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**The Moderating Role of Collectivism in the Relation Between Parental Guilt-Induction
and Need Frustration**

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Abstract

According to Self-Determination Theory (SDT), parental guilt-induction is linked with children's ill-being by frustrating their basic needs. Studies have shown that need frustration is universal once guilt-induction is perceived as controlling. Nevertheless, scholars support that cultural background could moderate this relation. Most research on guilt-induction, has mainly focused on the cross-cultural differences in the effects of guilt-induction on need frustration. Despite literature showing individual differences in cultural values within countries, the relationship has yet to be explored from an intra-cultural perspective. Therefore, this study aimed to explore the moderating role of individual values of collectivism in the relation between objective and perceived guilt-induction and the relation between perceived guilt-induction and need frustration. The total sample comprised 227 participants ($M_{age}=21.50$, $SD_{age}=2.18$), with 78.9 % being female. Participants completed an online survey and were randomly assigned to three vignettes (i.e., guilt-induction/high warmth, guilt-induction/low warmth or autonomy-support). Participants indicated the degree to which they perceived guilt-induction in response to the vignette and filled out a need frustration scale. Results revealed that collectivism did not moderate the relation between objective and perceived guilt-induction, nor the relation between perceived guilt-induction and need frustration. Nonetheless, further research should be conducted as it can potentially have implications in healthcare.

Keywords: Self-Determination Theory, guilt-induction, need frustration, intra-cultural variability, collectivism

Self-Determination Theory (SDT) is a theory of motivation applied among others in the parenting domain and consists of six mini-theories. Basic Psychological Needs Theory (BPNT) constitutes one of them and argues the existence of three basic psychological needs: relatedness, competence, and autonomy (Deci & Ryan, 2000; Ryan & Deci, 2000). According to BPNT, fulfilling all three needs is universally necessary for optimal human development and well-being. The frustration of these needs can have profound implications in an individual's life that could result in maladjustment and, in some cases, psychopathology (Vansteenkiste & Ryan, 2013; Chirkov et al., 2003). Therefore, need frustration and need satisfaction are crucial mechanisms determining an individual's functioning. Parenting practices have been shown to have an undeniable link with the need satisfaction or thwarting of their children's needs. Specifically, when perceived as controlling or accompanied by harsh psychological control, practices such as guilt-induction can have detrimental effects on children's well-being (Rudy et al., 2014). Soenens et al. (2015) suggested that cultural values can still moderate this relation. Chen et al. (2016) explored this relation cross-culturally, and their findings contradicted the theoretical argument proposed by Soenens et al. (2015). Despite these findings, Chen et al. (2016) did not account for intra-cultural variation. Therefore, this master thesis will explore the moderating effect of individual values of collectivism in the relation between maternal objective guilt-induction and perceived guilt-induction and the relation between perceived guilt-induction and need frustration. Objective guilt-induction refers to the maternal behaviour regardless of the participant's perception.

The Detrimental Effects of Parental Guilt-induction on Children's Needs

Considering need frustration, SDT further distinguishes between different social environments in an individual's life that could either be need thwarting or need supportive. Parental figures or caregivers constitute an example of such social environments (Soenens & Vansteenkiste, 2010). Different caregivers engage in several parental practices in their daily

interaction with their children to discipline or exert psychological control for the child's compliance. Different forms of parenting have different influences on a child's need satisfaction or frustration and, hence, on its well-being and development. Parenting practices that are perceived as fostering autonomy cater to the fulfilment of psychological needs, whereas perceived controlling parenting thwarts them (Soenens & Vansteenkiste, 2010). It is critical to distinguish between a lack of satisfaction of needs and need frustration, as the experience of low need satisfaction does not necessarily involve frustration of needs. However, need frustration is directly linked to low need satisfaction (Vansteenkiste & Ryan, 2013).

Considering need-thwarting parenting practices, most research has focused on controlling parenting (e.g., Barber, 1996; Soenens & Vansteenkiste, 2010). SDT differentiates between two manifestations of controlling parenting: internal and external controlling parenting. Externally controlling parenting strategies involve overtly exerting control, such as yelling, physical aggression or rewards. On the contrary, internally controlling parenting strategies involve covertly exerting control, such as subtle, non-verbal, or verbal cues that display disappointment (Soenens & Vansteenkiste, 2010). Psychological control is a specific form of internal control. It is a multidimensional construct that utilizes manipulative tactics and intrudes upon a child's psychological sphere (Barber, 1996; Soenens & Vansteenkiste, 2010). Under the umbrella of psychological control, several tactics include love withdrawal, shaming, and guilt-induction (Barber et al., 2005). Guilt-induction refers to parental attempts at inducing guilt to control and pressure children to comply with a request (Barber & Harmon, 2002; Rakow et al., 2009). Therefore, guilt induction involves the expression of disappointment when faced with a non-compliant child, such as "You are breaking my heart" or "How could you do this to me? I do so much for you".

Research has shown that psychologically controlling practices, such as guilt induction, are associated with internalizing symptoms (e.g., depression) in children (e.g., Barber, 1996; Lansford et al., 2014). From a SDT perspective, perceived guilt-induction constitutes a risk factor for the frustration of basic needs, leaving children with feelings of loneliness, a sense of inefficacy, reduced control and inferiority (Vansteenkiste & Ryan, 2013; Chen et al., 2016; Soenens et al., 2017). Moreover, other studies have shown that need frustration can be destructive and even pathogenic (e.g., Bartholomew et al., 2011). It is important to note that most studies showing the effects of guilt-induction on need frustration are correlational, therefore, precluding causal statements. Nonetheless, Chen et al. (2016) conducted an experimental study and found that perceived guilt-induction led to suffering in terms of need frustration, reaching a consensus with previous literature.

The Role of Collectivism and Individualism in Parental Guilt-Induction

Notwithstanding that parental guilt induction can threaten the satisfaction of the basic psychological needs, SDT emphasizes the difference between the experience of the event itself and its functional significance to the individual (Deci & Ryan, 1987). Accordingly, the experience of guilt induction and subsequent need frustration can differ between individuals that assign different meanings to the event's occurrence (Soenens et al., 2015). Therefore, there is apparent room for interpretation, and a percentage of this variation may be moderated by different cultural backgrounds, personality factors or temperaments (van Leeuwen et al., 2004; Kiff et al., 2011).

Scholars have emphasized the principle of universalism without uniformity, which posits that most psychological processes exhibit universal features common among individuals and context-specific characteristics (Shweder & Sullivan, 1993; Soenens et al., 2015). Culture has been shown to play an essential role in the varying perceptions of guilt-induction due to the diverse culturally endorsed values (Deci & Ryan, 1987; Ryan & Deci,

2006). Three reasons have been recognized for the existence of cultural diversity within BPNT. Firstly, different sociocultural environments may place different levels of importance on the basic psychological needs, leading to cross-cultural variability in how individuals experience and fulfil these needs (Oishi et al., 1999). Secondly, different cultures may offer varying opportunities and resources that facilitate meeting the basic psychological needs, resulting in disparities in the average level of satisfaction of these needs across cultures. Thirdly, different cultural contexts offer unique ways to satisfy the three needs. Specifically, how these needs are satisfied is shaped by the culture's values and beliefs and reflects the norms of the society (Chen et al., 2015).

Literature has explored the differences between collectivism and individualism in parental guilt induction and its effects on need frustration and psychological well-being. In collectivistic cultures, guilt induction may be perceived as conveying parental expectations and thus as having an informational intent (Fung & Lau, 2012). Additionally, the practice of guilt-induction may be perceived as less controlling due to interpersonal obligation. This latter concept in collectivistic cultures constitutes a desirable value that aligns with the notion of interdependence and relational closeness that characterize the culture. Moreover, it is mainly observed within a family context (Markus & Kitayama, 1991; Miller et al., 2008).

Rudy et al. (2014) found that the practice of parental guilt-induction is more common in collectivistic cultures than individualistic cultures. Moreover, their findings indicated that in collectivistic cultures, guilt-induction was not associated as strongly with harmful controlling parental practices. Nonetheless, Chen et al. (2016) further demonstrated that despite the perception of guilt-induction as less harmful, once individuals perceive the situation as controlling rather than informative, they experience need frustration regardless of their cultural background. Chen's et al. (2016) findings were consistent with the SDT's assumption regarding the negative cross-cultural impact of perceived parental control.

Nonetheless, Soenens et al. (2015) further noted that despite the universality of the processes behind perceived guilt-induction, one should not preclude the effect of individual differences as suggested by the universalism without uniformity position.

Besides research that has focused on cross-cultural differences in perceptions and reactions to psychologically controlling parenting, similar differences have been observed at the individual level. Costigan et al. (2006) found both cross-cultural and intra-cultural differences, between a sample of Asian Americans and a sample of European Americans, in terms of perceptions regarding parental control and conflict.

The Present Study

Despite the extensive empirical evidence regarding cross-cultural differences in parental guilt-induction and its effects on need frustration, literature has yet to establish the intra-cultural variability of individual cultural values. As noted by Chen et al. (2016), individual cultural values within a culture were not measured in their study; thus, this could implicate the preclusion of further explanations for the differences observed between the two cultures. Individuals within a culture may endorse different cultural values depending on different factors (Costigan et al., 2006).

Therefore, the present study aimed to explore the moderating effect of individual values of collectivism in the relation between parental guilt-induction and need frustration in a sample of Greek individuals. The research questions (RQ) that will be examined are: (RQ1) Does objective guilt-induction relate to perceived guilt-induction? (RQ2) Do individual values of collectivism moderate this relation? (RQ3) Does perceived guilt-induction relate to need frustration? (RQ4) Do individual values of collectivism moderate this relation? It is hypothesized that (a) objective guilt-induction will have a negative effect on perceived guilt-induction. Furthermore, (b) those who endorse higher collectivistic values will perceive guilt-induction as less controlling and (c) higher perceived guilt-induction will have a positive

effect on need frustration. Finally, (d) the more the individuals relate to values of collectivism, the weaker the relation between guilt-induction and need frustration will be.

Method

Participants

The total sample comprised 227 participants, of which 70.9 % fully completed the survey. The participants' age ranged between 18 and 25 years ($M_{age} = 21.50$, $SD_{age} = 2.18$), and 78.9 % were female. All the recruited participants were born in Greece. Regarding participants' education, 1.3% ($n = 3$) had attained less than a high school diploma, 52.9% ($n = 120$) had attained a high school diploma, 5.7% ($n = 13$) had attained a trade/technical/vocational training, 35.2% ($n = 80$) had attained a bachelor's degree, and 3.5% ($n = 8$) had attained a master's degree. With regards to participants' marital status, 44.1% ($n = 100$) had a partner, 0.4% ($n = 1$) were married, and 55.5% ($n = 126$) were single. Lastly, 58.1% ($n = 132$) of participants were unemployed, 24.2% ($n = 55$) had a part-time job, and 17.6% ($n = 40$) had a full-time job. The recommended sample was $n = 96$ and was calculated using GPower.

Procedure

The convenience sample was recruited through social media platforms, namely Instagram, LinkedIn, and WhatsApp and students' social networks. Participants were invited to complete a series of questionnaires created and distributed through the online platform Qualtrics. From these questionnaires, the present study employed three. All questionnaires were translated into Greek; therefore, participants completed the survey in their native language. To achieve conceptual equivalence, back translations from Greek to English by a native Greek researcher were conducted. The original questionnaires were then compared with the back-translations to inspect for inconsistencies. Before completing the survey, participants were informed about the aim of the study, the data collection procedure, potential

advantages and disadvantages, their personal data and privacy and provided their informed consent. Finally, the duration of the online survey lasted between 20 to 30 minutes. The study received ethical approval from the Faculty Ethics Review Committee (FERC) of Utrecht University (approval number: 22-2017) and was pre-registered at Open Science Framework (OSF).

Measures

Vignettes

The three vignettes employed in this study were based on the vignettes employed by Chen et al. (2016), based on Van Petegem et al. (2015). The vignettes were employed to assess participants' perceived maternal-guilt induction. The vignettes encompassed examples of different maternal communication styles as a reaction to the same situation. The parenting styles included autonomy support, guilt-induction without warmth and guilt-induction with warmth (Appendix A). Participants were presented with the following hypothetical situation: *“One day you visit your mother and inform her about a lower grade than usual for an important course. Because initially you thought the test went fairly well, you expected good points, and this is also what you told your mother. When you now inform your mother about your low grade, here is what she says: [...]”*. The initial situation was slightly adapted from Chen et al. (2016) to address young adults instead of adolescents.

Following this situation, participants were presented with the parental request to study more in the future formulated in the three different communication styles priorly mentioned. First, in the autonomy support condition, the mother displayed warm, empathetic, and non-judgmental language and behaviour. Second, in the guilt-induction with high warmth condition, the mother displayed warm and empathetic behaviour, such as affective touch, accompanied by the expression of disappointment and parental sacrifices. Last, in the guilt-induction without warmth condition, the mother displayed non-affectionate and cold

behaviour, such as distance between her and the young adult, accompanied by disappointment. The present study focused only on guilt-induction and used autonomy support as a comparison group. As the two conditions “guilt-induction with warmth”, and “guilt-induction without warmth” did not differ on perceived guilt-induction and need frustration, these two conditions were merged. That is, results of an independent samples t -test showed that for need frustration, there was not a significant difference between the scores of guilt-induction with warmth ($M = 4.15, SD = 0.67$) and guilt-induction without warmth ($M = 4.04, SD = 0.62$); $t(110) = .86, p = .72$. Moreover, the same was observed for the perceived guilt-induction variable; the conditions guilt-induction with warmth ($M = 4.50, SD = 0.54$) and guilt-induction without warmth ($M = 4.31, SD = 0.65$) did not differ; $t(110) = 1.73, p = .18$. For the purposes of this study, maternal warmth was not taken into consideration.

Perceived Psychological Control in the Vignettes

To assess perceived guilt-induction, a questionnaire that combined fifteen items from previously employed measures on guilt-induction was created. The questionnaire preceded with the stem, “If my mother reacted in this way, I would feel like she...”. Four items (i.e., “is not very sensitive to my needs”) were employed from the Psychological Control Scale-Youth Self-Report (PCS – YSR; Barber, 1996), and two (i.e., “is disappointed with me”) from the Perceptions of Parents Scales (POPS; Grolnick et al., 1997). Moreover, four items (i.e., “acts disappointed when I misbehave”) were from the psychological control scale by Olsen et al. (2002), two items (i.e., “uses guilt to control me”) were part of the Perceived Parental Autonomy Support Scale (P-PASS; Mageau et al., 2015) and three items (i.e., “believes I should be aware of her sacrifices”) were part of the Control by Guilt Induction Scale (CRPR; Roberts et al., 1984). All items were rated on a 5-point Likert scale ranging from 1 (*completely disagree*) to 5 (*completely agree*), with this scale showing a high reliability of $\alpha = .94$.

Autonomy Support in the Vignettes

To assess autonomy support, the Autonomy Support Scale of the Perceptions of Parents Scale (Grolnick et al., 1991) was employed. A total of four items (i.e., “allows to decide things for myself”) were used, and all items were rated on a 5-point Likert scale ranging from 1 (*completely disagree*) to 5 (*completely agree*). This scale was found to be reliable; $\alpha = .96$

Individual Values of Collectivism

To assess participants' values of collectivism, the Five-Dimensional Scale of Individual Cultural Values (CVSCALE; Yoo et al., 2011) was employed. It consists of 26 items and five dimensions, namely, Power Distance (PD), Uncertainty Avoidance (UA), Collectivism (C), Long-term Orientation (LTO), and Masculinity (M). The present study focused only on the dimension of collectivism, which consisted of six items (i.e., “Individuals should sacrifice self-interest for the group”). Items were rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). This scale was found to display low reliability; $\alpha = .54$. The removal of items would even further lower the reliability; hence this action was not performed.

Need Frustration

To assess need frustration specifically with respect to the vignette, the Basic Psychological Need Satisfaction and Frustration Scale (BPNSF; Chen et al., 2015) was employed. The questionnaire started with the stem “If my mother reacted in this way, I would...” and participants had to rate the different continuations of the sentence. The measure consisted of 24 items and six dimensions that fall under the categories of need satisfaction (i.e., “...have a sense of freedom”) and need frustration (i.e., “... feel obligated to do certain things”). The present study employed only the need frustration scale. BPNSF uses a 5-point

Likert scale ranging from 1 (*totally disagree*) to 5 (*totally agree*). This scale was found to be reliable; $\alpha = .96$.

Credibility, Relevance and Frequency in the Vignettes

To assess how believable, frequent and relevant the vignettes were, participants were presented again with the hypothetical situation without the maternal reaction. Subsequently, they were asked to answer: “How relevant is the situation as such (without the reaction of the mother)?”, “Do you think individuals your age ever experience such a situation?”, and “How believable is the situation as such (without the reaction of the mother)?”. All items were evaluated on a 7-point Likert scale ranging from 1 (*not relevant at all*) to 7 (*very relevant*) (relevance item), 1 (*never*) to 7 (*frequently*) (frequency item) and 1 (*not believable at all*) to 7 (*very believable*) (credibility item).

Plan of Analyses

All data were analyzed in SPSS (version 28.0.1.0). Initially, descriptive statistics and Pearson’s correlations were employed to examine associations between the study variables. Following, a Univariate Analysis of Covariance (ANCOVA) was performed to check the relation between the background variables (i.e., age, sex, job, marital and student status) and the outcome (i.e., need frustration). Subsequently, in the primary analyses, a basic moderation analysis (PROCESS by Hayes) was performed to check whether individual values of collectivism moderate the effects of objective guilt-induction on perceived guilt-induction. Lastly, an additional moderation analysis was employed to check whether individual values of collectivism moderate the effects of perceived guilt-induction on need frustration.

Results

Preliminary Analyses

To check whether the variables were normally distributed, skewness and kurtosis values were obtained for all variables. The data of Collectivism ($z_{\text{Skewness}} = -0.54$; $z_{\text{Kurtosis}} = 0.60$) were fairly symmetrical whereas the data concerning perceived guilt-induction ($z_{\text{Skewness}} = -0.68$; $z_{\text{Kurtosis}} = -1.17$) and need frustration ($z_{\text{Skewness}} = -0.63$; $z_{\text{Kurtosis}} = -0.78$) were moderately skewed. Nonetheless, since no excess skewness was observed, the parametric Pearson's correlations were employed in order to measure the variable correlations (Bulmer, 1979). Descriptive statistics of and bivariate correlations between the study variables are reported in Table 1. Perceived guilt-induction correlated positively with need frustration whereas collectivism was unrelated to all study variables.

Furthermore, the relation from the background variables of gender, marital status, age, student, education, and job status to need frustration was assessed employing an ANCOVA. To check for the homogeneity assumption Levene's Test of Equality of Variances was employed and demonstrated a non-significant p -value ($p = .43$); therefore, the assumption was met. Main effects were compared using a Bonferroni adjustment. Results demonstrated no significant effects of age ($F(1, 135) = .00, p = .96, \eta_p^2 = .00$), gender ($F(1, 135) = .00, p = .95, \eta_p^2 = .00$), marital status ($F(2, 135) = .91, p = .40, \eta_p^2 = .01$), education ($F(1, 135) = .46, p = .50, \eta_p^2 = .00$), job status ($F(2, 135) = 1.34, p = .27, \eta_p^2 = .02$) and student status ($F(1, 135) = 2.92, p = .09, \eta_p^2 = .02$) on need frustration.

Table 1*Descriptives of and Pearson's Correlations Between the Study Variables*

	<i>M</i>	<i>SD</i>	1	2
1. Perceived guilt-induction	3.59	1.33	-	
2. Need frustration	3.48	1.13	.89***	-
3. Collectivism	3.53	0.70	-.05	-.07

Note. *** $p < .001$.

Primary Analyses

To examine whether collectivism moderated the effects of objective guilt-induction (part of the vignette condition variable) on perceived guilt-induction, I employed a moderation analysis utilizing PROCESS macro in SPSS (Table 2). The condition variable was dummy-coded (objective guilt-induction = 1, autonomy support = 2). To check for the assumptions of multicollinearity, normality, homoscedasticity, linearity, and outliers, I employed a Linear Regression Analysis where I reconstructed the model that PROCESS ran. All assumptions were met except for the multicollinearity assumption (objective guilt-induction, Tolerance = .04, VIF = 22.90; objective guilt-induction*collectivism, Tolerance = .03, VIF = 33.83) (Appendix B). Results of the moderation analysis showed that the overall model was significant $F(3, 171) = 206.37, p = .00$ and explained 89% of the variation in perceived guilt-induction. Individuals in the guilt-induction condition perceived significantly more guilt-induction than those in the autonomy support condition. Nonetheless, the variable collectivism did not have an effect on perceived guilt-induction, nor did it moderate the effect of the conditions on perceived guilt-induction; $R^2 = .00, F(1, 171) = 2.33$.

Table 2

Moderation Analysis: Effects of Collectivism between Objective Guilt-induction and Perceived Guilt-induction

Model	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95% CI	
					LL	UL
Intercept	6.90	.14	48.75	.00	6.62	7.18
Condition	-2.51	.10	-24.81	.00	-2.71	-2.31
Collectivism	.28	.20	1.38	.17	-.12	.69
Condition*Collectivism	-.20	.13	-1.53	.13	-.47	.06

Note. CI = confidence interval; *LL* = lower limit, *UL* = upper limit.

To examine the moderating role of collectivism in the relation between perceived guilt-induction and need frustration, a moderation analysis was performed utilizing PROCESS macro in SPSS (Table 3). To check for assumptions, I followed the same process as described above. All assumptions were met except for the multicollinearity assumption (perceived guilt-induction, Tolerance = .04, VIF = 27.99; perceived guilt-induction*collectivism, Tolerance = .03, VIF = 33.26) (Appendix C). Results showed that the overall model was significant ($F(3, 158) = 204.28, p = .00$), and the model explained 89% of the variation in need frustration. Perceived guilt-induction had a positive effect on need frustration. However, collectivism did not have an effect on need frustration, nor did it moderate the effect of perceived guilt-induction on need frustration; $R^2 = .00, F(1, 158) = 2.79$.

Table 3

Moderation Analysis: Effects of Collectivism between Perceived Guilt-induction and Need Frustration

Model	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95% CI	
					LL	UL
Intercept	3.49	.04	85.49	.00	3.41	3.57
Perceived GI	.75	.03	24.33	.00	.69	.81
Collectivism	-.02	.06	-.40	.69	-.14	.09
Perceived GI*Collectivism	.07	.04	1.67	.10	-.01	.16

Note. GI = Guilt-induction. CI = confidence interval; *LL* = lower limit, *UL* = upper limit.

Discussion

Although there is empirical evidence on the effects of cross-cultural differences of guilt-induction in the experience of need frustration (e.g., Rudy et al., 2014), less is known regarding the effect of intracultural variation on need frustration. Therefore, the present study sought to examine whether individual cultural values of collectivism moderate the relation between objective and perceived guilt-induction and the relation between guilt-induction and need frustration in Greek individuals. It was expected that objective guilt-induction would have a negative effect on perceived guilt-induction and that collectivism would moderate this relation as well. Furthermore, it was hypothesized that guilt-induction would have a positive effect on need frustration and that collectivism would moderate this relation.

Significance of Findings

Results showed that individuals in the guilt-induction condition perceived higher guilt-induction compared to those in the autonomy support, confirming the first hypothesis.

Previous literature suggests that the objective experience of guilt-induction is more strongly

linked to perceptions of guilt-induction than autonomy support. This study supports these findings as autonomy support facilitates individuals' independent and volitional functioning (Soenens & Vansteenkiste, 2010; Rote et al., 2022). Objective guilt-induction in this case, could lead to feelings of inadequacy compared to the autonomy support condition, leading to greater perceptions of guilt-induction (Donatelli et al., 2007)

Moreover, the findings did not support the second hypothesis. The moderation analysis showed a non-significant interaction effect between objective guilt-induction and collectivism. Surprisingly, this finding contradicts research supporting the theoretical argument that individuals within collectivistic cultures appraise guilt-induction as less controlling and coming from a caring and informational point of view (e.g., Cheah et al., 2019; Fung & Lau, 2012). The low reliability of the collectivism variable may have resulted in this construct's unreliable measurement, resulting in a lack of moderation. Moreover, violating the multicollinearity assumption might have impacted the absence of an interaction effect (Allen, 1997). Additionally, the variable collectivism had a moderate variability in the sample. This suggests that the relative similarity in individual levels of collectivism among participants could have led to the lack of a moderation effect. Lastly, participants being solely Greek, may have had individual characteristics that impacted their intersubjective perceptions and experiences in a manner that limits generalizability to other collectivistic cultures (Chiu et al., 2010).

Furthermore, the findings supported the third hypothesis. Results showed that perceived guilt-induction had a positive effect on need frustration. This result is not surprising considering the vast amount of literature on the cross and intra-cultural effect of guilt-induction on need frustration (e.g., Soenens & Vansteenkiste, 2010; Chen et al., 2016). This result suggests that Greek individuals, despite being from a collectivistic culture once they perceived the vignette as guilt-inducing suffered in terms of need frustration.

Nonetheless, the findings did not confirm the fourth hypothesis. Intracultural variability of collectivism did not moderate the relation between perceived guilt-induction and need frustration. This finding contradicts the universalism without uniformity position that individual differences and, in this case, individual values of collectivism moderate this relation (Shweder & Sullivan, 1993; Soenens et al., 2015). The observed lack of moderation is rather consistent with the notion based on SDT that once guilt-induction is perceived as controlling, there is a universality in the experience of need frustration (Deci & Ryan, 2000; Ryan et al., 2016). An underlying reason for the inconsistency between our findings and previous research could be the chosen age group (18-25). Previous research has shown that generational status moderates the relation between guilt-induction and its subsequent effects on well-being and need satisfaction (Costigan et al., 2006). Therefore, including different generational groups in the sample could yield different outcomes due to a potentially higher variability of the collectivism variable. Moreover, van der Kaap-Deeder et al. (2017) suggested that the quality of the mother-child relationship matters. The present study did not account for the quality of this relationship; hence, a similarity in the quality of the participants' relationships could result in unreliable findings.

Strengths and Limitations

One of the present study's strengths was that the sample size was sufficiently large ($n = 161$), fostering generalization and robustness of the findings. Additionally, the questionnaires were translated into the participants' native language, which ensures less bias in the item interpretation. Moreover, an experimental study permitted greater control and the establishment of causal effects of objective guilt-induction (versus autonomy support) on perceived guilt-induction and of perceived guilt-induction on need frustration. Additionally, the study was pre-registered at the Open Science Framework, contributing to the

findings' transparency, reliability, and reproducibility. Lastly, our study utilized validated and previously used instruments.

Despite the several strengths of this study, several limitations should be considered. First, the measure of collectivism had poor reliability ($\alpha = .54$). The moderator's low internal consistency could have affected the employed moderation analyses, resulting in unreliable findings. Moreover, the questionnaire did not assess the participants' parental cultural background. Participants could have been second-generation immigrants with native proficiency in the language. Therefore, since the present study was interested in parent-child relationships, their parents' cultural backgrounds should have been assessed. A third limitation concerns the sole assessment of maternal guilt-induction; therefore, the findings of the relations of the variables cannot be generalized to paternal parenting.

Future Research and Clinical Implications

Despite the non-significant results of the moderation analyses, we should not preclude a possible moderation of the relation between perceived guilt-induction and need frustration. Considering the poor reliability of the moderator, future research should utilise other available measures that are more internally consistent and potentially include paternal guilt-induction to achieve a higher level of generalizability. Moreover, scholars should consider including participants with different generational statuses. Furthermore, to achieve the generalizability of the findings, the explored model should be replicated in populations from different countries. Lastly, to further examine the universalism without uniformity perspective, the moderating role of other cultural values (i.e., power distance) should be explored (Yoo et al., 2011).

The lack of moderations observed suggest that interventions targeting the reduction of need frustration by addressing perceived guilt-induction may be effective cross-culturally. Nonetheless, this should not preclude culturally driven individual differences in coping

responses to need frustration due to parental guilt-induction. Chen et al. (2016) found that individuals from collectivistic cultures have different coping responses than those from individualistic cultures. Therefore, considering the literature discussed in this paper, this applies intra-culturally. Accordingly, healthcare practitioners should be sensitive to treatment targets and potential misdiagnoses.

Conclusion

The present study found a causal relation between objective and perceived guilt-induction. Nonetheless, I did not find a moderating relation between objective guilt-induction and perceived guilt-induction. However, I found a causal relation between perceived guilt-induction and need frustration. Lastly, no moderation was found between perceived guilt-induction and need frustration. Despite the non-significant findings of the moderating effects of individual values of collectivism, future experimental research should further investigate this relationship as it can potentially have implications for the potential treatment targets and progress, rapport, and demotivation of minority groups to seek help.

References

- Allen, M. P. (1997). *Understanding Regression Analysis*. Springer.
https://doi.org/10.1007/978-0-585-25657-3_37
- Barber, B. K. (1996). Parental psychological control: Revisiting a neglected construct. *Child Development, 67*(6), 3296. <https://doi.org/10.2307/1131780>
- Barber, B. K., & Harmon, E. L. (2002). Violating the self: Parental psychological control of children and adolescents. *Intrusive Parenting: How Psychological Control Affects Children and Adolescents.*, 15–52. <https://doi.org/10.1037/10422-002>
- Barber, B. K., Stolz, H. E., Olsen, J. A., Collins, W. A., & Burchinal, M. (2005). Parental support, psychological control, and behavioral control: Assessing relevance across time, culture, and method. *Monographs of the Society for Research in Child Development, 70*(4), 147 <https://www.jstor.org/stable/3701442>
- Bartholomew, K. J., Ntoumanis, N., Ryan, R. M., Bosch, J. A., & Thøgersen-Ntoumani, C. (2011). Self-determination theory and diminished functioning: The role of interpersonal control and psychological need thwarting. *Personality and Social Psychology Bulletin, 37*(11), 1459-1473. <https://doi.org/10.1177/0146167211413125>
- Bulmer, M. (1979). Concepts in the analysis of qualitative data. *The Sociological Review, 27*(4), 651-677. <https://doi.org/10.1111/j.1467-954x.1979.tb00354.x>
- Cheah, C. S., Yu, J., Liu, J., & Coplan, R. J. (2019). Children's cognitive appraisal moderates associations between psychologically controlling parenting and children's depressive symptoms. *Journal of Adolescence, 76*(1), 109-119.
<https://doi.org/10.1016/j.adolescence.2019.08.005>

- Chen, B., Vansteenkiste, M., Beyers, W., Boone, L., Deci, E. L., Van der Kaap-Deeder, J., Duriez, B., Lens, W., Matos, L., Mouratidis, A., Ryan, R. M., Sheldon, K. M., Soenens, B., Van Petegem, S., & Verstuyf, J. (2015). Basic psychological need satisfaction, need frustration, and need strength across four cultures. *Motivation and Emotion, 39*(2), 216–236. <https://doi.org/10.1007/s11031-014-9450-1>
- Chen, B., Soenens, B., Vansteenkiste, M., Van Petegem, S., & Beyers, W. (2016). Where do the cultural differences in dynamics of controlling parenting lie? Adolescents as active agents in the perception of and coping with parental behavior. *Psychologica Belgica, 56*(3), 169-192. <http://dx.doi.org/10.5334/pb.306>
- Chirkov, V., Ryan, R. M., Kim, Y., & Kaplan, U. (2003). Differentiating autonomy from individualism and independence: A self-determination theory perspective on internalization of cultural orientations and well-being. *Journal of Personality and Social Psychology, 84*(1), 97–110. <https://doi.org/10.1037/0022-3514.84.1.97>
- Chiu, C. Y., Gelfand, M. J., Yamagishi, T., Shteynberg, G., & Wan, C. (2010). Intersubjective culture: The role of intersubjective perceptions in cross-cultural research. *Perspectives on Psychological Science, 5*(4), 482-493. <https://doi.org/10.1177/1745691610375562>
- Costigan, C. L., Bardina, P., Cauce, A. M., Kim, G. K., & Latendresse, S. J. (2006). Inter- and intra-group variability in perceptions of behavior among Asian Americans and European Americans. *Cultural Diversity and Ethnic Minority Psychology, 12*(4), 710–724. <https://doi.org/10.1037/1099-9809.12.4.710>
- Deci, E. L., & Ryan, R. M. (1987). The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology, 53*(6), 1024-1037. <https://doi.org/10.1037/0022-3514.53.6.1024>

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*(4), 227-268.

https://doi.org/10.1207/s15327965pli1104_01

Donatelli, J. L., Bybee, J. A., & Buka, S. L. (2007). What do mothers make adolescents feel guilty about? Incidents, reactions, and relation to depression. *Journal of Child and Family Studies, 16*(6), 859–875. <https://doi.org/10.1007/s10826-006-9130-1>

Fung, J., & Lau, A. S. (2012). Tough love or hostile domination? Psychological control and relational induction in cultural context. *Journal of Family Psychology, 26*(6), 966-975.

<https://doi.org/10.1037/a0030457>

Grolnick, W. S., Ryan, R. M., & Deci, E. L. (1991). Inner resources for school achievement: Motivational mediators of children's perceptions of their parents. *Journal of Educational Psychology, 83*(4), 508-517. <https://doi.org/10.1037/0022-0663.83.4.508>

Grolnick, W. S., Deci, E. L., & Ryan, R. M. (1997). Internalization within the family: The Self-Determination Theory perspective. In J. E. Grusec, L. Kuczynski (Eds.), *Parenting and Children's Internalization of Values: A Handbook of Contemporary Theory*, (pp. 135-161). John Wiley & Sons Inc.

Kiff, C. J., Lengua, L. J., & Zalewski, M. (2011). Nature and nurturing: Parenting in the context of child temperament. *Clinical Child and Family Psychology Review, 14*(3), 251–301. <https://doi.org/10.1007/s10567-011-0093-4>

Lansford, J. E., Laird, R. D., Pettit, G. S., Bates, J. E., & Dodge, K. A. (2014). Mothers' and fathers' autonomy-relevant parenting: Longitudinal links with adolescents' externalizing and internalizing behavior. *Journal of Youth and Adolescence: A*

Multidisciplinary Research Publication, 43(11), 1877-1889.

<https://doi.org/10.1007/s10964-013-0079-2>

Mageau, G. A., Ranger, F., Joussemet, M., Koestner, R., Moreau, E., & Forest, J. (2015).

Validation of the Perceived Parental Autonomy Support Scale (P- PASS). *Canadian Journal of Behavioural Science*, 47(3), 251-262. <https://doi.org/10.1037/a0039325>

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98(2), 224-

253. <https://doi.org/10.1037/0033-295x.98.2.224>

Miller, J. G., Chakravarthy, S., & Rekha, D. (2008). The moral emotions of guilt and

satisfaction: A cross-cultural perspective. *International Journal of Developmental Science*, 2(3), 236-250. <https://doi.org/10.3233/dev-2008-2304>

Oishi, S., Diener, E. F., Lucas, R. E., & Suh, E. M. (1999). Cross-cultural variations in

predictors of life satisfaction: Perspectives from needs and values. *Personality and Social Psychology Bulletin*, 25(8), 980–990.

<https://doi.org/10.1177/01461672992511006>

Olsen, S. F., Yang, C., Hart, C. H., Robinson, C. C., Wu, P., Nelson, D.A.,... Wo, J. (2002).

Maternal psychological control and preschool children's behavioral outcomes in China, Russia, and the United States. In B. K. Barber (Eds.), *Intrusive Parenting: How Psychological Control Affects Children and Adolescents* (pp. 235-262). Washington, DC: American Psychological Association. <https://doi.org/10.1037/10422-008>

Rakow, A., Forehand, R., McKee, L., Coffelt, N., Champion, J., Fear, J., & Compas, B.

(2009). The relation of parental guilt induction to child internalizing problems when a

- caregiver has a history of depression. *Journal of Child and Family Studies*, 18(4), 367–377. <https://doi.org/10.1007/s10826-008-9239-5>
- Roberts, G. C., Block, H., & Block, J. (1984). Continuity and change in parents' child-rearing practices. *Child Development*, 55(2), 586-597. <https://doi.org/10.2307/1129970>
- Rote, W. M., Hall, C., & Sandifer, E. (2022). Domain-differentiated parental guilt induction: Understanding the structure and correlates of a novel measure. *Parenting*, 22(4), 315-346. <https://doi.org/10.1080/15295192.2021.2008769>
- Rudy, D., Carlo, G., Lambert, M. C., & Awong, T. (2014). Undergraduates' perceptions of parental relationship-oriented guilt induction versus harsh psychological control: Does cultural group status moderate their associations with self-esteem? *Journal of Cross-Cultural Psychology*, 45(6), 905–920. <https://doi.org/10.1177/0022022114532354>
- Ryan, R. M., & Deci, E. L. (2000). The darker and brighter sides of human existence: Basic psychological needs as a unifying concept. *Psychological Inquiry*, 11(4), 319–338. https://doi.org/10.1207/s15327965pli1104_03
- Ryan, R. M., & Deci, E. L. (2006). Self-regulation and the problem of human autonomy: Does psychology need choice, self-determination, and will? *Journal of Personality*, 74(6), 1557–1586. <https://doi.org/10.1111/j.1467-6494.2006.00420.x>
- Ryan, R. M., Deci, E. L., & Vansteenkiste, M. (2016). Autonomy and autonomy disturbances in self-development and psychopathology: Research on motivation, attachment, and clinical process. In D. Cicchetti (Eds.), *Developmental Psychopathology* (3rd ed., pp. 385-438). London, England: Wiley.
<https://doi.org/10.1002/9781119125556.devpsy109>

- Shweder, R. A., & Sullivan, M. A. (1993). Cultural psychology: Who needs it?. *Annual Review of Psychology*, 44(1), 497-523. <https://doi.org/10.1146/annurev.ps.44.020193.002433>
- Soenens, B., & Vansteenkiste, M. (2010). A theoretical upgrade of the concept of parental psychological control: Proposing new insights on the basis of Self-Determination Theory. *Developmental Review*, 30(1), 74- 99. <https://doi.org/10.1016/j.dr.2009.11.001>
- Soenens, B., Vansteenkiste, M., & Van Petegem, S. (2015). Let us not throw out the baby with the bathwater: Applying the principle of universalism without uniformity to autonomy-supportive and controlling parenting. *Child Development Perspectives*, 9(1), 44–49. <https://doi.org/10.1111/cdep.12103>
- Soenens, B., Deci, E.L., Vansteenkiste, M. (2017). How parents contribute to children’s psychological health: The critical role of psychological need support. In: Wehmeyer, M., Shogren, K., Little, T., Lopez, S. (Eds.), *Development of Self-Determination Through the Life-Course*. Springer, Dordrecht. https://doi.org/10.1007/978-94-024-1042-6_13
- Van der Kaap-Deeder, J., Vansteenkiste, M., Soenens, B., & Mabbe, E. (2017). Children’s daily well-being: The role of mothers’, teachers’, and siblings’ autonomy support and psychological control. *Developmental Psychology*, 53(2), 237. <https://doi.org/10.1037/dev0000218>
- Van Leeuwen, K. G., Mervielde, I., Braet, C., & Bosmans, G. (2004). Child personality and parental behavior as moderators of problem behavior: Variable- and person-centered

approaches. *Developmental Psychology*, 40(6), 1028–1046. <https://doi.org/10.1037/0012-1649.40.6.1028>

Van Petegem, S., Soenens, B., Vansteenkiste, M., & Beyers, W. (2015). Rebels with a cause? Adolescent defiance from the perspective of reactance theory and self-determination theory. *Child Development*, 86(3), 903-918. <https://doi.org/10.1111/cdev.12355>

Vansteenkiste, M., & Ryan, R. M. (2013). On psychological growth and vulnerability: Basic psychological need satisfaction and need frustration as a unifying principle. *Journal of Psychotherapy Integration*, 23(3), 263–280. <https://doi.org/10.1037/a0032359>

Yoo, B., Donthu, N., & Lenartowicz, T. (2011). Measuring Hofstede's five dimensions of cultural values at the individual level: Development and validation of CVSCALE. *Journal of International Consumer Marketing*, 23(3-4), 193-210. <https://www.researchgate.net/publication/233129941>

Appendix A

Vignette

Autonomy-supportive scenario

Aw, I know you had a good feeling about it and you probably expected to do better. You tried your best, so I can imagine this grade is not what you hoped for. Why do you think you got this result? It happens sometimes you do better on a test than other times. Ok, I know it didn't go well this time, but you can try to learn from what went wrong. Perhaps you can try to see it as a challenge and think about other ways that you can try to learn the study material? If you need help, you can always rely on me.

Guilt-inducing scenario, High warmth:

Your mother sits down next to you and puts her arm around you. She says:

“You gave me hope that your result would be good, so how can I be anything but sad and disappointed with this result? Don't you feel guilty about this inferior score? You know I really care for you, but you probably didn't put much effort into studying for the test. You know, I try really hard to take care of you and this family.”

Your mother smiles at you and before she walks away, she gives you a hug and adds:

“I do all of this for you, so that you can study hard and get good grades. Is this poor result the thanks I get for my hard work? Please, I beg you, try not to disappoint me like this again. Study hard for your next test so that you don't get a bad grade.”

Guilt-inducing scenario, Low warmth:

Your mother sits across from you. She says:

“You gave me hope that your result would be good, so how can I be anything but sad and disappointed with this result? Don't you feel guilty about this inferior score? I hate to reiterate again and again how much I care for you. You probably didn't put much effort into studying for the test. You know, I try really hard to take care of you and this family.”

Your mother stares at you and as she is walking away she adds:

“I do all of this for you, so that you can study hard and get good grades. Is this poor result the thanks I get for my hard work? Please, I beg you, try not to disappoint me like this again.

Study hard for your next test so that you don’t get a bad grade.”

Appendix B

Assumption Checks

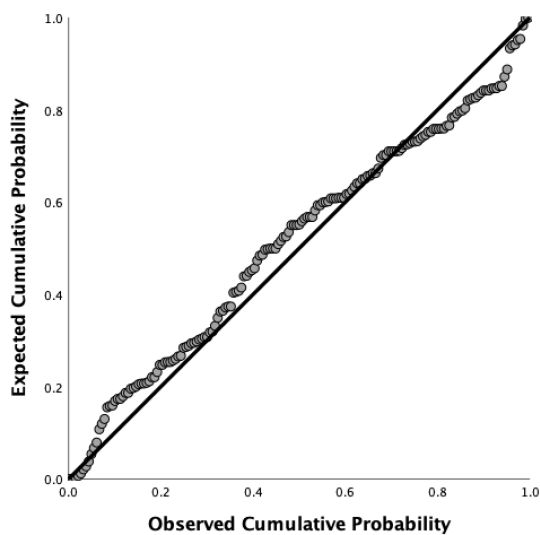
Table 1b

Model Summary and Durbin-Watson Test

Model	<i>R</i>	<i>R</i> ²	<i>SE</i>	Durbin-Watson
	.89	.78	.63	1.63

Figure 1b

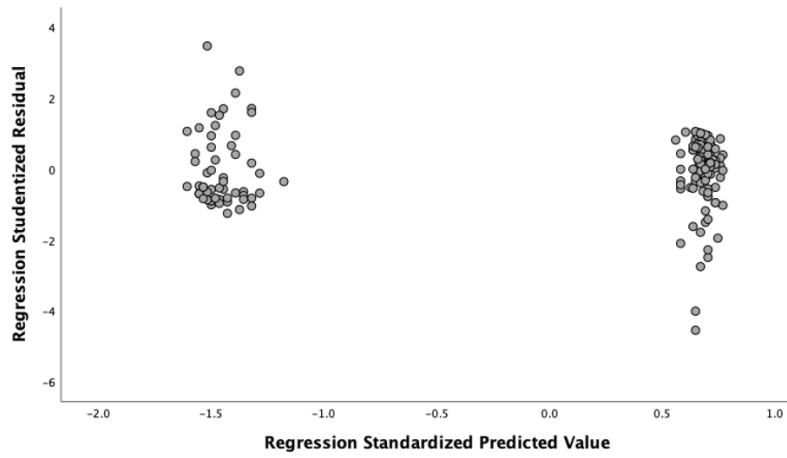
Normal P-P Plot of Regression Standardized Residual



Note. Dependent variable = Perceived guilt-induction

Figure 2b

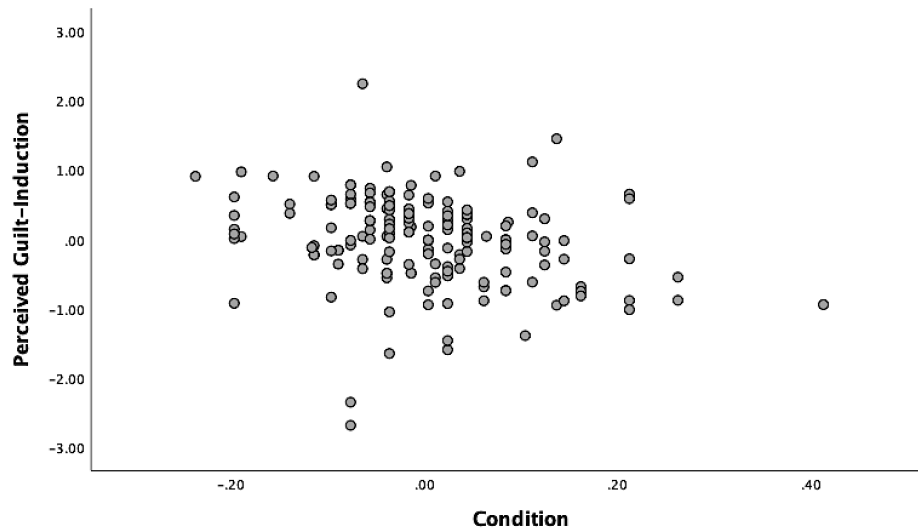
Scatterplot Checking for Homoscedasticity



Note. Dependent variable = Perceived guilt-induction

Figure 3b

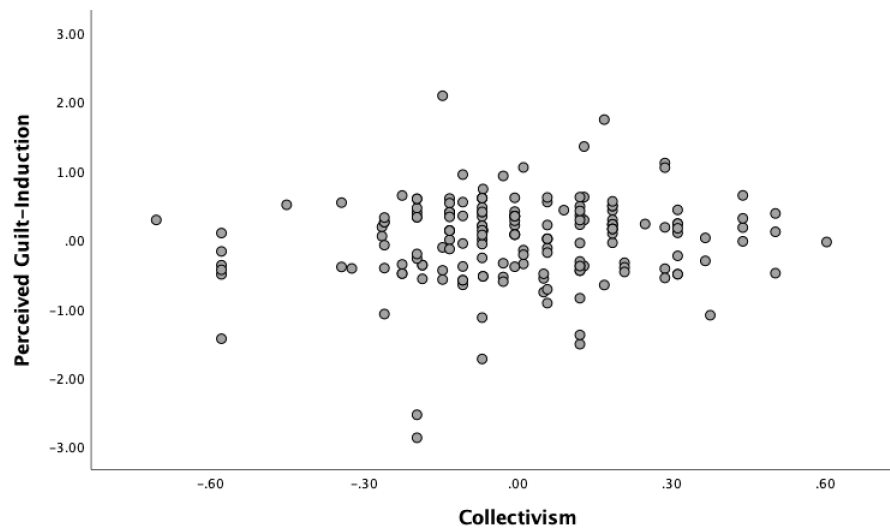
Partial Regression Plot between Perceived Guilt-Induction and the Condition Variable



Note. Dependent variable = Perceived guilt-induction

Figure 4b

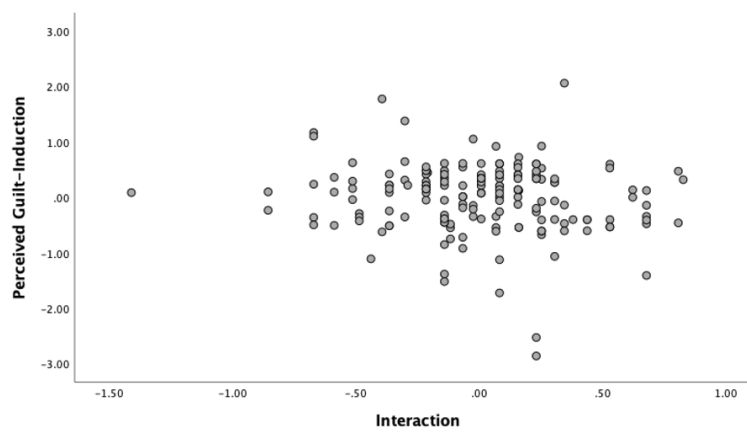
Partial Regression Plot between Perceived Guilt-Induction and Collectivism



Note. Dependent variable = Perceived guilt-induction

Figure 5b

Partial Regression Plot between Perceived Guilt-Induction and the Interaction Variable



*Note. Interaction = Condition*Collectivism*

Appendix C

Assumption Checks

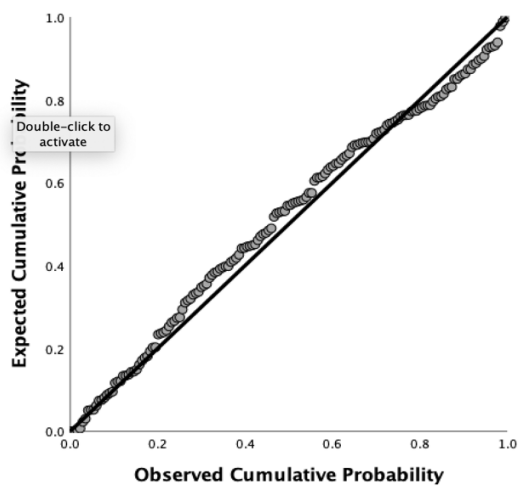
Table 1c

Model Summary and Durbin-Watson Test

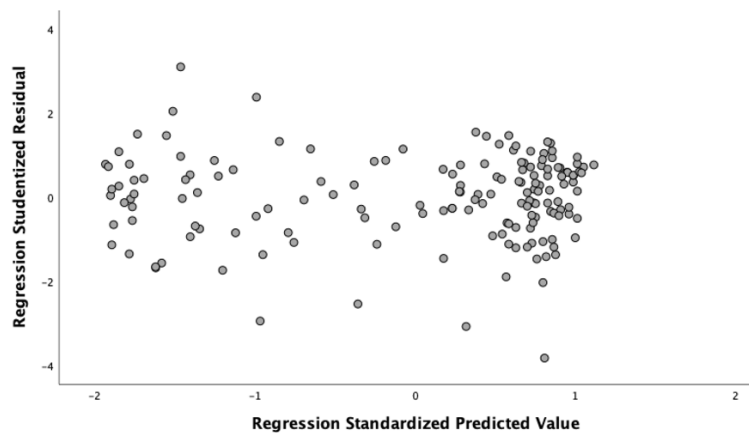
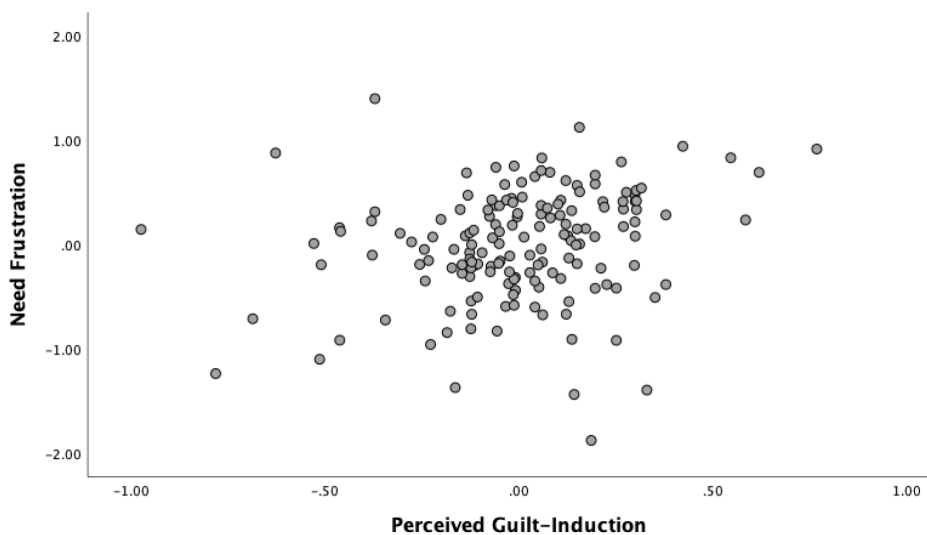
Model	<i>R</i>	<i>R</i> ²	<i>SE</i>	Durbin-Watson
	.89	.79	.52	1.63

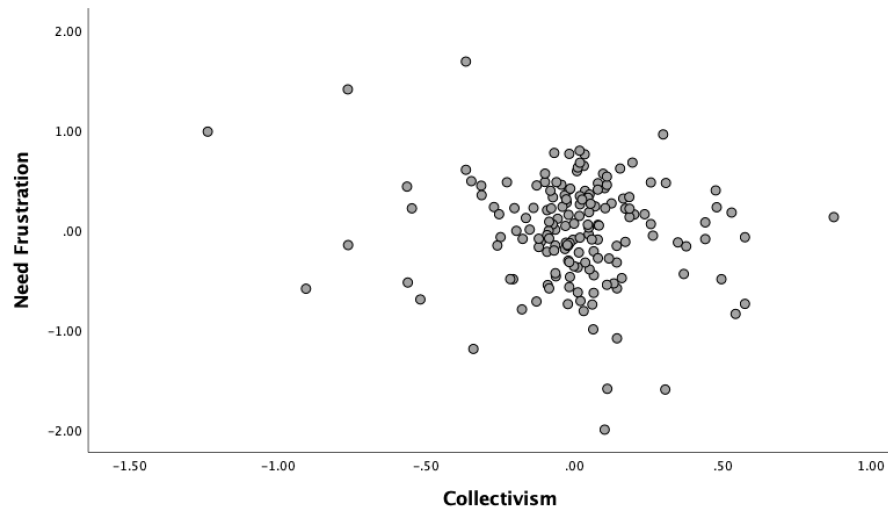
Figure 1c

Normal P-P Plot of Regression Standardized Residual



Note. Dependent variable = Need frustration

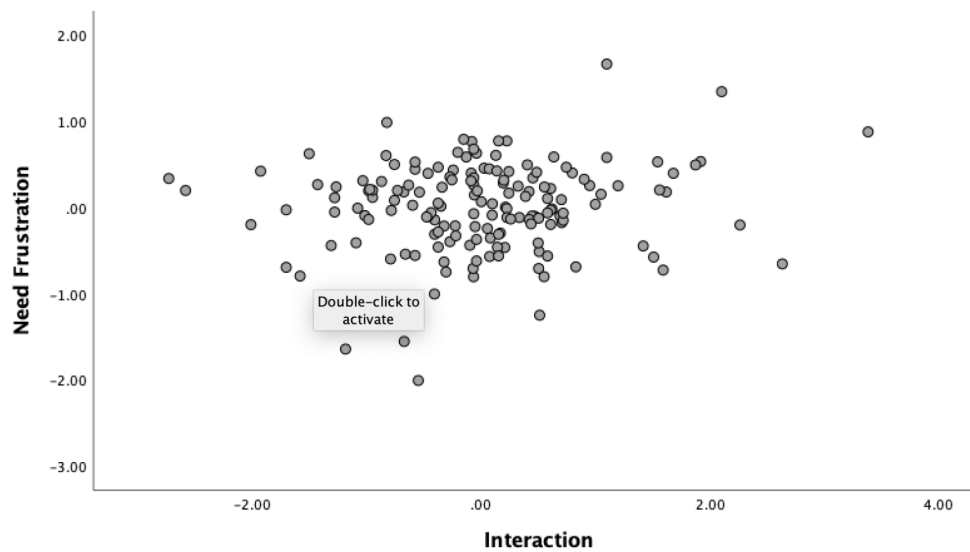
Figure 2c*Scatterplot Checking for Homoscedasticity**Note.* Dependent variable = Need frustration**Figure 3c***Partial Regression Plot between Need Frustration and Perceived Guilt-Induction**Note.* Dependent variable = Need frustration**Figure 4c***Partial Regression Plot between Need Frustration and Collectivism*



Note. Dependent variable = Need frustration

Figure 5c

Partial Regression Plot between Need Frustration and the Interaction Variable



Note. Interaction = Perceived guilt-induction*Collectivism