness, moral identity, and physiological responses to moral shame. In this study, participants answered questionnaires and responded to Kohlberg’s (1981) moral dilemma. The researcher read scripted feedback that morally shamed the participants, and cortisol levels were measured following this process. The results were analyzed using multiple linear regression. The father’s chaos parenting trait was positively related to increases in cortisol during shaming, and the father’s coercion parenting trait was negatively related to increases in cortisol during shaming. The father’s structure parenting trait was positively related to guilt-negative behavior evaluations and warmth was negatively related to guilt repair. Finally, the father’s warmth was negatively related to moral integrity while chaos was positively related. This research provides insight into the complex process of reacting to moral shame.

Keywords: shame, guilt, father, parenting, cortisol

1. Introduction

Individuals experience shame daily, and their reactions affect their personal, work, and community relationships. They typically respond in anger, avoidance, or defensiveness. Some may also be unaffected by shame. There are many factors behind these reactions, and exploring the origins of shame may help individuals develop healthy responses that are more beneficial for society and themselves. Shame is something that every person will encounter, and one’s response to it is largely impacted by their environment.

1.1 Shame and guilt

Moral emotions are crucial in the development, maintenance, and demonstration of one’s morality. They are defined as “emotions that are linked to the interests or welfare either of society as a whole or at least of persons other than the judge or agent” (Haidt, 2003, p. 853). Not only are moral emotions imperative to operating under one’s moral standards, but they also allow individuals to anticipate the effects of their actions in society and adjust their behavior accordingly (dos Santos et al., 2020). For instance, moral emotions such as guilt or shame encourage individuals to accommodate sociomoral norms of behavior (Miceli & Castelfranchi, 2018). They influence how one perceives and responds to moral transgressions in society. Some moral emotions are also closely tied to one’s sense of self and indicate

the self-importance or self-relevance of moral values (Krettenauer et al., 2014). Due to this relationship, guilt and shame are considered key moral emotions, as they both result from discrepancies between one's ideal and actual self (Krettenauer et al., 2014). Many believe that guilt and shame occur in tandem, but there are significant differences between the two.

Shame and guilt are often used interchangeably. They coexist, correlate, and both consist of negative self-evaluations due to perceived transgressions (Miceli & Castelfranchi, 2018). However, these emotions are distinct and encompass different criteria. Guilt is a moral self-evaluation as it is associated with one's responsibility for behavior that typically involves a moral transgression. It is an evaluation of one's moral actions and ability to cause harm to another person, which is rooted in responsibility (Miceli & Castelfranchi, 2018). The research about shame is conflicting: most researchers identify shame as a moral emotion (dos Santos et al., 2020; Haidt, 2003; Krettenauer et al., 2014), but others do not (Miceli & Castelfranchi, 2018). Shame is considered to have more focus on one's self-image rather than the transgression, which leads some researchers to claim it is a nonmoral emotion. It is important to mention that "nonmoral" does not mean "immoral"; it implies that the behavior did not focus on the individual's sense of responsibility in a moral transgression. Shame is evaluated as a moral emotion in the context of this study because of its role in moral transgressions.

There are important distinctions between guilt and shame. Guilt and shame are both self-evaluations but with different focuses. Guilt focuses on the action that was either taken or not taken, while shame focuses on oneself: "How could I have done *that*"; while shame is "How could *I* have done that" (Dempsey, 2017, p. 84). Guilt often involves feelings of regret, which stem from perceived responsibility. However, these feelings reflect the individual's actions or offenses, not their sense of self (dos Santos et al., 2020). In guilt, the self is not the central object of negative evaluation, but rather the action done or undone (Lewis, 1971). The individual perceives the transgression as a flaw of oneself which is indicative of an identity self-evaluation. The individual's appraisal of their behavior affects whether they experience guilt or shame. Guilt concentrates on what the other person involved in the transgression feels, whereas shame involves feelings about the self. Terrizzi (2013) found an intriguing relationship between shame and disgust, particularly towards oneself. The findings support the distinction that shame concerns the self because disgust was found to be linked to shame, not guilt. This suggests that disgust interacted differently with the qualities of shame. There are evidently some areas where shame and guilt diverge; therefore, the action tendencies for these emotions are distinct.

An action tendency refers to specific urges or behaviors that follow a particular emotion. For guilt, tendencies are prosocial and directed toward others: apologizing, making amends, confessing, asking for forgiveness, attempting to restore the relationship, and vowing to change (Dempsey, 2017). The individual focuses on the interpersonal relationship as opposed to how their actions affected their identity. Guilt motivates the individual to perform reparative actions rather than avoidance ones (Lewis, 1971). In contrast, action tendencies for shame involve remarks of inadequacy and defectiveness, seeking escape or avoidance, and the desire for the other person to not view them as a lesser person (Dempsey, 2017). The person often responds by avoidance or social withdrawal, contrasting the action tendencies of guilt. However, these tendencies are prosocial when the individual incorporates surrender or appeasement to repair the offense (Miceli & Castelfranchi, 2018). Shame produces a desire to both restore and protect one's self-image. Gausel and colleagues (2016) studied the paradox of shame, where the action tendencies of shame differ. The individual may appraise their moral transgression as a "self-defect" that involves concern for their *self*-image, which leads to prosocial actions to restore it. On the other hand, the individual may also appraise the offense as a "concern for social condemnation" that threatens their *social* image. This generates feelings of rejection that instigate social withdrawal (Gausel et al., 2016, p. 119). Thus, the action tendencies of shame are dependent on the individual's appraisal and whether the transgression threatens their social image or self-image. In both cases, the action tendencies associated with shame strongly suggest a connection to identity. The individual focuses on how a transgression exposes a potential flaw in their ideal self (Miceli & Castelfranchi, 2018).

As mentioned previously, those who feel shame after a moral transgression fixate on how it reveals a fault in their ideal self which suggests a relationship between shame and identity (Miceli & Castelfranchi, 2018). Additionally, Olthof and colleagues (2004) found that shame was significantly higher when one's identity was threatened. Moreover, identity is deeply intertwined with family and parenting. Additionally, the development of guilt in response to transgressions is heavily influenced by parenting (dos Santos et al., 2020). Some individuals express guilt and shame more frequently, which could be affected by various dimensions of parenting.

1.2 Parenting, guilt, and shame

Family relationships have a significant role in a child's development. Parental practices and the overall family environment affect a child's guilt and shame proneness. A study conducted by Ferguson and Stegge (1995) indicated that parental hostility, lack of discipline, and poor recognition of positive behaviors led to an increased expression of shame. The findings of their study were supported by Alessandri and Lewis (1996) who found that negative comments about a child's performance are also associated with higher levels of shame. Other practices such as harsh parenting, power assertion strategies, low protection and care, hostility, and emotional abuse are related to a child's shame expression as well (dos Santos et al., 2020). In addition to these dimensions, disciplinary methods are crucial in developing the experience of shame and coping strategies. A study conducted by dos Santos and colleagues (2020) found that parental practices based on reasoning assist guilt development, specifically when parents discuss the effects of the behavior with the child. The child becomes more sensitive to others' perspectives when they violate moral norms, which encourages feelings of guilt over shame (dos Santos et al., 2020). This may redirect feelings of depression, avoidance, or aggression to prosocial behaviors instead. In addition, more structured and responsive parents improve moral internalization in children, suggesting a healthier relationship with shame (dos Santos et al., 2020). Parents play an instrumental role in their child's ability to cope with experiences of shame and guilt.

The root of punishment tactics and other parenting practices are parental traits. Skinner et al. (2005) identified six unipolar dimensions: warmth, rejection, structure, chaos, autonomy support, and coercion. These dimensions are foundational for parenting and reveal the nature of the relationships (Skinner et al., 2005). These traits are also assessed with each parent individually, which teases out their own parenting style. Warmth and rejection impact the child's psychological and personality development, sociocultural beliefs, and emotional coping (Rohner et al., 2005). Specifically, warmth involves emotional availability, kindness, and comfort. Rejection involves the withdrawal of love and acceptance from the child. Characteristics of rejection are harshness, hostility, and criticism (Skinner et al., 2005). The parent communicates their dislike for their child, whether it's passive or overt. Warmth is known as the most important aspect of caregiving, so it deeply impacts a child for the rest of their life. Structure consists of discipline, control, and clear expectations (Skinner et al., 2005). It also applies to goal orientation, where the parent provides contexts for ways to achieve goals and avoid consequences. Chaos involves unclear expectations and arbitrary punishment, which produces mental confusion (Skinner et al., 2005). This can cause many issues for the child later in life, specifically accomplishing goals and contributing to society. Autonomy support focuses on free choice and expression, curiosity, and respect (Skinner et al., 2005). This enables the child to problem solve and communicate their views later in life. Coercion refers to strict obedience, psychological control, and overcontrolling the child's actions and beliefs (Skinner et al., 2005). This is problematic because the child is unable to explore their own beliefs. They also often internalize or externalize their problems (Skinner et al., 2005). All these traits are consistent across parenting and have a significant impact on the child, specifically their coping, emotional processing, and self-image. The impact will affect how one processes guilt and shame, which will persist into adulthood; however, there has been insufficient investigation in this specific avenue. Understanding this relationship may indicate methods to improve communication and reactions when one is shamed.

1.3 Fathers, guilt, and shame responses

While both parents have a significant impact on the development of guilt and shame responses in children, fathers have a particularly interesting effect. According to a previous model by Massey-Abernathy, fathers and mothers often have different behaviors when interacting with their children. A father's investment is more variable than the mother's (Massey-Abernathy & Byrd-Caven, 2016). Mothers also report more acceptance and warmth. The father's play often involves roughness, but it also exhibits control and affection. This teaches obedience through sensitivity, which is the role that fathers often have in the parent dyad (Massey-Abernathy, 2022). Both obedience and sensitivity to others are values connected to guilt behaviors. Acknowledging right and wrong is part of instilling obedience. Therefore, fathers may have a unique role in developing a child's ability to process their own social transgressions. The emotional tone and amount of affection displayed by the father are also associated with higher social competency in children (Parke & Buriel, 2007). This competency may provide a greater ability to process a social transgression, leading to an increase in guilt behaviors. One study shows that a father's presence is positively related to a child's emotional regulation

(Massey-Abernathy, 2022). If a father engages in more complex play and communication with the child, then the child is predicted to have greater emotional regulation (Parke, 1995; Parke & Buriel, 2007; Pleck, 1997). If a father rejects a child, does not define clear expectations, and attempts to control their child, the child's emotional regulation will suffer. Shame often involves an intense emotional experience, so one's emotional coping mechanisms are truly put to the test. Shame may induce negative emotions such as anger, anxiety, low self-esteem, etc. (Miceli & Castelfranchi, 2018). If a child has a poorly functioning emotional regulation system, these emotions may become overwhelming. Therefore, a child with a father who exhibits negative traits such as rejection, chaos, or coercion may be more reactive when experiencing shame because they are unable to regulate the negative emotions that stem from shame.

Literature also shows that fathers have a unique impact on cortisol levels, which signify stress. One study showed that warm father relationships, specifically with daughters, led to lower cortisol levels overall and more attuned responses when their daughter was discussing a problem with a friend (Byrd-Craven et al., 2012). This indicates that a father who displays warmth acts as a buffer when their child engages in stressful activities such as confrontation in friendships. Another study indicated a father's negativity relates to increased cortisol in their child, especially during an emotional challenge (Mills-Koonce et al., 2011). The children in this study were seven to 24 months old, but this imbalance may continue into adulthood if the negativity persists. Literature supports how father-child interactions moderate the reactivity of emotion regulation. These mechanisms are crucial for social interactions throughout life (Massey-Abernathy & Byrd-Caven, 2016). A child with a negative relationship with their father may experience higher levels of stress in everyday life and specifically in emotionally charged social interactions. This would especially hinder their abilities to cope when shamed, which affects their response. Being shamed causes a physiological response, specifically through cortisol levels. Therefore, reactions to shame may differ depending on one's ability to cope and regulate their physiological responses.

1.4 Physiological responses to shame

Research has indicated that shame elicits physiological responses. When the social self is threatened through shame, cortisol levels increase. Cortisol is a hormone that has many roles in the body, varying from metabolism to immune responses. Levels are also dependent on the time of day, as there is a spike in the morning when one wakes up. Cortisol is also popularly known to activate during stress responses due to its ability to release energy stores and activate other physiological systems (Dickerson, Kemeny, et al., 2004). Dickerson, Kemeny, and colleagues (2004) investigated the connection between cortisol and social evaluative threats. Social evaluative threats involve potential harm to one's self-image or self-perception. They found that social evaluative threats (such as shame) initiate the release of cortisol. Not only do levels spike, but the recovery time from the stressor is slower when the threat is social-evaluative (Dickerson, Gruenewald, et al., 2004). Their studies indicate that one's physiology changes when one interacts with a social-evaluative stressor. We previously established that shame induces social-evaluative threats because it is a direct attack on one's identity. Dickerson, Gruenewald, and colleagues (2004) also classify shame as a social-evaluative threat that in turn releases cortisol. Therefore, the relationship between shame and social-evaluative threats may be bidirectional. It is unclear if shame causes a social-evaluative threat or if it simply results from one. It could also operate in both directions. In any case, cortisol is released when the self is threatened in this fashion, which indicates a stress response. Not only does this threat initiate physiological responses, but it also provokes emotional responses that diverge from those associated with guilt.

Literature about the physiological responses to guilt is lacking. Most studies only discuss the physiological reactions to shame. However, Dickerson, Kemeny, et al. (2004) examined shame and guilt in a self-blame study. They assessed the immunological effects of inducing shame and guilt and found that cortisol seemed to predict shame but not guilt. Therefore, it is possible that guilt does not activate the same release of cortisol as shame. This distinction further indicates the differences between these two emotions.

1.5 The present study

Due to this gap in research, the purpose of this study is to investigate how father parenting traits affect the physiological response to moral shame, guilt and shame proneness, and moral identity by provoking moral shame. An individual who experiences higher levels of shame may also experience intense emotions (Miceli & Castelfranchi,

2018). As previously established, fathers impact the development of one's emotional regulation (Massey-Abernathy, 2022). If their father exhibits negative traits, then they may have a more difficult time regulating these emotions, leading to more stress when they are provoked. The literature has also suggested that a father's traits affect one's cortisol levels (Byrd-Craven et al., 2012). Positive father traits may act as a buffer against stress, while negative father traits may heighten it. Fathers have also been shown to impact one's social competency and enforce obedience (Hofferth et al., 2010; Parke & Buriel, 2007). This may assist in the development of guilt behaviors and moral identity. The authors would like to note that this study is part of a larger study. There were additional variables included in the study procedure. However, to enhance clarity in the analysis, the variables applicable to this study are the only ones discussed. The hypotheses for this study are as follows:

- I. If an individual's father exhibits rejection, chaos, or coercion, then cortisol levels following moral shaming will increase.
- II. If an individual's father exhibits warmth, structure, or autonomy support, then cortisol levels will not be affected.
- III. An individual's experiences of shame self-evaluation and shame withdrawal will increase if their father exhibits rejection, chaos, or coercion.
- IV. An individual's experiences of guilt negative behavior evaluation and guilt repair following moral transgressions will increase if their father exhibits warmth, structure, or autonomy support.
- V. If an individual's father exhibits rejection, chaos, or coercion, then their moral identity will increase.
- VI. If an individual's father exhibits warmth, structure, or autonomy support, then their moral identity will decrease.

2. Method

2.1 Participants

The participants in this study were students in an introductory psychology course ($N = 99$). Results of a post hoc power analysis conducted using G*Power determined that with six predictors with a significance criterion of $\alpha = .05$ for 99 participants, power = .81 (Faul et al., 2007). The participants answered a demographic questionnaire, and 62 identified as female, 32 as male, and five as non-binary. 77.8% identify as White, 10% as Asian, 8.8% as Hispanic/Latinx, and 5% as mixed or other. The mean age of the participants was 19.7 years.

2.2 Measures

The measures in this analysis are a demographic questionnaire, the Guilt and Shame Proneness (GASP) scale, a Parental Trait questionnaire based on Skinner's theories, a Moral Identity Questionnaire (MIQ), and cortisol collection. This study is part of a larger study that examines the impact of personality on these variables as well. Therefore, personality and religiosity questionnaires were included in the procedure, but are not reported within this analysis. The purpose of this is to keep each analysis clear and uncomplicated.

2.2.1 Demographic questionnaire

A short five-question demographic questionnaire was developed to assess general information about the participants. The scale included items about the participants' gender, age, childhood social economic status, race, and college classification.

2.2.2 The GASP scale

The GASP scale (Cohen et al., 2011) "measures individual differences in one's propensity to feel guilt and shame across a range of personal transgressions." It includes various situations where participants use a 7-item Likert scale to rank the likelihood that they would feel guilty or shameful from 1 (*very unlikely*) to 7 (*very likely*). This scale contains two guilt subscales that measure NBEs (Negative Behavior Evaluations) and responses to public transgressions. There

are also two shame subscales that measure similar aspects, NSE (Negative Self Evaluation) and the action tendency. These four subscales are Guilt NBE, Guilt Repair, Shame NSE, and Shame Withdraw. Each of these sections addresses the different dimensions of how one experiences guilt and shame. Guilt NBE refers to feeling bad about a particular transgression and recognizing that what one did was wrong. Guilt Repair refers to the action tendency of guilt, where the person seeks to repair the situation. Shame NSE addresses if the person views themselves as a bad person following a transgression. Shame focuses on the self, which this subscale targets. Shame Withdraw acknowledges the action tendency of shame, where the person emotionally, physically, or socially withdraws when a transgression occurs. All these scales are individually reliable ($\alpha > .60$). Cohen et al. (2011) tested the reliability and predictive validity of the scales and found that each subscale is internally reliable and predictably valid.

2.2.3 Skinner's unipolar parental traits

Parental traits are another variable measured in this study based on Skinner's (2005) motivational model. The questionnaire used in this study is based on their model and is modified to reflect the relationship that the participant has with their father and mother individually, rather than the parental unit. Therefore, this questionnaire is divided into two sections: father and mother. The participant chooses if the person they are referencing is their father, stepfather, adopted father, male relative, or other. The same question was asked of mothers. They rank the accuracy of 24 statements about both caregivers on a 4-item Likert scale from 1 (*not at all true*) to 4 (*very true*). This scale measures six dimensions: Warmth ($\alpha = .77$), Structure ($\alpha = .66$), Autonomy Support ($\alpha = .73$), Rejection ($\alpha = .69$), Chaos ($\alpha = .67$), and Coercion ($\alpha = .74$). The three positive dimensions are Warmth (e.g., My father and I do special things together), Structure (e.g., My father's expectations for me are clear), and Autonomy Support (e.g., My father expects me to say what I really think). The three negative dimensions are Rejection (e.g., Sometimes I feel like my father thinks I'm difficult to like), Chaos (e.g., My father changes the rules a lot at home), and Coercion (e.g., I often get into power struggles with my father). Each trait was examined individually. These traits are unidimensional, meaning that parents can score high in one and high in another, even if they are considered contradictory. For example, a parent can score high in warmth and rejection, as they can exhibit both traits at different points of their parenting due to the situation. Therefore, we believe that this model can provide a more comprehensive and deeper analysis of a parent's behavior. We also want to make the distinction that we are discussing the role of a father figure. The Skinner's questionnaire that we use asks about the participant's "primary male caregiver" and provides several options: father, stepfather, adopted father, male relative, or other. Therefore, the option of "other" is available if it is more applicable to the participant's father figure. There is also the option to answer "none" if that is more applicable to the participant. Therefore, the participants had options to answer what fit their family experience. Our focus is not on the gender identity of the individual but rather on the role that they embody (which is determined by the participants' selections).

2.2.4 MIQ

The MIQ (Black & Reynolds, 2016; $\alpha = .90$) assesses "the conscious and unconscious mental processes that determine whether a given action is right or wrong according to the prevailing moral paradigm." It is included to assess the participants' moral identity. The two subscales are Moral Self ($\alpha = .87$) and Moral Integrity ($\alpha = .84$). Moral Self involves the extent that the individual builds their sense of self around their moral beliefs (e.g., I try hard to act honestly in most things I do). It also involves the desire to see oneself as moral or to be seen by others as moral. Moral Integrity focuses on the individual's behaviors and whether they do what they believe is the right thing when nobody's watching. This subscale is also negatively coded (e.g., As long as I make a decision to do something that helps me, it does not matter much if other people are harmed). The questionnaire consists of 20 items where the participants rate how strongly they agree with the statement on a 6-item Likert scale from 1 (*strongly disagree*) to 6 (*strongly agree*). These statements center around judgments and decisions regarding the well-being of others and how that defines one's moral self.

2.2.5 Salivary cortisol samples

Salivary cortisol samples are also collected to determine a physiological response. Salivary cortisol is a hormone that is secreted into the saliva from the hypothalamic-pituitary-adrenal axis, particularly when someone is stressed (Dickerson, Kemeny, et al., 2004). Samples were collected using the passive drool method, where the participants salivate through a straw into a vial. The samples are stored at 20°C. Three samples are collected throughout the study:

one at the beginning for a baseline, one immediately following shaming, and one 15 minutes following shaming. Cortisol takes 15 minutes to present in the saliva. The baseline sample establishes the level of physiological stress that the participant enters with. Therefore, if the participant's levels increase during the study, then it is due to the manipulation, not extraneous factors. As mentioned earlier, the social-evaluative stress hormone, cortisol, is suggested to be released when someone is shamed (Dickerson, Gruenewald, et al., 2004). This study seeks to evaluate if there is an interaction between parental responsiveness and the release of this hormone during moral shaming.

2.3 Procedure

The present study was approved by Institutional Review Board (IRB) before data collection began. Once the student was provided informed consent and made aware of the general purpose, risk, and benefits of the study, they received a number so that identification is impossible following data collection. The researchers recruited participants via a research participation pool program. These students received course credit for their participation. They signed up for a time slot and met the researcher in a research lab in an academic building on a midwestern university campus. There were no inclusion or exclusion criteria or any restrictions based on demographic characteristics.

Following informed consent, the participants were instructed to salivate in a tube to measure their salivary cortisol levels, establishing their baseline stress level. Then, the participant completed the GASP scale (Cohen et al., 2011), the MIQ (Black & Reynolds, 2016), and a parental trait questionnaire based on Skinner's six dimensions of parenting (Skinner et al., 2005). Following this, they began the moral interview in front of a one-sided glass. They were deceptively told that there are "moral psychologists" in the adjacent room grading their responses; however, nobody was in the room. They were presented with Kohlberg's moral dilemma. Kohlberg's (1981) moral dilemma provides a scenario where a man has a wife who is ill and needs a scientist's medicine to survive. The scientist is charging ten times the money it costs to make the drug, which is more than the man can afford. The man could only raise half the money. Once he explained to the scientist that his wife was dying and requested the drug for cheaper, the chemist refused, saying that he had discovered the drug and wanted to make money from his work. The man became desperate and decided to steal the drug. The participants heard this dilemma and were asked to respond to questions. These questions include: "should [the man] have stolen the drug; would it change anything if [he] did not love his wife; what if the person dying was a stranger, would it make any difference; should the police arrest the chemist for murder if the woman died?" Following their answers, the researcher left the room to obtain the specialists' "feedback", which was actually a standardized, prewritten script that intended to invoke moral shame when read to the participants. The researcher read the feedback to the participant. The script stated: "After careful consideration and evaluation of your response to your questionnaires and interview, we regret to inform you that there were several key moral areas that are lacking. Your score was considerably lower in comparison to others that have completed this task. We must express bluntly that there was a high concern for your responses and recommend that you take advantage of the resources provided at the end of the study." The researcher then collects a second salivary cortisol sample that evaluated the participant's stress during the interview and questionnaires. The researcher instructed the participants to complete questionnaires regarding demographics, their feelings about the "interview", personality and religiosity (not included in this analysis), and their affect following the shaming. Finally, the last cortisol sample was collected 15 minutes following the moral shaming script to measure the stress that the participant felt. The data and materials for this study are available upon request.

The participants are experiencing stress during the study through the study process and the shaming script. However, these levels are not beyond what is experienced daily. There is always the risk of being stressed or shamed in daily life. While this study elicited these feelings, it did not intensify them beyond everyday experiences. Participants were also debriefed and provided counseling resource information to minimize their stress after leaving the study. During debriefing, the deception was revealed to the participant, as well as an explanation for the purposes and true aim of the study. The participant was also provided counseling resource information and thanked for their time.

2.4 Plan of analysis

To determine if positive and negative aspects of fathers' parenting impacted guilt and shame proneness, moral identity, or cortisol responses, multiple regression analyses were conducted that included both mother and father parenting styles. Fathers' parenting traits contributed to variance beyond the contribution of mothers; therefore,

individual subcomponents of fathers' parenting traits were analyzed. All composite variables were examined for outliers that were three or more standard deviations away from the mean. Data analyses were conducted both with and without outliers. Significant results did not differ between the data sets, which led to the decision to include all data points in the final analyses.

In addition to survey collection data, all cortisol samples were assayed twice, and mean scores were used as the final value. Differences in scores between baseline, immediate after shame, and peak cortisol response to shame were then computed to account for variations within individual stress responses.

3. Results

In this study, the aim was to investigate the role of fathers' parenting traits in physiological responses to shame, guilt and shame proneness, and moral identity. The results regarding hypothesis I were confirmed by the chaotic trait, but contradicted by the coercive father parenting trait. Hypothesis II was not indicated in the results. Regression analysis indicated that there is a significant relationship between aspects of fathers' parenting with peak rise in cortisol ($R^2 = .19$, $F(6, 77) = 2.91$, $p = .01$). Specifically, higher cortisol increases were positively related to the traits of fathers' chaos ($\beta = .37$, $p = .03$) and negatively related to fathers' coercion ($\beta = -.48$, $p < .01$). As the trait of chaos increased, cortisol peak differences increased, and as the trait of coercion decreased, cortisol peak differences increased. Regression analysis indicated that there is a significant relationship between aspects of fathers' parenting and the rise in cortisol immediately after shaming ($R^2 = .16$, $F(6, 76) = 2.38$, $p = .04$). Specifically, higher cortisol increases were positively related to the traits of fathers' chaos ($\beta = .41$, $p = .02$) and negatively related to fathers' coercion ($\beta = -.32$, $p = .04$). As the trait of chaos increased, cortisol increased immediately after shaming, and as the trait of coercion decreased, cortisol increased immediately after shaming.

Hypothesis III was not confirmed in the results, as regression analysis did not indicate that there was a significant relationship between these variables. However, hypothesis IV was confirmed by the structure trait but contradicted by the warmth trait. Regression analysis indicated that there is a significant relationship between aspects of fathers' parenting with guilt NBE ($R^2 = .20$, $F(6, 79) = 3.18$, $p < .01$). Specifically, participants experience higher evaluation of negative guilt behavior evaluations as the trait of structure father increased ($\beta = .31$, $p = .01$). Regression analysis indicated that there is a significant relationship between aspects of fathers' parenting with guilt repair ($R^2 = .17$, $F(6, 79) = 2.62$, $p = .02$). Specifically, participants experience lower repair of guilt as the trait of warm father increased ($\beta = -.45$, $p < .01$).

Finally, hypothesis V was contradicted by the chaotic father parenting trait, and hypothesis VI was supported by the warmth trait. Regression analysis indicated that there is a significant relationship between aspects of fathers' parenting with the moral integrity dimension of moral identity ($R^2 = .23$, $F(6, 79) = 3.83$, $p < .01$). Specifically, moral integrity decreased as the trait of fathers' warmth increased ($\beta = -.31$, $p = .04$) and the fathers' trait of chaos increased ($\beta = -.52$, $p = .001$). See Table 1 for the model summaries, Table 2 for the ANOVA values, and Table 3 for the ANOVA coefficients.

Table 1. Model summaries for outcome variables with predictors: (Constant), Coercion father, Structure father, Autonomy Support father, Warmth father, Chaos father, and Rejection father

Outcome Variable	<i>R</i>	<i>R</i> ²	<i>Adj. R</i> ²	<i>SE</i>
Peak Cortisol	.430	.185	.121	.158
Immediate Cortisol	.398	.158	.092	.112
Guilt NBE	.441	.195	.133	5.22
Guilt Repair	.407	.166	.102	3.72
Moral Integrity	.475	.225	.167	7.76

Table 2. ANOVA results for the outcome variables and predictors: Coercion father, Structure father, Autonomy Support father, Warmth father, Chaos father, and Rejection father

Outcome Variable	<i>df</i>	<i>F</i>	<i>p</i>
Peak Cortisol	6,83	2.907	.013*
Immediate Cortisol	6,82	2.378	.037*
Guilt NBE	6,85	3.180	.008**
Guilt Repair	6,85	2.616	.023*
Moral Integrity	6,85	3.833	.002**

Note: * $p < .05$, ** $p < .01$

Table 3. Coefficients for Coercion father, Structure father, Autonomy Support father, Warmth father, Chaos father, and Rejection father with outcome variables

Outcome Variable	Predictor	<i>b</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
Peak Cortisol	(Constant)	.291	.176		1.655	.102
	Warmth	-.016	.009	-.273	-1.802	.076
	Rejection	-.008	.009	-.150	-.883	.380
	Structure	.001	.008	.009	.074	.941
	Chaos	.021	.009	.373	2.270	.026*
	Autonomy Support	-.001	.007	-.020	-.149	.882
	Coercion	-.026	.008	-.476	-3.173	.002**
Immediate Cortisol	(Constant)	.197	.124		1.587	.117
	Warm	-.012	.006	-.300	-1.932	.057
	Rejection	-.011	.007	-.306	-1.756	.083
	Structure	-.001	.005	-.011	-.091	.928
	Chaos	.016	.007	.405	2.413	.018*
	Autonomy Support	.002	.005	.043	.310	.757
	Coercion	-.012	.006	-.317	-2.065	.042*
Guilt NBE	(Constant)	25.310	5.079		4.983	< .001
	Warm	-.502	.274	-.274	-1.831	.071
	Rejection	-.376	.300	-.209	-1.253	.214
	Structure	.640	.248	.308	2.585	.012*
	Chaos	-.450	.307	-.236	-1.466	.147
	Autonomy Support	-.082	.223	-.050	-.368	.714
	Coercion	-.132	.261	-.074	-.504	.616
Guilt Repair	(Constant)	27.625	3.617		7.637	< .001
	Warm	-.576	.195	-.449	-2.951	.004*
	Rejection	-.151	.214	-.120	-.707	.482
	Structure	.315	.176	.217	1.787	.078
	Chaos	-.412	.218	-.309	-1.884	.063
	Autonomy Support	.065	.159	.056	.409	.684
	Coercion	-.071	.186	-.057	-.379	.706
Moral Integrity	(Constant)	9.627	7.551		1.275	.206
	Warm	.868	.407	-.313	2.130	.036*
	Rejection	-.184	.446	-.068	-.413	.681
	Structure	-.492	.368	-.156	-1.337	.185
	Chaos	1.514	.456	-.524	3.319	.001*
	Autonomy Support	.186	.332	.075	.562	.575
	Coercion	.348	.389	.129	.895	.374

Note: **p* < .05, ***p* < .01

4. Discussion

This study found that fathers' traits, particularly chaos and coercion, are related to one's physiological stress following moral shaming. Participants who experienced a chaotic father growing up were significantly more stressed when shamed. This occurred both directly following shaming and during peak shame. This indicates that the study itself

was also stressful to them (completing questionnaires, performing the moral dilemma test, etc.). This stress seemed to accumulate once the shaming was introduced. The participants with a chaotic father had a significant increase in stress from their baseline sample to their peak shame sample. A father who displays chaos provides an inconsistent and unpredictable environment when interacting with the child. Chaos goes beyond a lack of structure; it has been shown to confuse a child's ability to achieve something that they desire (Skinner et al., 2005). Therefore, an individual who has experienced a father with this trait will become confused when something unexpected happens in their environment. This confusion will likely induce some level of stress, as they are unable to navigate the situation (Mills-Koonce et al., 2011). This study was likely an unfamiliar environment, which makes sense why participants who experienced a chaotic father were stressed by the study itself. The shaming was also a sudden disruption to what the participants believed would happen. This caused intense confusion that then elevated their stress levels more than their counterparts.

Additionally, cortisol levels were negatively related to participants with a coercive father. This means that the participants with a coercive father were less stressed during the study and shaming. The cortisol levels immediately following shame remained close to the participant's baseline. The self-evaluative threat and the feedback from the moral dilemma did not raise their stress levels. This is also true for the participants' peak shame. The difference in their cortisol levels from their baseline to the peak was affected less. Therefore, this indicates that those who have experienced a coercive father are less likely to be stressed during shaming. Coercion is a negative father trait and involves psychological control and strict obedience (Skinner et al., 2005). Coercive parenting also typically involves name-calling, angry outbursts, and threatening rejection (Prinz et al., 2009). These behaviors involve similar physiological and cognitive effects of shaming since the father is often berating the individual. Therefore, the individual is not fazed by these types of behaviors from others because they experience them so often.

This study also indicated significant results regarding the GASP with positive father traits. In this study, participants with a father who had the structure trait had higher guilt NBEs. This indicates that the structure trait in fathers encouraged feeling guilty about a transgression (Cohen et al., 2011). Structure provides clear expectations and discipline. However, it is also suggested that structure acts as a guideline for social contexts that provide information to achieve desired outcomes (Skinner et al., 2005). This clear discipline that is based on reason, specifically with social wrongdoings, assists in guilt development (dos Santos et al., 2020). Structure encourages the child to be more sensitive about how their actions will affect others and guides them to think through the consequences. Fathers also have a unique role with discipline and obedience, which indicates they have a stronger impact when they have the structure trait (Hofferth et al., 2010). Their delivery of obedience and discipline typically carries more weight and can have stronger benefits and consequences (Hofferth et al., 2010). A father's clear, firm discipline assists guilt development significantly, which is why structure is a beneficial father trait. The individual will engage in more prosocial behaviors because they will be able to consider others' experiences and feel remorse when they commit a transgression.

Guilt repair had a negative relationship with the warmth trait of fathers. Guilt repair refers to the action tendencies of guilt: to make amends, alter one's behavior in the future, apologize, avoid excuses, etc. (Cohen et al., 2011). If a participant had a warm father, then these behaviors significantly decreased. Therefore, warm fathers led to a lack of repair behaviors when one experienced guilt. This is because of the comfort that a warm father provides and how he is also associated with discipline. The warmth trait involves acceptance, love, and affection. Warmth is also crucial when a child seeks comfort (Skinner et al., 2005). As stated earlier, fathers are crucial when exercising discipline (Hofferth et al., 2010). Therefore, when an individual turns to their father after committing a moral transgression, they are seeking either comfort or discipline. If the father has this warmth trait, they will often respond with acceptance (Skinner et al., 2005). When acceptance is given by the father instead of discipline, the individual may not feel the need to perform guilt-repair actions. It discourages the individual from seeking to repair the situation and change their actions because they were given acceptance from the figure that should provide discipline.

Finally, there were significant findings regarding moral identity. Moral identity involves both moral self and moral integrity. The moral self focuses on whether one is perceived as moral, while moral integrity consists of abiding by one's moral beliefs. Moral integrity was negatively related to the warmth trait as well. Moral integrity refers to doing the right thing even when no one is watching and remaining true to one's values. If a participant had a warm father, then they were less likely to have moral integrity. This is likely due to the reasons mentioned previously for warmth and guilt repair. Fathers providing acceptance instead of discipline may inhibit the individual's desire to remain true to their moral values. The individual perceives how the father will always accept and love them, which may lessen their accountability

and commitment to moral values. Their moral integrity also decreases if they have a father with chaos. The individual does not recognize the importance of having moral integrity because the chaotic father obscures goal behaviors (Hofferth et al., 2010). Therefore, the individual believes that they need to do whatever they can to survive and get ahead rather than critically think about how to reach a goal without compromising their morals.

4.1 Implications

The findings of the study have great implications for the stress responses related to parenting. The procedure of the study proved to be stressful. The findings support previous literature that suggests individuals who were raised by a chaotic father are significantly more stressed and struggle in unfamiliar situations (Mills-Koonce et al., 2011). This study also discovered that these individuals are significantly more stressed when morally shamed. This could affect how they cope with being shamed, as well as their overall health since unfamiliar situations are inevitable in life. These findings are new to the field, as this father trait specifically has not been directly linked to stress during moral shame. It supports previous literature about a father's role in emotional regulation (Massey-Abernathy, 2022; Parke, 1995; Parke & Buriel, 2007; Pleck, 1997), as the chaotic trait hindered the participants' abilities to regulate intense emotions and stress when experiencing moral shame. These findings provide a deeper identification of a specific father trait that hinders a child's future regulation of intense emotions, and by extension, stress during these episodes. The finding about coercive fathers also supports the idea that a coercive father may desensitize their child to shame, thus they are less stressed. This connection was supported by the findings in this study: the participants that experienced a coercive father are less likely to be stressed when they are engaged with a self-evaluative threat in an unfamiliar environment and when they are being morally shamed. This raises some interesting questions about how this affects their relationships and performance in society. These findings provide new contributions to understanding the impact of father traits. They indicate the impact of a specific father's parenting trait on one's ability to regulate their stress response in a moral shame scenario. It is contradictory to the idea that negative father traits harm an individual's ability to regulate their emotions. This negative trait actually seems to help them remain less stressed in an intensely emotional experience. However, it is unclear if their regulation system is well-developed, or if they are simply desensitized to these intense emotions. Further research may need to be conducted to identify the cause behind this reaction.

The findings about the structure trait and guilt NBEs are also novel and provide a more detailed perspective on the impact of a father's traits on one's social abilities. The structure trait is identified as a father parenting trait that specifically helps develop one's experience of feeling guilty about a transgression, which will impact a child's social functioning. It is supportive of past claims that fathers have an impact on social functioning (Massey-Abernathy, 2022; Parke & Buriel, 2007), but provides a new depth to previously established ideas. The findings about father warmth and guilt repair also contribute new information because of the deeper analysis they provide on the impact of father traits and guilt behaviors. However, they are contradictory to the idea that father parenting may enhance one's social competence. In this case, fathers who conveyed the warmth trait were associated with a decreased ability or desire to repair the situation following a transgression. This suggests that even though a father's parenting trait may be positive, it may not always have positive outcomes. It also indicates the importance of researching the impact of father parenting traits at a deeper level so that incorrect assumptions are not made.

The findings about father traits and moral integrity indicate that while a warm father is a good trait, it may prevent an individual from valuing moral integrity. A chaotic father also hinders their ability to preserve their moral integrity by creating an environment where they are unable to critically process how to accomplish a goal without compromising their morals. There is no current research that examines the impact of fathers' parenting traits on one's moral identity, particularly their moral integrity. These findings provide specific traits that may lead an individual to not follow through on their moral values, which may have many important impacts on the individual and society. They also emphasize the important role that a father has in a child's moral integrity, which has not been previously established.

4.2 Limitations

The main limitation of this study is that some of the participants were not deceived by the interview scenario. They were skeptical that there were moral psychologists behind the two-sided mirror. After debriefing, some participants stated "I thought so, but I went along with it" or other phrases that expressed a lack of deception. While this was only

a few participants, it potentially affects the internal validity of the results. The design should be altered to prevent this limitation. Instead of claiming that there are psychologists behind a two-sided mirror, there should be a panel of confederates that are visible and verbally deliver the shaming script. This design will be more convincing to the participants. Another limitation is that information was not collected about the family structure of the participants: two parents, single-parent, etc. Participants were offered the opportunity to mention “none” when asking about each caregiver, but further questions were not asked or examined. We also did not ask about the gender identity of the parents because that was not the focus of the study. We specifically wanted to see how the father’s role particularly affected the variables due to the evolutionary impact and variable nature of “father”. Therefore, the distinction of father is important to this study. However, examining the gender identity of one’s parent (or if they only want to be known as “parent”) may be an interesting future study. Another limitation is the age of the participants. The majority of the participants were college students between the ages of 18 and 23. Age may influence one’s reaction to moral shame because parenting practices and the culture of the United States have changed significantly each decade. To control this extraneous variable, participants could range between 18 and 60 years old. Although there were some limitations in this study, the results are still valuable.

5. Conclusion

The results support previous literature that emphasizes the role of fathers’ parenting traits and a child’s physiological and emotional regulation mechanisms. The findings also suggest the impact of fathers on guilt behaviors and moral integrity. They indicate that some father traits, such as warmth, may have unintended consequences and hinder a child’s guilt and moral integrity development. This suggests that fathers need to be balanced when giving both acceptance and discipline. If more fathers understood the importance of their parenting and were equipped with more tools, then perhaps the negative consequences of some fathers’ parenting traits would occur less often. Various therapies could be developed to support fathers who want to ensure that they are parenting their children in the healthiest way possible. Counselors could educate them on the importance of their parenting traits and the best way to respond to various situations. Another way these findings could be used is in the development of psychoeducational programs aimed at both parents. Increasing the awareness of these traits, especially from the child’s perspective, may lead to a healthier family dynamic as a whole. This could benefit all members of the family, not just the child. Therapies could also be developed for those who experienced the negative consequences of their own father’s parenting. These findings would allow counselors to tailor these sessions according to the person’s needs, which would result in better outcomes for the individual overall.

The findings of this study suggest that it’s not just about decreasing negative parenting traits and increasing positive ones: there needs to be a balance. Too much of one positive trait could lead to a negative outcome, as seen in our findings with the warmth father parenting trait being associated with decreased guilt repair and moral integrity. More awareness of this aspect of parenting may lead to a healthier environment for both the individual and the family. It may also have ripple effects in society due to the impact on one’s social behaviors.

It is impossible for a father to be perfect. Mistakes will undoubtedly be made, and there are many challenges and variations when it comes to parenting. However, understanding the impact of a father’s parenting practices and equipping them to raise their children in the healthiest environment possible is a worthwhile pursuit.

Conflict of interest

The authors have no conflict of interest.

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