HHS Public Access

Author manuscript

Child Psychiatry Hum Dev. Author manuscript; available in PMC 2016 April 01.

Published in final edited form as:

Child Psychiatry Hum Dev. 2015 April ; 46(2): 217–227. doi:10.1007/s10578-014-0467-1.

Children's Proneness to Shame and Guilt Predict Risky and Illegal Behaviors in Young Adulthood

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Abstract

Do shame and guilt help people avoid doing wrong? Although some research suggests that guilt-proneness is a protective factor while shame-proneness puts individuals at risk, most research is either cross-sectional or short-term. In this longitudinal study, 380 5th graders (ages 10–12) completed measures of proneness to shame and guilt. We re-interviewed 68% of participants after they turned 18 years old (range 18–21). Guilt-proneness assessed in childhood predicted fewer sexual partners, less use of illegal drugs and alcohol, and less involvement with the criminal justice system. Shame-proneness, in contrast, was a risk factor for later deviant behavior. Shame-prone children were more likely to have unprotected sex and use illegal drugs in young adulthood. These results held when controlling for childhood SES and teachers' ratings of aggression. Children's moral emotional styles appear to be well established by at least middle childhood, with distinct downstream implications for risky behavior in early adulthood.

Keywords

Shame; Guilt; Risky Sexual Behavior; Substance Use; Delinquency

Thus far most research has examined the implications of shame and guilt for people's emotional and social well-being – their capacity for empathy, predisposition to anger, psychological symptoms, and level of self-esteem. But less investigated are the implications of shame and guilt for *risky behavior*. It is commonly assumed that because these are painful, self-conscious, moral emotions, feelings of shame and guilt keep people "on the straight and narrow," decreasing the likelihood of transgression and impropriety. But when it comes to risky behavior (e.g., risky sexual behavior, substance use, criminal behavior) – how useful are shame and guilt? Are shame-prone and guilt-prone people, in fact, less likely to steal from their neighbor? Furthermore, can these moral emotions measured in childhood prospectively predict risky behavior in young adulthood?

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Little research has examined the implications of the self-conscious emotions for risky behavior [1]. Some social psychological research prior to the mid 1980's addressed questions about guilt and sex, and the apparent effects of guilt on reparative behavior [2, 3]. A major drawback to this earlier literature is that researchers had not yet made the critical distinction between shame and guilt. Although frequently used interchangeably, shame and guilt are now recognized to be distinct emotions that promote different motivations or "action tendencies" [4–13].

In brief, feelings of shame involve a painful focus on the self (e.g., "***I*** did something bad"). The experience of shame is often accompanied by a sense of shrinking, of being small, of worthlessness and powerlessness, and of being exposed. Due to its intolerability, people in the midst of a shame experience often resort to any one of a number of defensive tactics such as seeking to hide or escape the shameful feeling by denying responsibility [7, 8, 11, 13, 14] or attempting to shift the blame outside by holding others responsible for their dilemma [15–17]. And not infrequently, they become irrationally angry with others, sometimes resorting to overtly aggressive and destructive actions [18].

In contrast, feelings of guilt involve a focus on a specific behavior (e.g., "I did ***something bad***"). The experience of guilt is often accompanied by a sense of tension, of remorse, and of regret over the "bad thing done." Rather than provoking the defensive and retaliatory responses that are the hallmark of shame, this sense of tension and regret tends to motivate reparative action (e.g., confessing, apologizing) [4, 6, 7, 10, 13, 14, 19]. It is possible that feelings of guilt are more likely to foster constructive changes in future behavior because what is at issue is not a bad, defective self, but a bad, defective behavior.

Research consistently shows differences in the psychological and social correlates of shame and guilt. In general, proneness to guilt appears to be the more adaptive or constructive emotional style, whereas proneness to shame seems to carry with it some personal costs. This is especially true when one focuses on the unique variance in shame and guilt (i.e. where the effect of shame is factored out of guilt ("shame-free" guilt) and where the effect of guilt is removed from shame ("guilt-free" shame)). Regarding psychological adjustment, when one uses measures that are sensitive to the distinction between focusing on the self vs. the behavior [see 20], research on adults consistently shows a positive relationship between proneness to shame and a variety of psychological symptoms, including depression, anxiety, somatic symptoms, obsessive-compulsive tendencies, and paranoid ideation [21–26, see 27 for a meta-analytic review of shame and depression, 28, 29]. Although fewer studies in this domain focus on children and adolescents, results are similar to those found in adult samples, demonstrating a link between shame-proneness and psychological symptoms among youth [30–32, see 33 for a review, 34]. In contrast, proneness to "shame-free" guilt is generally negligibly or negatively related to psychological symptoms among children, adolescents, and adults [23, 28–30, 35–38].

Although there has been research on the relationship between the self-conscious emotions and aggression for adults, adolescents, and children [17, 18, see 33 for a review], little research has examined the impact of shame- and guilt-proneness on illegal behavior. In a sample of 5–12 year old children, Ferguson et al. [32] found that shame-proneness was

related to higher levels of externalizing symptoms. In contrast, guilt-proneness was related to lower levels of externalizing symptoms among boys. But contrary to predictions, the opposite was true for girls. Externalizing behavior, as reported by parents, was higher for guilt-prone girls. The measure of externalizing symptoms, however, combines the constructs of aggression and delinquency, leading to questions about possible confounding.

In a sample of undergraduates, Tibbetts [39] found a positive relationship between shame-proneness and the intention to drive drunk and the intention to shoplift, but again this was not measuring actual behavior. Building on his previous work, Tibbetts [40] used multiple measures of shame and guilt in a new sample of undergraduates. Criminal offending, indexed by self-reports of a number of illegal behaviors (including use of marijuana and other illegal drugs) showed a negative relationship to shame- and guilt-proneness [39]. In a multiple regression analysis in which all shame and guilt measures were simultaneously entered as predictors, shame-proneness was unrelated to offending whereas guilt-proneness remained negatively related. Robinson et al. [41] compared a group of 64 incarcerated adolescent male offenders to a sample of 60 male high school students. Shame- and guilt-proneness only marginally differentiated between groups. However, it should be noted that differences between the two groups were small, as adolescents from the community sample also displayed fairly high levels of antisocial behavior. When the two samples were combined, shame-proneness was mostly unrelated to self-reported antisocial attitudes and behavior. In contrast, guilt-proneness was consistently negatively related to antisocial attitudes and behaviors.

Although the previous studies used cross-sectional data, there have been a couple of studies that have looked at the prospective relationship of shame and guilt to illegal behavior. In a longitudinal study of 476 adult jail inmates, shame-proneness and guilt-proneness were assessed shortly after incarceration [42]. Participants were interviewed about arrests and criminal activities they had engaged in but were not arrested for at one year following release into the community; official arrest records were also accessed. In general, guilt-proneness negatively, and directly, predicted re-offense in the first year post-release; shame-proneness did not.

In a longitudinal study of 1,243 male prisoners between the ages of 14–24 who were serving their first incarceration in Germany, shame and guilt, assessed at the beginning of incarceration, were found to predict recidivism following release. Specifically, using log-logistic hazard models, shame positively predicted recidivism (assessed using official records of convictions) and guilt negatively predicted recidivism [43]. Of note, these effects remained significant even after controlling for the influence of psychological treatment.

Finally, in their prospective study, Stuewig and McCloskey [37] as part of a larger model, examined whether shame or guilt in early adolescence was related to delinquency measured in late adolescence. Although “guilt-free” shame was unrelated to delinquency using either juvenile court records or self-report of delinquency, “shame-free” guilt was inversely related to delinquency. Using structural equation modeling, guilt-proneness continued to be negatively related to delinquency even when a number of other variables including

symptoms of conduct disorder in childhood and parenting in adolescence were integrated in the model.

Very little empirical research has examined the relationship between shame and guilt and other risky behaviors such as substance use and risky sexual behavior, especially when taking into account the distinction between shame, with its focus on the self, and guilt, which focuses on the behavior. Nonetheless, the theoretical construct of shame plays a central role in the contemporary clinical literature on addictions [44–46]. Substance abuse experts have suggested that problematic alcohol and drug use develop as a misguided, maladaptive style of coping with negative emotions, such as anger, shame, and loneliness. Some individuals attempt to dampen these distressing emotions by using alcohol and/or drugs. Although alcohol or drugs can numb the pain in the short run and act as a "quick fix", what often ensues is a destructive cycle of addiction and shame. As Potter-Efron [46] observed, "Individuals who get caught in this pattern often drink in order to escape their shame only to find that eventually they feel even more shame because they have been drinking out of control" (p. 128).

Although the clinical literature has emphasized the role of shame in substance abuse [44, 47, 48], only a handful of empirical studies have actually examined whether proneness to problematic feelings of shame are linked to substance use and abuse. In two studies of adults in early stages of recovery from drug and alcohol addiction [49, 50], men and women in recovery had lower mean scores on guilt-proneness and higher mean scores on shame-proneness, as compared to men and women in community samples.

Similar findings have been observed in studies that considered within-group variations in shame-proneness and problems with substance use. Using a sample of adult jail inmates and two samples from an undergraduate population, shame-proneness was consistently positively related to both alcohol and drug problems, while guilt-proneness tended to be negatively related, albeit less consistently [51]. The same pattern of results was found among 281 college students, where "guilt-free" shame was positively related to problematic alcohol use disorder symptomology, alcohol use-related consequences, and alcohol use problem severity, and "shame-free" guilt was negatively related to alcohol use symptomology, and alcohol use-related consequences [52]. Finally, in a community sample of 206 adults followed for a period of 24 months, guilt-proneness predicted reductions in heavy drinking frequency using latent growth curve modeling [53]. Shame-proneness, however, was not a significant predictor of heavy drinking days in the overall latent growth curve and was associated with fewer heavy drinking days at the bivariate level.

Although there is a broad empirical literature examining substance use among adolescents, almost none has incorporated measures of shame *and* guilt. In one sample of 200 adolescents, guilt was significantly negatively associated with the onset of regular drinking and marijuana use [54]. Shame was not examined. To date, we have found no other research examining correlations of alcohol, marijuana, or use of other illicit drugs to shame and guilt among adolescents.

Even less research has examined the relationship of shame and guilt to sexual behavior outside the context of shame related specifically to sexual abuse experiences [e.g., 55] or anticipated guilt over sexual activity [2, 56]. One of the few studies examining proneness to shame and guilt with risky sexual behavior was conducted in a sample of 368 adult male jail inmates. Guilt-proneness was negatively related to risky sexual behavior (defined as unprotected sex: with someone other than primary partner; with someone who is a needle user; while trading, giving, or getting sex for drugs, money, or gifts) and overall number of sexual partners [57]. Shame-proneness, however, was unrelated to risky sexual behavior and showed only a small negative relationship with number of partners.

In short, contrary to common assumption, available evidence from a handful of studies suggests that shame and guilt are differentially associated with antisocial and other problematic behaviors. Consistent with the notion that guilt serves positive, adaptive functions, guilt has been linked to lower levels of crime and delinquency, fewer problems with alcohol and drugs, and less risky sexual behavior. In contrast, the findings for shame have been less consistent. The majority of research has not found a direct relationship between shame and criminal or delinquent behavior, but when it has, the relationship is positive. Shame-proneness does seem to be related to more problems with alcohol and drugs, but unrelated to risky sexual behavior. These findings, however, are limited in that so few studies have tested these relationships, and almost none have examined shame- and guilt-proneness in samples younger than college age. Testing whether these findings generalize to youth and adolescence is an important step in that many of these risky behaviors first appear before the college years. Examining the developmental antecedents of these behaviors is a necessary first step to more fully understand the underlying processes that are at work.

In the current study we sought to replicate and extend these findings by conducting a wider assessment of risky behaviors. Furthermore, we aimed to assess the implications of shame and guilt prospectively. Concurrent links between moral emotions and moral behavior are an important first step in understanding deviant, socially costly behaviors, but such correlational findings are limited and it is important to follow them up with prospective findings. In particular, we were interested in the degree to which childhood shame predicted more risky behaviors in early adulthood, specifically, sexual behavior, substance use, and involvement in the criminal justice system. In contrast, guilt was expected to predict the opposite – less involvement with risky behaviors. We expected these results to be consistent even when controlling for two other well-known predictors of risky behavior, childhood aggression and socio-economic status.

Method

Participants and Procedures

Participants in this longitudinal study were 380 children and their parents. The sample was initially studied in 1990 (Wave 1), when the youth were in the 5th grade (ages 10–12). Children were recruited from nine public elementary schools in an ethnically and socioeconomically diverse community in suburban Washington DC. Initially, letters describing the general nature of the study were sent to the parents of all 5th-grade students at

the participating schools. Permission forms included a request for the parents' phone number so parents could later be contacted for the family portion of the study. Only those students for whom we received a signed form granting permission, and who themselves agreed to participate, were included in the child phase of the study. All procedures and measures were approved by the institutional review board of the university. At Wave 1, students participated in group sessions conducted in the classroom. Research staff read aloud all instructions and items as the students proceeded. Demographic information, including income and education, was collected from the parents of participants. Average family income was under $25,000 for about 11% of the sample, between $25,000 and $40,000 for about 21% of the sample, between $40,000 and $60,000 for about 39% of the sample, and with 29% earning above $60,000 per year.

Children were re-interviewed in the 7th/8th grade (Wave 2), and again after their 18th birthday (M = 18.7, *range* 18–21) (Wave 3). At Wave 3, information on morally relevant outcomes was collected in the course of an in-depth social and clinical history interview conducted via phone. In order to reduce response bias we encouraged participants to find a place where they had some privacy and if necessary interviews were rescheduled to a time when they felt more comfortable answering questions. We also emphasized that the interviews were confidential and their responses would not be stored along with any identifying information. We were able to locate 304 (80%) of the original sample of 380 children and of these re-interviewed 261 (86%). Three participants completed some measures but were missing data on all the outcomes of interest for this paper, leaving us with a sample of 258 (68% of the original sample) for most analyses. Of the 43 participants who were located but did not participate at Wave 3, 19 failed to schedule an interview, 19 refused to participate, and 5 were unreachable due to active military service. In the current paper, we focus on Wave 1 and Wave 3 data only.

Analyses comparing those with and without Wave 3 data showed no differences in children's shame, guilt, ethnicity, family income, and teacher's ratings of aggressive behavior as measured in Wave 1. The only significant difference was mothers' education, where those with no follow-up data had an average of one year less education compared to those with follow-up data ($t(251) = -2.98$, $p < .01$; M = 12.6, SD = 1.4 vs. M = 13.5, SD = 2.2).

Measures

Assessment of Moral Emotions (Wave 1)—To assess proneness to shame and proneness to guilt, children completed the Test of Self-Conscious Affect for Children (TOSCA-C). The TOSCA-C [58] is composed of 15 brief scenarios (10 negative and 5 positive in valence) which respondents would be likely to encounter in day-to-day life. Each scenario is followed by a number of associated responses, two of which capture phenomenological aspects of shame and guilt, as described in the theoretical, phenomenological, and empirical literature [e.g., 7, 13, 59]. The measures are not forced-choice in nature. Respondents are asked to rate, on a 5-point scale, their likelihood of reacting in each manner indicated. This allows for the possibility that some respondents may experience both shame and guilt in connection with a given situation. The TOSCA-C was

developed based on "subject-generated" as opposed to "experimenter-generated" items. The scenarios were drawn from narrative accounts of personal shame, guilt, and pride experiences provided by a sample of several hundred elementary school age children. Likewise, the associated responses were drawn from a much larger pool of affective, cognitive and behavioral responses provided by a second sample of children. Preliminary longer versions of the measures were subjected to extensive pilot testing and psychometric analyses.

Table 1 shows the internal consistency (i.e., Cronbach's alpha) estimates of reliability for the shame and guilt scales in the current study. These coefficients are comparable to those observed by Tangney et al. [18]. It is worth noting that these estimates of internal consistency are quite high given that the alpha coefficient tends to underestimate reliability due to the situation variance introduced by this scenario approach.

Previous studies offer support for the validity of the TOSCA-C. For example, consistent with studies of adults, children's shame-proneness was associated with a relatively high degree of anger and tendencies to manage anger in an unconstructive fashion [18]. Similarly, paralleling adult findings, TOSCA-C guilt-proneness was related to proactive and constructive strategies for managing everyday experiences of anger.

Teacher Ratings of Aggression (Wave 1)—The 5th grade teachers of the children completed the Teacher Form of the Child-Behavior Checklist [60]. Teachers are in a unique position to evaluate children's externalizing behavior because they have a large base of experience in which to evaluate the degree a child is more or less aggressive compared to peers. Teachers also have an opportunity to see students interact with their peers on a consistent basis. Although having multiple informants (child, parent, peer, teacher) might be the optimal strategy, using teachers' reports provides an independent measure of childhood aggression for participants.

Assessment of Risky, Illegal, and other Morally-Relevant Behaviors (Wave 3) —Participants were asked questions regarding sexual activity including whether they had ever been sexually active (i.e., oral, anal, or vaginal intercourse with another person), number of sexual partners they have had, number of times they have had unprotected sex (i.e., not using condoms or some other form of protection against infectious disease), number of times had sex without some form of birth control, and whether they have ever had a sexually transmitted disease (STD). Regarding substance use, participants were asked whether they currently smoked cigarettes, ever drank alcohol, ever used marijuana, cocaine, crack amphetamines, depressants, heroin, hallucinogens, inhalants, or some other drug. We also created a variable measuring polydrug use by counting up the number of different illegal drugs ever used (range 0–9). Due to low endorsement, questions regarding cocaine, crack, and amphetamines were combined into one variable measuring whether any of these substances were ever used. Additionally, follow-up questions were asked about alcohol use including "In a typical week during the past month, how much beer did you consume? (How many cans or bottles of beer in an average 7-day week?)" Two parallel questions were asked about glasses of wine and hard alcohol drinks. These three questions were summed to create a variable measuring number of alcoholic drinks per week. Furthermore, participants were

asked if they had ever driven under the influence of alcohol or drugs and how many times. Finally, we asked the participants about their involvement with the criminal justice system: Have you been arrested or picked up for any crimes? Have you ever been convicted? Have you ever spent any nights in jail? Have you ever spent any nights in juvenile detention (JD)? The last two questions were combined to create a variable indexing whether they have ever been incarcerated overnight.

Results

Risky Behavior

As shown in Table 2, there was substantial variability in participants' risky behavior at Wave 3. Of the 258 children interviewed, 81% reported ever being sexually active with an average of 5 partners (*range* 0–200). Over half the sample reported having unsafe sex and 43% reported having not used birth control at least once. Regarding alcohol use, 78% reported they had consumed alcohol; 17% reported they had consumed 7 or more alcoholic drinks per week during the past month. On average they began drinking at age 15.8 years. Forty-eight percent reported having used marijuana and 16% reported having used other illicit drugs, the most common of which was hallucinogens. Almost 7% of the sample had used three or more different illegal drugs.

Regarding driving behavior, 44% had been cited for at least 1 moving violation and 24% reported driving under the influence of drugs and/or alcohol. In terms of involvement with the criminal justice system, 16% had been arrested and 8% had served time in jail or in juvenile detention. In short, this ethnically and socioeconomically diverse longitudinal sample provides a powerful context in which to evaluate questions about the predictors of such critical behaviors as unsafe sex, drug use, and involvement in the criminal justice.

Predictive Relationship of Shame and Guilt in 5th Grade to Risky Behaviors in Emerging Adulthood

We investigated the degree to which early tendencies to experience shame and guilt were predictive of risky, illegal, and otherwise inadvisable behavior in late adolescence. Concurrent data can be useful in establishing important relationships between moral emotions and moral behavior, but such data sheds little light on the causal nature of these relationships. To answer this question, we ran a series of regression analyses predicting risky behaviors reported when participants were 18–21 years old from individual differences in proneness to shame and guilt assessed at ages 10–12.

Consistent with previous research [14, 18, 20], children's proneness to shame and guilt were positively correlated (r = .42), reflecting the fact that both are negatively valenced emotions and the fact that these emotions can co-occur. As in previous research [37, 61, 62], here we focus on the unique variance in shame and guilt, respectively, factoring guilt from shame and vice-versa and using the residualized variables as predictors.

Table 3 presents the results of simple regression analyses, examining the degree to which "guilt-free" shame and "shame-free" guilt predict subsequent risky behavior in young adulthood. Because SES is often considered a risk factor for risky behavior, we conducted a

second set of analyses examining the predictive utility of these emotional styles, controlling for mother's education and family income. Finally, we conducted a third set of analyses controlling for 5th grade teacher ratings of aggression. The purpose of this third set of analyses was to rule out the possibility that any apparent predictive relationships simply reflect the fact that children with behavior problems are apt to engage in risky behavior in adolescent – and that concurrent links between childhood moral emotional style and poor behavioral adjustment may simply carry forward into adolescence, thereby weakening any causal conclusions. Table 3 presents the results of these three sets of regression analyses for shame and guilt, respectively. Depending on the distribution of outcome variables, negative binomial, logistic, or OLS regression analyses were conducted, as indicated in the table.

Shame

Shame-proneness measured in childhood prospectively predicted a number of critical outcome variables assessed in young adulthood. Specifically, shame-prone children started drinking at a younger age, used a greater variety of drugs, were more likely to use heroin and other drugs, and drove under the influence more often than their less shame-prone peers. Although shame-proneness was unrelated to number of sexual partners, shame positively predicted unprotected sex.

An alternative explanation to these findings is that they may be an artifact of SES. As can be seen from Table 3, controlling for SES had little effect on the positive relationship between shame-proneness and subsequent risky behavior.

It is also possible that our results are spurious due to the well-established relationship between childhood aggression and later behavior problems [63]. To evaluate this possibility, analyses controlling for childhood aggression using the teacher-reported aggression scale from the CBCL were conducted. The link between childhood shame-proneness and later risky and illegal behaviors are not simply a reflection of the fact that children who engage in risky and illegal behavior continue to do so as adults. The only finding to drop below statistical significance was the number of times participants drove while under the influence, which still showed a marginal effect ($p = .073$). And in fact, when controlling for childhood aggression, young adults' reports of how often they did not use birth control became significant. Overall, shame-proneness in childhood related to a number of risky outcomes in young adulthood even after controlling for other well-known correlates.

Guilt

The long-term implications of guilt-proneness in middle childhood were in sharp contrast to those of shame. Proneness to guilt at Wave 1 predicted opposite outcomes, suggesting a more protective role for guilt. Guilt-prone children were less likely to have used alcohol by young adulthood, started drinking at a later age, were lower on polydrug use, were less likely to use marijuana, heroin, and other drugs, and drove under the influence less often, relative to their less guilt-prone peers. Guilt-prone individuals were also less likely to have unprotected sex, to not use birth control, and they had fewer sexual partners. The relationships also held when examining items relating to the criminal justice system. Fifth-

graders high in guilt-proneness were less likely to later be arrested, convicted, or to have spent time in jail or juvenile detention.

Introducing control variables into the analyses made little difference. When controlling for SES, only the age at which participants started drinking, whether they ever used marijuana, and whether they ever used other drugs dropped below statistical significance. When controlling for childhood aggression, ever used alcohol, polydrug use, other drug use and ever spent time incarcerated became non-significant. In each case, the magnitude of change was modest, and the direction of results was consistent with the simple regression analyses.

Discussion

Overall, we found that shame in childhood positively predicted risky behaviors years later in young adulthood, while guilt in childhood negatively predicted risky behaviors. Although this is one of the first studies to investigate this long-term relationship, work is still needed to investigate the mechanisms and processes whereby proneness to these moral emotions influences long term outcomes. Muris and Meesters [33] suggest that secondary appraisals, or how children cope with the feelings of shame, play a role in the development of further behavioral problems. Our hunch is that the proclivity to experience shame relatively early in childhood sets into motion a cycle of bad behavior, shame, more bad behavior, and so forth. On several counts, shame-prone children are likely to suffer from a cumulative disadvantage beginning at least in the early school years, such that failure in one area leads to failures in other areas. Although little empirical research has directly examined the degree to which childhood shame “snowballs,” culminating in an escalating cycle of risky, counterproductive patterns of behavior and maladaptive shame reactions, one such pathway may begin with academic problems. All children must cope with failure, but for the shame-prone child, failure may be especially difficult due to the tendency for negative self-focus associated with experiences of shame. According to Dweck and Leggett [64], there are adaptive and maladaptive responses to failure. Some children tackle new tasks, fail, and search for new information and strategies to get it right the second time around. Their focus is on the challenge of the new task, not on themselves. Other children focus less on the task and more on the failure and its implications for their developing sense of self-worth. We suggest that these children are more likely to experience shame. They are more likely to become “stuck” in shameful feelings of worthlessness and powerlessness, which may in turn lead to drinking and drug use in order to cope [52] or at the very least to escape a tarnished, vulnerable self [65].

Another potential pathway from shame-proneness to risky behavior may be through peer-related problems. The painful feeling of shame can lead to withdrawal and depression, but it also tends to provoke defensive externalization and irrational anger [17, 18]. Rather than acknowledging, learning from, and repairing the damage caused by interpersonal transgressions, shame-prone individuals are inclined to distort, rationalize, or deny – responses that are not likely to endear them to peers or teachers. In fact, research has shown that even by the middle elementary school years, shame-prone children are less popular, less empathic, and less able to manage feelings of anger in a constructive fashion [12, 18, 66].

Moreover, shame-prone children may have less developed interpersonal problem-solving skills. Covert et al. [67] examined the implications of shame-proneness for undergraduates' interpersonal problem solving skills in response to a series of interpersonal dilemmas. Shame-proneness was unrelated to the number of solutions generated by participants, but shame-prone individuals' solutions were of lower quality. Furthermore, shame-prone individuals expressed lower self-efficacy for implementing these solutions and had fairly grim expectations for the outcome of the solutions, if enacted. Future research should examine whether these same patterns hold for youth, as poor interpersonal skills may lead to less communication in romantic or sexual situations where they may be less likely to practice safe sex.

In contrast to shame, the propensity to experience guilt in response to failures and transgressions appears to put children on a path toward a lifelong pattern of responsible behavior [68]. What is it about guilt that fosters moral behavior to the benefit of the individual, his or her relationships and society at large? Two factors – the propensity to take responsibility for one's actions and positive interpersonal relationships– are likely to contribute to this link between an early capacity to experience shame-free guilt and positive outcomes observed in emerging adulthood. Research has shown that the experience of guilt goes hand-in-hand with accepting responsibility for one's actions [12, 62]. Feelings of guilt about specific behaviors are less likely to invoke the defensiveness, denial, and externalization of blame that is so characteristic of shame. There is less risk in realistically assessing one's failures and transgressions because at issue is a bad behavior not a bad self. Individuals higher on guilt-proneness are thus more readily able to take responsibility and, as a consequence, engage in reparative action. We speculate that, unfettered by the need to defensively rationalize or distort, guilt-prone people are better placed to develop a pattern of making responsible decisions about, not only risky behavior (e.g., regarding premarital sex, drugs and alcohol, criminal behavior), but also a broad range of behaviors important throughout life, including unethical and counterproductive work behavior [69].

A second factor – positive interpersonal relationships – seems likely to further steer guilt-prone youth on the path toward more moral, responsible behavior. Feelings of guilt appear to facilitate rather than inhibit other-oriented empathy [17, 66, 70]. As they move into adolescence, peer relationships become more complex arenas posing many morally-relevant issues. Guilt-prone adolescents would seem especially well-equipped to build solid, supportive relationships given their enhanced empathic skills, their ability to take responsibility for inevitable hurtful exchanges, to apologize and make amends. Moreover, empirical research indicates that proneness to guilt is associated with adaptive problem-solving strategies [71], particularly in the interpersonal realm [67]. Such well-developed social skills in conjunction with solid, trusting relationships are likely to contribute to guilt-prone adolescents' ability to effectively communicate with partners regarding birth control and safe-sex measures as well as to make wise choices more generally.

The fact that we ask about a number of different risky behaviors in young adulthood is a strength of the study, however, a limitation is that the majority of the outcomes are measured with only one item. Because this was a large study covering a wide variety of domains, in-depth questions about each domain were not feasible. Relatedly, more questions about actual

criminal/delinquent behavior rather than merely involvement with the criminal justice system would have been preferable in that the vast majority of delinquent behavior does not lead to arrest. Future research would benefit from the use of standardized measures of the different types of risky behavior, as well as attempting to collect data from other informants (e.g. peer, significant other) or official records (e.g. school infractions, arrest records).

A second limitation has to do with the measurement of shame and guilt. The TOSCA-C measures dispositional shame- and guilt-proneness. In other words, how young people generally feel when they have transgressed across a range of common situations. It is possible that more domain specific forms of shame and guilt (e.g., guilt about sexual behavior) would have different effects. Finally, it is important for there to be more longitudinal work, not just replicating the current findings but examining whether the relationship between shame and guilt and risky behavior is bi-directional and whether this differs by age. It is possible that the self-conscious emotions predict poor behavior in childhood, but by adolescence some of these risky behaviors may help sustain if not increase feelings of shame or decrease feelings of guilt. Investigating and understanding these processes may help us develop interventions in order to short circuit this negative cycle.

Summary

The current findings add substantially to research underscoring the benefits of guilt and the darker side of shame. Children prone to feelings of shame in childhood were more likely – years later – to engage in a range of risky behaviors. There was no evidence that a propensity to experience shame helped “put the brakes on” problematic behavior as participants moved toward adulthood. In contrast, the propensity to experience guilt about specific behaviors appears to be a protective factor, predicting above and beyond two other common predictors of risky behavior – childhood aggression and socio-economic status. The contrasting effects of shame and guilt, one of risk and one of protection, were found across a variety of domains, including sexual risk behaviors, substance use, and involvement in the criminal justice system. Understanding the roles shame and guilt play across the life course may add substantially to our knowledge of developmental processes and pathways to risky behavior.

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Table 1

Summary Statistics and Reliabilities for Shame, Guilt, and Teacher Aggression Wave 1

Scale	Number of items	Possible Range	Observed Range	Mean	SD	Alpha
Wave 1						
Shame (*N* = 366)	15	1 – 5	1.00 – 4.67	2.77	0.65	0.78
Guilt (*N* = 368)	15	1 – 5	1.27 – 5.00	3.88	0.59	0.79
Aggression (*N* = 332)	25	0 – 2	0.00 – 1.90	0.18	0.34	0.96

Note: Shame and guilt were measured using the Test of Self-Conscious Affect for Children (TOSCA-C). Aggression was measured using the Teacher's Report Form of the Child Behavior Checklist (CBCL).

Child Psychiatry Hum Dev. Author manuscript; available in PMC 2016 April 01.

Table 2

Demographic Characteristics and Risky Behaviors of Participants at Wave 3 (18–21 years old)

Characteristic	N	Percent/ Mean (SD)
Demographics		
Female	258	59.3%
Age (in years)	258	18.7 (.76)
Graduated from High School	258	89.9%
Race		
White	161	62.4%
Black	75	29.1%
Other	22	8.5%
Sexual Behavior		
Ever Sexually Active	258	81.4%
Number Sexual Partners	256	5.12 (13.7)
Number times had unprotected sex	248	14.95 (53.6)
Number of times did not use birth control	242	11.49 (45.0)
Ever had STD*	258	7.8%
Cigarette Use		
Smoker	258	27.9%
Alcohol Use		
Ever Drank Alcohol	258	77.9%
Drinks per week	256	5.47 (15.6)
Age Started Drinking (in years)	201	15.8 (2.3)
Drug Use		
Number Different Illegal Drugs Ever Used	258	0.93 (1.6)
Ever Used Pot	258	48.1%
Ever Used Uppers Coke/Crack/Amphetamines	258	8.9%
Ever Used Depressants	258	3.9%
Ever Used Heroin	258	1.9%
Ever Used Hallucinogens	258	14.3%
Ever Used Inhalants	258	3.5%
Ever Used Other Drugs	258	3.9%
Driving Behavior		
Ever Drive Under Influence of Alcohol or Drugs	255	24.3%
Number Times Drove Under the Influence	254	26.8 (198.8)
Criminal Justice History		
Ever Been Arrested	257	16.0%
Ever Been Convicted	256	5.5%
Ever Spent Night in Jail or JD*	255	7.8%

*Note: STD = Sexually Transmitted Disease; JD = Juvenile Detention

Table 3

Unstandardized Regression Coefficients (Standard Errors): Children's Shame and Guilt Predicting Risky Behavior in Young Adulthood

		5th Grade Shame Controlling for			5th Grade Guilt Controlling for	
Risky Behavior at Ages 18–21	**Childhood Shame**	**Mother's Education and Family Income**	**5th Grade Teacher Aggression Ratings**	**Childhood Guilt**	**Mother's Education and Family Income**	**5th Grade Teacher Aggression Ratings**
Sexu al Behavior						
Number of Sexual Partners [a]	.003 (.14)	.114 (.16)	−.070 (.15)	−.733 *** (.14)	−.584 *** (.14)	−.692 *** (.14)
Number of Times had Unprotected Sex [a]	.572 * (.26)	.621 * (.31)	.732 ** (.27)	−1.09 *** (.28)	−1.34 *** (.31)	−1.07 *** (.28)
Number of Times Did Not Use Birth Control [a]	.569 + (.32)	.734 + (.38)	.683 * (.30)	−.899 ** (.29)	−1.34 *** (.32)	−.823 ** (.28)
Ever had an STD [b]	.411 (.40)	.420 (.46)	.702 (.43)	−.419 (.40)	−.563 (.45)	−.488 (.40)
Cigarette Use						
Currently Smokes Cigarettes [b]	.243 (.24)	.374 (.29)	.294 (.25)	−.061 (.26)	.029 (.29)	−.010 (.26)
Alcohol Use						
Ever Drank Alcohol [b]	.435 + (.26)	.418 (.33)	.466 + (.28)	−.678 * (.32)	−.923 * (.41)	−.630 + (.32)
Age Started Drinking Alcohol [c]	−.816 ** (.28)	−.860 ** (.33)	−.794 ** (.29)	0.804 ** (.30)	.597 + (.33)	.790 * (.30)
Number of Alcoholic Drinks Per Week [a]	−.246 (.25)	−.309 (.31)	−.472 (.29)	−.164 (.23)	−.131 (.27)	−.112 (.26)
Drug Use						
Num. Different Illegal Drugs Ever Used [a]	.370 * (.16)	.447 * (.18)	.355 * (.17)	−.401 * (.18)	−.396 * (.20)	−.324 + (.19)
Ever Used Pot [b]	.091 (.21)	.145 (.26)	.189 (.23)	−.512 * (.24)	−.530 + (.28)	−.540 * (.25)
Ever Used Uppers (Cocaine, Crack or Amphetamines) [b]	.741 + (.38)	.815 + (.43)	.728 + (.40)	−.620 + (.36)	−.508 (.38)	−.573 (.37)
Ever Used Depressants [b]	.843 (.56)	.966 (.61)	.707 (.56)	.046 (.61)	.048 (.60)	.114 (.59)
Ever Used Heroin [b]	2.11 * (.88)	2.36 * (1.0)	1.81 * (.87)	−1.59 ** (.61)	−1.47 * (.62)	−1.40 * (.61)

Risky Behavior at Ages 18–21	5th Grade Shame Controlling for: Childhood Shame	5th Grade Shame Controlling for: Mother's Education and Family Income	5th Grade Shame Controlling for: 5th Grade Teacher Aggression Ratings	5th Grade Guilt Controlling for: Childhood Guilt	5th Grade Guilt Controlling for: Mother's Education and Family Income	5th Grade Guilt Controlling for: 5th Grade Teacher Aggression Ratings
Ever Used Hallucinogens [b]	.539 + (.31)	.661 + (.35)	.607 + (.33)	−.366 (.31)	−.421 (.33)	−.288 (.32)
Ever Used Inhalants [b]	.723 (.59)	.863 (.64)	.561 (.58)	−.680 (.54)	−.705 (.53)	−.565 (.53)
Ever Used Other Drugs [b]	1.72 ** (.61)	1.99 ** (.73)	1.49 * (.61)	−1.02 * (.48)	−.864 + (.51)	−.878 + (.48)
Driving Behavior						
Ever Drive Under Influence of Alcohol [b]	.363 (.26)	.358 (.29)	.462 + (.27)	−.766 *** (.27)	−.631 * (.29)	−.779 ** (.27)
Number of Times DUI [a]	1.78 ** (.56)	1.83 ** (.54)	1.34 + (.75)	−1.54 *** (.44)	−2.17 *** (.59)	−1.47 * (.63)
Criminal Justice History						
Ever Been Arrested [b]	.312 (.29)	.369 (.34)	.311 (.31)	−.706 * (.29)	−.816 * (.33)	−.617 * (.31)
Ever Been Convicted of a Crime [b]	.135 (.47)	.243 (.50)	.206 (.50)	−.843 * (.43)	−.696 (.44)	−.890 * (.45)
Ever Spent Night in Jail or Juvenile Detention [b]	.328 (.40)	.684 (.50)	.272 (.41)	−.810 * (.37)	−.966 * (.42)	−.738 + (.38)

FOOTNOTE: Shame and guilt residuals are used where we factor guilt from shame and vice-versa (i.e. the shame variable reflects “guilt-free” shame).

For the first analyses where we only include the shame residual or the guilt residual, sample sizes ranged from 242–258, except for questions regarding age when started drinking (which pertained to the 201 participants who had ever drank alcohol). For analyses controlling for SES variables, sample sizes dropped to 181–191 due to missing Time 1 parent data, except for age when started drinking (n = 152). For analyses controlling for Time 1 teacher ratings of aggression, sample sizes were 229–245, except for age when started drinking (n = 190).

STD = Sexually Transmitted Disease; DUI = Drove Under the Influence

[a] Negative Binomial Regression

[b] Logistic Regression

[c] OLS Regression

+ p < .10

* p < .05

** p < .01

$^{***}p < .001$