Domains of Socialization and Adolescent Internalization of Prosocial Values

by

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INTERNALIZATION OF PROSOCIAL VALUES

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Abstract

The present study examined the relation between effective parenting behaviours and adolescents' internalization of prosocial values for 41 mother-adolescent dyads. Utilizing a Domains-of-Socialization framework proposed by Grusec and Davidov (2010), we focused specifically on how appropriate parenting behaviours in different domains influenced adolescents’ internalization of prosocial values measured as a function of reasons given for engaging in prosocial behavior. The results indicated that maternal behaviours in the control domain hindered adolescent internalization whereas maternal behaviours in both the mutual reciprocity and protection domains fostered adolescent internalization of prosocial values. Furthermore, since parenting behaviours between domains were, at most, moderately correlated with each other, this would suggest that each of the domains of socialization are composed of relatively unique parenting behaviours with very little overlap. Lastly, maternal and adolescent personality contributed to appropriate parenting behaviours across several domains. The theoretical and practical implicates are discussed.
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Domains of Socialization and Adolescent Internalization of Prosocial Values

Psychologists traditionally posit that the primary goal of socialization is the integration and acceptance of society’s values as one’s own (Grolnick, Deci, & Ryan, 1997). This internalization process can be hindered or facilitated by different parenting behaviours (Hoffman, 2000). The present research examined how distinctive parental behaviours predicted adolescents’ internalization of prosocial values. Ryan and Connell (1989) propose that by examining the reasons adolescents give for why they might engage in certain prosocial behaviours it is possible to determine the extent to which their prosocial values are internalized. Greater internalization of prosocial values has been associated with a greater tendency to engage in prosocial behaviours (Padilla-Walker, 2007), defined as actions that are intended to benefit another person and that can occur for a variety of underlying reasons (Eisenberg & Spinrad, 2014). These underlying reasons, as Ryan and Connell (1989) suggest, can range on a scale from external to identified, the former being the least internalized and the latter being the most internalized. Therefore, for the purposes of the current study, internalization of prosocial values was measured as a function of the types of reasons given for engaging in specific prosocial behaviours with the assumption that the more adolescents gave reasons that were of the identified type the more internalized were their prosocial values. Although many studies have investigated the central role parents play in socialization and the relation between parental socialization and prosocial behaviours (Carver, Knafo, & Plomin, 2006; Dannemiller et al., 2000; García Coll, Knafo, & Plomin, 2006), few studies have looked at the relation between parenting behaviours and internalization of prosocial values.
Utilizing a Domains-of-Socialization framework proposed by Grusec and Davidov (2010), the present study focused on adolescent internalization, specifically, how effective parenting behaviours in different domains influence adolescents’ reasons for engaging in prosocial behaviours. The current study also explored whether behaviours in various parental domains were distinct forms of parenting or merely variants of a single approach to effective parenting, as existing research has demonstrated that closely related parenting dimensions produce different developmental outcomes (Davidov & Grusec, 2006). Lastly, to measure additional variables affecting domain performance, this study investigated maternal and adolescent personality, since personality of both parents and children has been shown to relate to a variety of parenting behaviours (Carlo, Roesch, & Melby, 1998; Kochanska, Friesenborg, Lange, & Martel, 2004).

**Internalization: The Goal of Socialization**

Socialization has been defined as the process by which children learn the skills, values, motivations and behaviours that are required for proper functioning in society (Maccoby, 2007). Furthermore, it is generally understood that parents are the earliest and most important sources of socialization for children for a variety of reasons including time spent with the child and proximity (Grusec, 2006). Thus, parents act as the primary socialization agents in the development of children’s prosocial value development. Consequently, parenting behaviours can either foster or hinder the child’s acceptance and transformation of values as their own. Socialization can take several forms including the mere exposure to cultural values, lessons directed at the child, and appropriate responding to distress. Subsequently, different socialization processes will likely produce different child outcomes. Ultimately, the goal of socialization is to have children accept parental values, while simultaneously integrating them
into their own sense of self (Hoffman, 1977). Therefore, successful socialization leading to internalization is marked by behaviours that are internally driven rather than externally controlled as well as by reasons that reflect internalized as opposed to externalized justifications for prosocial action.

**Self-Determination Theory**

Deci and Ryan’s (2000) self-determination theory is an attempt at understanding underlying human motivations. The authors suggest that prosocial behaviour depends on the degree to which the prosocial value behind the behaviour is internalized. In other words, the motivation to behave prosocially stems from the individual’s need to remain committed to his or her prosocial values. Thus, successful socialization involves performing a prosocial behaviour volitionally, because the value behind the behaviour has been internalized. On the other hand, prosocial values which are not internalized are associated with behaviours performed out of fear of negative consequences or expectation of reward. Consequently, internalized prosocial values, which are integrated into one’s self-concept will likely produce behaviours even in the absence of external factors. Deci and Ryan (2000) proposed several conditions that aid in facilitating value internalization. Firstly, the child must feel a sense of relatedness to the socialization agent, the child must feel developmentally competent when performing the behaviour and the internalization of values must involve a sense of autonomy and acceptance of values as one’s own. Thus, in order for values to be internalized, they must develop in an environment where the individual feels at least some control when making decisions. Ryan and Connell (1989) proposed that one’s reasons for action might range from External (following a rule or avoiding punishment); Introjected (self and other approval or avoidance of disapproval); and Identified (personally important or self-valued goals). Ultimately, reasons influence behaviours and the
more internalized a value is, the closer the reasoning is to “identified.” Deci and Ryan (1991) conceptualized these reasons as forms of internalization of values, since they can be thought of as the extent to which the behaviour associated with the value is externally or internally driven. Thus, using this framework, the current study assessed internalization of prosocial values by measuring the reasons associated with acting prosocially.

**Parenting and the Internalization of Prosocial Values**

Certain parenting behaviours and strategies have been identified as promoting or detracting from the internalization process. Specifically, Hardy, Padilla-Walker and Carlo (2008), found that controlling parenting styles were associated with a decreased sense of autonomy and lower internalization of moral values. However, greater internalization of moral values was found in adolescents whose parents interacted with them in autonomy-supportive ways (i.e., encouraging choice and agency). Therefore, for the present study it was expected that positive socialization, characterized by autonomy support and a deep understanding of prosocial values, would lead to greater internalization as reflected in the kinds of reasons children give for prosocial behaviour. In contrast, socialization processes that are contingent on the promise of external rewards, fear of punishment, or acceptance from the parent will lead to the externalization of values.

**Domains of Socialization**

Prior research looking at parenting interactions has commonly focused on broad categories of parenting styles (Baumrind, 1966; Baumrind, 1971) such as warmth, control and responsiveness (Carlo, McGinley, Hayes, Batenhorst, & Wilkinson, 2007) and found that warm, firm, and responsive parenting all lead to positive socialization. However, there are many forms of parent-child interactions that can be labeled as ‘firm and responsive.’ Furthermore the existing
theories of parenting interactions and socialization are often contradictory in their basic premises, in part because they focus on different aspects of the parent-child relationship (Grusec & Davidov, 2010). As a way of understanding differences in parenting theories and findings in the developmental literature, Grusec and Davidov (2010) proposed a domain-specific approach. Each domain of socialization involves a different relationship between the socialization agent and the child, with each domain having different specific features, mechanisms and outcomes. Grusec and Davidov (2010) identified five distinct domains of socialization, namely Control, Protection, Mutual Reciprocity, Group Participation and Guided Learning.

**Control domain.** The control domain is characterized by a hierarchal relationship between the parent and the child. This domain is activated when there is a conflict of goals, mainly when the child has misbehaved and the parent exerts control over the child in order to stop the child from misbehaving. Likewise, the control domain is also activated when the child has acted in a way the parent approves of, and the parent rewards the child for this action. Thus, parents in the control domain use rewards and punishments in an attempt to shape the child’s behaviour. Control in this domain is achieved by reward or by punishment combined with reasoning.

**Control and internalization.** Previous research has demonstrated that the use of power assertion can impede children’s internalization of values (Bureau & Mageau, 2014). Likewise, Hardy et al (2008) found parenting styles that focused on compliance correlated negatively with internalization, as reflected in the reasons adolescents gave for prosocial behaviour. Similarly, Ryan, Deci and Grolnick (1997) reported that more controlling mothers had children who were more focused on external rewards, such as the acquisition of material objects, than they were on prosocial values. Although the control domain involves elements from authoritative parenting
such as negotiation, it is primarily involves discipline, rule imposition and behaviour modification. Therefore, given the relation between controlling parenting strategies and the development of external motivation, it was hypothesized that maternal behaviour in the control domain would predict external reasons for acting prosocially, thereby negatively predicting internalization.

**Protection domain.** Effective behaviour in the protection domain consists of the parent responding appropriately to the child’s distress in order to provide protection or comfort. In turn, the child develops a strong sense of security and is more likely to be emotionally self-regulated (Ainsworth, Blehar, Waters, & Wall, 2014). Emotion self-regulation has been linked to lower personal distress, increased ability to perspective-take, and higher levels of sympathy when reacting to the plight of others (Eisenberg, Wentzel, & Harris, 1998). Securely attached children are also more likely to comply with parental direction because they trust that the parent has their best interest at heart.

**Protection and internalization.** Research has found that perspective-taking and sympathy predicted prosocial behaviours in children (Carlo, Mestre, Samper, Tur, & Armenta, 2011; Malti, Ongley, Dys, & Colasante, 2012). Furthermore, sympathy and perspective-taking have been positively associated with the internalization of prosocial values (Carlo, Mestre, Samper, Tur, & Armenta, 2010). Therefore, considering the relation between perspective-taking and sympathy with internalization (Deci & Ryan, 1987) it was hypothesized that maternal behaviour in the Protection Domain would positively predict internalization, that is, a greater preponderance of identified over external and introjected reasoning. Additionally, trust in the parent not to impose standards that could be perceived as arbitrary should further facilitate internalization.
**Mutual reciprocity domain.** Unlike the control domain, the mutual reciprocity domain is characterized by the absence of hierarchy in the parent-child relationship. Effective behaviour in this domain involves the parent complying with the child’s reasonable requests, an action that increases the child’s willingness to comply with the adult’s requests (Parpal & Maccoby, 1985).

**Mutual reciprocity and internalization.** Kochanska and Aksan (1995) found that mothers who complied with their children’s requests had children who reciprocated this action. Additionally, Whatley, Webster, Smith and Rhodes (1999) demonstrated that people are more likely to comply with an individual’s request, when the individual initially provided a favour. Given that this domain establishes an expectation for exchange it was predicted that prosocial behaviour in this domain would predict externalized reasons. Thus, it was hypothesized that socialization in the mutual reciprocity domain would negatively predict internalization.

**Group participation domain.** In the group participation domain, the parent models behaviour guided by society norms and values and also shapes the child’s environment by either exposing or limiting exposure to certain groups. Socialization in this domain can also take the form of family rituals and routines in order to communicate to the child a sense of group identity.

**Group participation and internalization.** Hoffman (1970) suggested that socialization processes that occurred through observational learning and modeling did not provide rationale or reason to the child. Consequently, this socialization mechanism created externalized motivations for behaviour, because the values underlying the behaviour are not clear to the observer. Thus, it is likely that prosocial behaviours, which have been observed by the child, will be associated with externalized reasoning because simple reproduction of observed action does not imply that the child has integrated the action into their own self-concept. Therefore, it was predicted that
socialization in the group participation domain would negatively predict internalization of prosocial values.

**Guided learning domain.** Effective behaviour in the guided learning domain consists of the parent generating learning opportunities that are appropriate for the child’s interests and developmental level. The parent’s behaviour in this domain is independent of the child’s actions. The parent socializes by teaching, allowing the child to develop and understand important life skills. Success in this domain requires the use of scaffolding and is contingent on the task being taught within the child’s zone of proximal development (Vygotsky, 1978). The parental involvement decreases over time as the child’s skill level increases to a point where the child can perform without the aid of the parent. Grusec and Davidov (2010) suggest that this domain also encompasses the teaching and understanding of emotional skills leading to higher levels of empathy and a greater ability to perspective take.

**Guided learning and internalization.** Deci, Eghari, Patrick and Leone (1994) found that applying a meaningful rationale for an uninteresting behaviour increased the likelihood that the value underlying the behaviour was integrated into the individuals self concept. Additionally, socialization in the guided learning domain supports the child’s autonomy, since the parent accounts for takes into account the child’s competence and allows the child to contribute to the discussion (Grusec & Davidov, 2010). Hence appropriate parenting in this domain, which is autonomy supportive, should lead to a deep understanding and internalization of prosocial values. Thus, it was hypothesized that effective maternal behaviour in this domain would positively predict internalization, that is, a greater occurrence of identified over external and introjected reasoning.

**Effective Use of Domains**
As noted previously, the domain approach to socialization (Grusec & Davidov, 2010) attempts to separate parenting behaviours into different dimensions. However, studies have often analyzed positive/negative parenting as unidimensional constructs, failing to account for different aspects of parenting behaviours (Goldberg, Grusec, & Jenkins, 1999). Davidov and Grusec (2006) found that parental responsiveness to distress and warmth were associated with different child outcomes, demonstrating that two closely related positive parenting dimensions are indeed distinct. Likewise, successful parenting behaviours can be found in each of the five domains, but parents may be more successful in one domain than they are in another. Thus, a secondary purpose of this study was to examine the relations between domain endorsement: Is parental behaviour in one domain related to the endorsement of another domain?

Since no prior study has looked at the association between effective parenting behaviours in each domain, our predictions were largely exploratory. However, it was anticipated that the parental behaviour in each domain that positively contribute to internalization (i.e, protection and guided learning), would correlate positively, and correlate negatively with the behaviours in the domains that impede the internalization process (i.e., Group Participation, Mutual Reciprocity and Control). Mothers who can function appropriately in the protection domain are able to properly attend to their child’s distress and respond in an emotionally supportive way. These mothers, who are able effectively take the perspective of their adolescent when attempting to reduce their distress, are likely to perspective-take in learning opportunities, considering their child’s developmental age and correctly guiding them (guided learning). Both of these domains require similar parenting skills, specifically the ability to perspective-take and provide autonomy. On the other hand, mothers who focus on external rewards, using punishment and privileges
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(control), and exposure to certain values (group participation), to shape their child’s behaviours may be more likely to focus on exchange (mutual reciprocity).

**Adolescent Personality and Maternal Endorsement of Domains**

An additional focus of this research was to explore the relation between adolescent personality and maternal endorsement of domains-of-socialization (Grusec & Davidov, 2010). Research has shown that child personality relates to the quality of the relationship with the mother (Carlo et al., 1998; Kochanska et al., 2004). It was hypothesized that adolescent personality would be associated with the mothers’ behaviour in each domain. For example, children who score high on agreeableness (John & Srivastava, 1999) will have mothers who operate efficiently in the mutual reciprocity domain since interactions in this domain are characterized by patience, tolerance and flexibility. Furthermore, adolescents who are agreeable, and thus more compliant will elicit maternal compliance. Additionally, children who score high in neuroticism (John & Srivastava, 1999), indicating high levels of distress, will have mothers who are able to behave competently in the protection domain. Neuroticism is often characterized by fearfulness (John & Srivastava, 1999), consequently the parent will learn to behave appropriately in the protection domain, since they have to respond to the adolescent’s distress, this mother will experience constant feedback allowing her to develop proper protection skills, which effectively reduce distress.

**Maternal personality and domain endorsement**

Diener, Clark, Kochanska and Ready (2000) found that mothers who scored high in agreeableness used less controlling styles of discipline. The researchers also found that mothers who were high in conscientiousness were more responsive to their child and that maternal conscientiousness was positively associated with child self-regulation skills. Therefore, it was
predicted that mothers who were high on agreeableness and conscientiousness (John & Srivastava, 1999; Lee & Ashton, 2004) would operate well in the mutual reciprocity domain. Additionally, it was predicted that mothers who are high in conscientiousness would operate effectively in both the group participation and guided learning domains, since conscientiousness would enable them to anticipate negative exposure and effectively respond when a teaching opportunity arises.

**The Present Research and Summary of Hypotheses**

The present research focused on how effective parenting behaviours in distinct domains predict adolescent reasons for behaving prosocially. This study additionally measured whether effective behaviour in one domain was associated with effective behaviours across other domains. Lastly, mother and adolescent personality were measured in an attempt to determine which specific adolescent and maternal personality variables correlated with effective behaviours in each domain.

Mothers completed online questionnaire measures assessing maternal behaviour in each of the five domains of socialization, and adolescents completed questionnaires assessing internalized reasoning. Additionally, the mother and adolescent each completed a personality questionnaire in order to explore the roles that adolescent personality and maternal personality play in relation to domains.

**Summary of hypotheses.** 1) Effective maternal behaviour in the control domain was expected be a negative predictor of internalization, as reflected in external reasons for prosocial behaviours. With respect to personality, this domain was expected to relate negatively to maternal agreeableness 2) Successful maternal behaviour in the protection domain was expected to predict adolescent internalized prosocial reasoning, thus greater internalization. With respect
to personality, adolescents who were high in neuroticism were expected to have mothers who operate well in this domain. 3) Effective maternal behaviour in the mutual reciprocity domain was anticipated to be a negative predictor of internalization, as reflected in external reasons for prosocial behaviours. With respect to personality, it was hypothesized that adolescent agreeableness would be associated with mothers’ effective behaviour in the mutual reciprocity domain. 4) Effective behaviour in the group participation domain was expected to predict external reasons for prosocial behaviours, thereby negatively contributing negatively to internalization. Additionally, mothers who were high in conscientiousness were expected to operate well in this domain. 5) Maternal endorsement of the guided learning domain was expected to predict adolescent internalization of prosocial values, as reflected in internal reasons for prosocial behaviours. With respect to personality, maternal conscientiousness and adolescent openness were expected to correlate positively with correct endorsement of the guided learning domain.

Methods

Participants

Participants were recruited from a database maintained at the Child Study Center. Participants listed in this database are from the University of Toronto Summer Day camp programs and have agreed to be contacted for research purposes.

The current sample consisted of 41 mothers and their 12 to 15 year old children. Mothers (M = 48 years, SD = 6 years, range = 31-65 years) were primarily from Western European cultural backgrounds (58%), the remainder were Eastern European (14%), East/Southeast Asian (11%), and other/mixed backgrounds (17%). All mothers had completed high school, 59% of mothers
had completed college or university and 40% had completed graduate school; the majority of mothers (75%) were employed. With regards to family composition, 74% of mothers were married, 14% reported that they were living with the biological father of the adolescent participating in the study, and 12% reported being single or divorced/separated. For adolescents (M=14 years, SD=.84 years, range=12-15 years, 58% female, 42% male), 75% reported having siblings. Data collection is still ongoing.

Procedure

Mother-adolescent dyads were contacted by telephone and given a description of the study. Mother-adolescent dyads that agreed to participate were e-mailed a consent form and a link to the online questionnaires. Mothers were asked to complete an online questionnaire package containing measures of demographics, parenting practices in the control, protection, mutual reciprocity, guided learning and group participation domain, and a self-report measure of personality. Adolescents were asked to complete an online questionnaire package containing self-report measures of reasons for engaging in prosocial behaviours, and personality. Adolescents were given a $20 gift card as compensation for their participation.

Domain measures. Mothers completed questionnaire measures pertaining to effective behaviours in each domain.

Control. Three of the 11 subscales of the Parenting Styles and Dimensions Questionnaire (Robinson, Mandleco, Olsen, & Hart, 1995) were used to measure mothers’ positive behaviour in the control domain. These scales are: Non-Reasoning/Punitive Strategies subscale (reverse-scored) the Directiveness subscale (reverse-scored), and the Democratic Participation subscale to represent authoritative parenting (Baumrind, 1971).
The Non-Reasoning/Punitive Strategies subscale is comprised of 6 items measuring if the parent engages in reasoning when disciplining (e.g., “I punish by taking privileges away from my child with little if any explanations”). The Directiveness subscale includes 4 items measuring the degree to which the parent directs the child’s behaviour (e.g., “I demand that my child do things”). Both the Non-Reasoning/Punitive Strategies and Directiveness subscales were reverse scored since the control domain involves reasoning and direction when disciplining. Lastly, the Democratic Participation subscale includes 5 items measuring the extent to which the parent involves the child (e.g., “I allow my child to give input into family rules”). The mean scores were calculated by averaging the ratings across all 15 questions in order to obtain a composite control score. The reliability and validity of the PSDQ and its subscales have been demonstrated in previous research (Robinson et al., 1996). Cronbach’s α coefficients for the current study were, .76 for the Non-Reasoning/Punitive subscale, .60 for the Directiveness subscale, and .70 for the Democratic subscale. The Cronbach’s α coefficient for the composite control score was .80. The complete scale can be found in Appendix A

Protection. Coping with Children’s Negative Emotions Scale (CCNES). Mothers completed a measure adapted by Remmes and Ehrenreich-May (2014) from Fabes, Eisenberg, & Bernzweig (1990). The CCNES measures mothers’ reports of how they react to their child’s distress. Mothers are asked how they would respond to 9 different scenarios in which youth experience negative emotion. For each situation, six possible responses to the situation are provided and mothers are asked to rate how likely they are to respond, on a six-point Likert scale (“1”= Very Unlikely to “7” = Likely). The measure yields six subscales (Punitive, Minimizing, Distress Responses, Expressive-Encouragement, Emotion-Focused and Problem-Focused), which provide an indication of how parents perceive their own responsiveness to their child’s
expressions of various types of negative affect (e.g., sadness, fear, etc.). Remmes and Ehrenreich-May (2014) reworded the items for a sample ages 12 to 18 years old. The reworded scale consists of 9 items that are more appropriate for adolescents. The complete scale can be found in Appendix B.

The adapted CCNES demonstrated good internal consistency. Cronbach’s α coefficients for the current study were, .78 for the Punitive subscale, .89 for the Minimization subscale, .91 for the Distress Reaction subscale, .83 for the Expressive Encouragement subscale, .52 for the Emotion-Focused subscale and .78 for the Problem-Focused subscale.

Previous researchers have calculated two aggregate subscales based on the supportive (expressive encouragement, emotion-focused, and problem-focused) and non-supportive responses (punitive, minimization and distress reaction) (Nelson, O’Brien, Blankson, Calkins, & Keane, 2009; Suveg, Shaffer, Morelen, & Thomassin, 2011). Similarly, for the present study an overall protection score was obtained by subtracting the total scores on the non-supportive responses from the total scores on supportive responses.

**Mutual reciprocity.** A new measure was devised to assess maternal behaviour in the mutual reciprocity domain. Mothers were presented with several statements such as, “My adolescent and I enjoy spending time with one another and doing things together” and asked to rate themselves on a scale from 1 (not at all like me) to 5 (very much like me). A complete list of the items is presented in Appendix C. The Cronbach’s α coefficient for the current study was .70.

**Group participation.** A new measure was developed to measure maternal behaviour in the Group Participation Domain. Mothers were presented with several statements assessing: management of the child’s social environment (e.g., “I monitor the television programs that my
adolescent watches, so that he/she doesn’t watch content that is inappropriate in my opinion”), fostering a sense of family identity (“in our family, all of us always celebrate family events”), whether the mother believes in modeling her behaviour (e.g., “I think it’s really important to set the right example for my child”), and engagement in family routines and rituals (e.g., “in our family we all have set roles when it comes to regular chores”). Mothers were asked to rate themselves on a scale from 1 (not at all like me) to 5 (very much like me). A complete list of the items is presented in Appendix D. The Cronbach’s α coefficient for the current study was .73.

Guided learning. A new questionnaire was devised to assess maternal behaviour in the Guided Learning Domain. Mothers were presented with statements regarding how much they engage in learning experiences with their child, such as “Before teaching my child something, I first try to understand what he/she already knows and understands,” and asked to rate themselves on a scale from 1 (not at all like me) to 5 (very much like me). A complete list of the items is presented in Appendix E. The Cronbach’s α coefficient for the current study was .83.

Personality measures. Mothers and adolescents completed the Big Five personality inventory BFI (John and Srivastava, 1999).

Mother personality. Mothers were presented with 44 statements about personality qualities and asked how closely each statement applied to themselves on a scale from 1 (strongly disagree) to 5 (strongly agree). Means were calculated for each personality factor to create five composite variables. The Cronbach’s α coefficients for the current study were, .89 for Extraversion, .75 for Agreeableness, .88 for Conscientiousness, .90 for Neuroticism, and .76 for Openness.

Adolescent Personality. Adolescents were presented with 44 statements about personality qualities and asked how closely each statement applied to themselves on a scale
from 1 (strong disagree) to 5 (strongly agree). Means were calculated for each personality factor to create five composite variables, Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness. The Cronbach’s α coefficients for the current study were, .83 for Extraversion, .87 for Agreeableness, .77 for Conscientiousness, .86 for Neuroticism, and .81 for Openness.

**Adolescent prosocial reasoning.** Ryan and Connell’s (1989) Prosocial Self-Regulation Questionnaire (PRQ-P) was used to measure adolescents’ prosocial motivation. Each item asks a question about possible reasons for prosocial behaviour, e.g., “Why would you keep a promise to friends?” After each question adolescents are provided with six reasons where 1 is “Not at all true” and 4 is “Very true”. The reasons are categorized into three different levels of behavioural regulation; External (following rules or avoiding punishment), with five items; Introjected (self and other approval or avoidance of disapproval), with 10 items, and Identified (personal importance, internally motivated), with five items. Mean scores for each type of regulation are obtained by averaging each type of reasoning across all items. The Cronbach’s α coefficients for the current study were, .72 for External regulation, .75 for Introjected Regulation and .92 for Identified Regulation.

As typically done by researchers using this type of measure (e.g., Grolnick & Ryan, 1989; Hardy et al., 2008) a relative autonomy (internalization) score was achieved by weighting the scores on all types of regulation and summing them; extrinsic (-2), introjected (-1) and identified (+2). This linear contrast allows researchers to measure external related reasoning (external and introjected) against identified reasoning, producing an overall internalization score. This overall internalization score reflects adolescents’ general preference for using internal reasons as opposed to external reasons. The PRQ-P is a well-validated and reliable scale and has been shown to predict empathy and moral reasoning. (Ryan & Connell, 1989).
Results

The results are presented in four sections. Following data screening, correlation and multiple linear regression analyses were performed to address the central question concerning whether certain parenting domains better predicted adolescent internalized reasoning. Next, we addressed questions regarding domain relations. Subsequently, hypotheses relating to adolescent and maternal personality were tested. Correlation analyses were performed to test whether certain mother and adolescent personality variables were associated with the domain in which the mother operated.

Descriptive Statistics

Prior to hypothesis testing, all variables were screened for normality. The means, standard deviations and ranges for all the variables in the study are presented in Table 1 (adolescent variables) and Table 2 (mother variables), below. None of the variables showed deviation from a normal distribution.
Table 1

_Descriptive Statistics: Adolescent Data_

<table>
<thead>
<tr>
<th>Adolescent Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative Autonomy (Internalization)</td>
<td>-.43</td>
<td>1.49</td>
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_N=41_
Table 2

*Descriptive Statistics: Mother Data*

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*N=41*
Predicting Adolescent’s Internalization

Correlations between mothers’ parenting scores in each domain, internalization, adolescent personality, and adolescent gender are displayed in Table 3, below. Maternal protection correlated positively with adolescent internalization ($r = .31, p = .04$). Adolescent internalization was marginally correlated with mutual reciprocity ($r = .27, p = .08$) and group participation ($r = .27, p = .08$). Adolescent agreeableness was the only personality variable significantly correlated with internalization. Therefore, adolescent agreeableness was used as a control variable in the analysis involving internalization as the outcome variable. Adolescent’s gender was not correlated with other study variables and thus not controlled for in subsequent statistical analyses.
### Table 3

*Correlations: Adolescent Personality, Maternal Domains, Gender and Internalization*

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<thead>
<tr>
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<th>1</th>
<th>2</th>
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<td>1.</td>
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<td>6.</td>
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<td></td>
<td></td>
<td></td>
<td>.29</td>
<td>.41**</td>
<td>-.50**</td>
<td>.27</td>
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<tr>
<td>9.</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.33*</td>
<td>-.36*</td>
<td>.23</td>
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<td>10.</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>-.17</td>
<td>.37*</td>
</tr>
<tr>
<td>11.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>12.</td>
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</table>
A multiple linear regression analysis was used to predict adolescent internalization by parenting behaviours in each domain. A summary of the regression analysis is presented in Table 4. Adolescent agreeableness was added as a control variable. Multiple linear regression allowed for analysis of the separate main effects of the five domains and agreeableness on adolescent internalization. The maternal domains and adolescent agreeableness were entered simultaneously in order to control for maternal performance across each domain. Results showed maternal mutual reciprocity, $\beta = .36, p = .05$, and maternal control, $\beta = -.50, p = .01$, were significant predictors of adolescents’ internalization. Additionally, adolescent agreeableness was a significant predictor of adolescent internalization, $\beta = .87, p < .02$. In line with our predictions, maternal control was a negative predictor of adolescent’s internalization. Contrary to our hypothesis, mutual reciprocity was a positive predictor of adolescent’s internalization. Furthermore, maternal protection was also a positive predictor, falling just short of statistical significance. The model accounted for 36% of the variance in adolescent internalization.
Table 4

**Summary of Multiple Regression Analysis for Predicting Adolescent Internalization**

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B</th>
<th>SE</th>
<th>B</th>
</tr>
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<td>.37*</td>
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<td>.79</td>
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<tr>
<td>Protection</td>
<td>.35</td>
<td>.19</td>
<td>.38^</td>
</tr>
<tr>
<td>Mutual Reciprocity</td>
<td>1.61</td>
<td>.79</td>
<td>.36*</td>
</tr>
<tr>
<td>Group Participation</td>
<td>-.33</td>
<td>.72</td>
<td>-.08</td>
</tr>
<tr>
<td>Guided Learning</td>
<td>-2.98</td>
<td>.57</td>
<td>-.09</td>
</tr>
</tbody>
</table>

*Note. R² = .36, ^p < 0.7, *p < 0.05*
Domain Relations

Additionally, Table 3 indicates that there was a modest degree of association between mothers’ scores in the various domains, with the exception of the control domain where there was no relation with guided learning or with group participation. Table 3 indicates that contrary to predictions, performance in the control domain correlated positively with protection ($r = .60, p = .00$) and in the mutual reciprocity domain ($r = .34, p = .02$). Performance in the protection domain correlated positively with that in the mutual reciprocity domain ($r = .38, p = .01$), in the group participation domain ($r = .35, p = .03$) and in the guided learning domain ($r = .50, p = .00$). Performance in the mutual reciprocity domain, correlated positively with that in the group participation domain ($r = .48, p = .00$) and in the guided learning domain ($r = .38, p = .01$). Lastly, table 3 indicates that group participation correlated positively with behaviours in the guided learning domain ($r = .44, p = .00$).

Predicting Maternal Domain Scores from Adolescent and Maternal Personality

Table 3 displays correlations between adolescent personality variables and maternal domain endorsement. Table 5 displays correlations between maternal personality variables and domain endorsement. The results are presented according to each domain below:

Control. Contrary to hypothesis, maternal agreeableness and maternal openness correlated positively with control ($r = .45, p = .00, r = .42, p = .01$, respectively). Adolescent agreeableness also correlated positively with maternal behaviour in the control domain ($r = .32, p = .04$).

Protection. Maternal conscientiousness ($r = .40, p = .01$), agreeableness ($r = .49, p = .00$) and openness ($r = .40, p = .01$) all correlated significantly with maternal behaviour in the
protection domain. Adolescent agreeableness ($r = .41, p = .01$) and adolescent extraversion ($r = .35, p = .02$) also correlated positively with maternal protection.

**Mutual reciprocity.** Contrary to our predictions, no personality variables correlated with maternal behaviour in the mutual reciprocity domain.

**Group participation.** In line with our predictions, maternal conscientiousness correlated positively with maternal behaviour in the group participation domain ($r = .40, p = .01$). Additionally, maternal extraversion also correlated with this domain ($r = .41, p = .01$). No adolescent personality variables contributed to maternal endorsement in this domain.

**Guided learning.** Maternal agreeableness correlated with maternal behaviour in the guided learning domain ($r = .38, p = .01$). With regards to adolescent personality, adolescent extraversion correlated positively with maternal behaviour in the guided learning domain ($r = .37, p = .02$).
Table 5

*Correlations: Maternal Domains and Maternal Personality*

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<th>Conscientiousness</th>
<th>Neuroticism</th>
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<th>Openness</th>
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<td>-.18</td>
<td>.45**</td>
<td>.42**</td>
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<td>Protection</td>
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<td>.39*</td>
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<td>.49**</td>
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<td>Group Participation</td>
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<td>-.27</td>
<td>.38*</td>
<td>.31*</td>
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</tbody>
</table>

*N=41  *p < 0.05, **p < 0.01*
Discussion

Using a Domains-of-Socialization framework, the present research focused on how distinct parenting behaviours predict the development of adolescents’ internalization of prosocial values. Despite the small sample size, the pattern of results offers interesting insights regarding associations between parenting domains and adolescent prosocial reasoning. We also examined the extent of the relation between parenting behaviour in different domains as well as the relation between maternal and adolescent personality and parenting behaviour in the different domains.

Domains of Socialization and Internalization

It was hypothesized that appropriate maternal behaviour in the protection and guided learning domains would be a positive predictor of internalization, whereas maternal behaviour in the control, mutual reciprocity, and group participation would be a negative predictor.

Control domain. When controlling for maternal behaviour across all domains, mothers’ behaviour in the control domain negatively predicted internalization, as reflected by the external reasons adolescents gave for why they would behave prosocially. This finding supported our hypothesis that the control domain promotes behaviour motivated by external reasons, which ultimately impedes the internalization process. Maternal control was assessed using a measure of authoritative parenting characterized by firm control, flexibility and reasoning (Baumrind, 1966). An authoritative parenting style has often been related to positive outcomes. For example, adolescents from authoritative homes have been shown to do better in school, engage in less delinquent behaviours, and generally report less psychological distress (Steinberg, Mounts, Lamborn, & Dornbusch, 1991). However, authoritative parenting is multifaceted, defined by several distinct factors such as: acceptance and involvement, firm control and autonomy (Steinberg et al., 1991). Previous research on authoritative parenting style has included
acceptance as a central feature when measuring authoritativeness (Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Steinberg, Elmen, & Mounts, 1989; Steinberg et al., 1991), whereas the measure employed in the current study focused on more controlling and compliant aspects of authoritative parenting. Therefore, this finding accords with research that children of controlling parents are less likely to internalize values, and more likely to focus on external rewards (Grolnick et al., 1997). It is also noteworthy that although an authoritative parenting style has been linked to internalization (Rudy & Grusec, 2001), it is frequently studied in relation to school outcomes (Gillet, Vallerand, & Lafrenière, 2012; Levin, Grolnick, Ryan, & Deci, 1991). However, previous (Deci and Ryan, 2012) and present research would suggest that beyond academia, successful socialization processes leading to value internalization are characterized by perspective-taking, encouragement, choice, and minimal use of behavioural control. It is possible that motivations surrounding school-related activities (such as homework) need to involve some form of control since these activities are less likely to be intrinsically motivated. However given the current findings, controlling parenting behaviours are unlikely to lead to internalization of prosocial values.

**Protection domain.** Our prediction that effective maternal behaviour in the protection domain would positively contribute to adolescent internalized reasoning and ultimately foster internalization of prosocial values was supported (falling just short of statistical significance). When controlling for maternal behaviours across all domains, effective maternal behaviours in the protection domain contributed positively to adolescent internalization. Responding appropriately to distress allows for proper emotional regulation skills to develop (Ainsworth et al., 2014). Subsequently, emotional self-regulation is associated with increased sympathy and perspective-taking skills, both of which have been linked to internalization of prosocial values.
Therefore, effectively addressing a child’s distress may be an important parenting skill, eventually leading to deeper internalization of values.

**Mutual reciprocity domain.** Contrary to predictions, after controlling for maternal behaviour across the other domains, effective behaviours in the mutual reciprocity domain predicted internalized reasons for prosocial behaviours. The finding is contradictory to our hypothesis that the exchange relationship involved in this domain would emphasize external reasons for prosocial behaviours. A possible explanation for the unexpected finding can be drawn from research on mother-child mutual responsive orientation, characterized by positive reciprocal interactions between the mother and the child (Kochanska & Murray, 2000). Kochanska and Murray (2000) demonstrate that a mutually responsive orientation predicts conscience development conceptualized as the child’s internalization of maternal rules and values. The finding that mutual responsiveness predicts the child’s willingness to accept parental norms and values (internalization) indicates that mothers’ appropriate behaviours in the mutual reciprocity domain are, in fact, antecedents of internalization.

**Guided learning domain.** Contrary to our predictions, after controlling for maternal behaviour across the other domains, effective behaviours in the guided learning domain did not predict internalized reasoning. Research has found that maternal warmth contributes to the interaction between the mother and the child, playing an important role in children’s development of social and emotional outcomes (Denham, Renwick, & Holt, 1991; Maccoby & Martin, 1983). Although teaching in the guided learning domain is characterized as autonomy supportive and conducive to the child’s developmental age, research has shown that parental warmth moderates the impact of the lesson being taught to the child (Grusec, 2011). Ultimately, mothers’ socialization efforts are made more or less effective by maternal warmth. Therefore, it
is possible that maternal warmth affects the adolescents’ willingness to internalize the parental lessons. Since the current study did not include a measure of warmth, it is possible that moderating variables, such as warmth, alter how the adolescent internalizes the prosocial values learned in this domain.

**Adolescent agreeableness.** It is interesting to note that adolescent agreeableness was associated with internalization (see Table 3). Similarly, Ingledew, Markland and Sheppard (2004), in their study on personality and self-determination, found agreeableness to be related to internalization. Furthermore, research on moral development found that agreeableness predicted moral motivations and moral actions (Malti & Buchmann, 2010; Matsuba & Walker, 2004). The current finding suggests that beyond parenting, other individual factors (i.e., personality) can contribute to internalization.

**Domain Relations**

Although largely exploratory, we predicted that maternal behaviours in certain domains, namely protection and guided learning would correlate positively. On the other hand, behaviours in the control, mutual reciprocity and group participation domains were predicted to correlate positively, but negatively with protection and guided learning. Findings revealed, however, that successful parenting behaviours were generally correlated positively across domains. It is important to note, that although there were associations between each domain, the moderate correlations (see Table 3) suggest that effective behaviours in each domain are somewhat distinct. Furthermore, effective behaviours in each domain differentially predicted internalization, highlighting the notion that parenting in the different domains is distinct.

**Personality**
Adolescent personality. Adolescent agreeableness was positively correlated with maternal behaviours in the control and protection domains. Agreeableness is characterized by cooperation (Costa Jr & McCrae, 1992) making it likely that agreeable adolescents are willing to cooperate in situations where behaviour needs to be altered. Agreeableness has also been liked to sensitivity (Olsen, Martin, & Halverson, 1999), so it is possible that mothers of sensitive adolescents are prone to protect in an emotionally sensitive way.

Adolescent extraversion was another personality variable that correlated with effective maternal behaviours, this time in the protection and guided learning domains. Extraversion has been associated with sensitivity and assertiveness (John & Srivastava, 1999). As mentioned previously, sensitive adolescents may elicit protecting behaviours from their mothers producing. Over time, mothers gain more practice becoming more proficient at sensitive and effective protecting skills. With regards to adolescent extraversion and maternal behaviours in the guided learning domain, it is possible that adolescents who are more assertive actively elicit positive teaching interactions and mothers have the opportunity to build proper teaching skills.

Mother personality. Maternal agreeableness correlated with behaviours in the control, protection and guided learning domains. Since agreeable parents have been found to show higher degrees of sensitivity when addressing issues with their children (Belsky, Crnic, & Woodworth, 1995), it is possible that agreeable mothers are able to correctly address situations where they need to control their adolescents’ behaviour. As noted above, sensitivity is also an important feature of the protection domain. With regards to maternal agreeableness and behaviours in the guided learning domain, Belsky et al (1996) found that agreeable parents interact with their child in ways that are cognitively stimulating, thus it seems reasonable that
agreeableness correlated with guided learning since cognitive stimulation and sensitivity are both central components of this domain.

Maternal openness also correlated with behaviours in the control and protection domains. Open parents are more likely to carefully consider their own child rearing values, which can contribute to properly recognizing the child needs (Metsäpelto & Pulkkinen, 2003). It may be possible that recognizing a child’s needs aids in promoting effective ways of controlling their behaviour. Also, openness has been associated with parental nurturance (Metsäpelto & Pulkkinen, 2003), which can explain its relation to effective behaviours in the protection domain.

Lastly, conscientiousness correlated with effective maternal behaviours in the protection and group participation domains. Clark et al (2000) found that conscientious mothers were more responsive to the needs of their children. Accordingly, responsiveness is central to properly addressing adolescents’ distress, so conscientious mothers are more likely to operate well in the protection domain. With respect to group participation, conscientious mothers may be able to accurately identify environments that they want their child exposed to or removed from. Furthermore, since conscientiousness is associated with order and organization (Costa Jr & McCrae, 1992) it may be possible that it is related to adherence to routines and rituals, which are central to the group participation domain.

**Limitations**

One significant limitation of the present research is the small sample size. Only 41 mother-adolescent dyads have participated in the study thus far. Due to this small sample size caution is required when drawing conclusions. Another limitation is the biased sample, the majority of adolescents were from well-educated, intact families, thus the findings of the present research cannot be assumed to generalize beyond this specific population.
Beyond the sample-based limitations, there are also limitations in the design of the study. As mentioned above, some measures were designed specifically for measuring the domains-of-socialization (Grusec & Davidov, 2010). Since these measures are newly developed for the purpose of measuring domains, they are not yet validated, furthermore, mothers are not the sole agents of socialization. The socialization process is complex, and can involve other adults, teachers, peers, siblings, the media, etc, all of which may contribute to the internalization of prosocial values. Further research is required to examine if father behaviours in each domain affect adolescent internalization. Lastly, the present research is merely correlational, thus causal influences are not warranted.

**Future Directions**

Despite these limitations, findings from the present study have important research and potential practice for parenting and internalization. The finding that the control domain inhibits internalization is one that should be further investigated in order to elucidate which processes of control are effective in the socialization process. In a study looking at the relation between domain behaviours and value acquisition, Vinik (2014) measured internalization according to the level of processing within an autobiographical narrative. She similarly found that narratives in the control domain were associated with external motivations for learning values, indicating low levels of internalization. Although the current study did not measure internalization using narratives, the present findings also suggest that if the parental goal includes value internalization, the control domain is least successful. The results of the present study reveal that if parental goals do include internalization, it may be beneficial for the parent to comply with reasonable requests and address distress appropriately.

**Conclusions**
The associations found between maternal behaviour and adolescent internalization is largely consistent with previous studies showing that internalization of values is associated with autonomy supportive parenting and appropriate emotional reactions to distress (Hardy et al., 2008). However, this study represented the first time that research was conducted specifically examining the relation between maternal behaviour in distinct domains and adolescent internalization. Given the small sample size, the initial significant findings suggest that studying parenting domains shows promise and merits further consideration.
References


Appendix A: Control Domain Measure

Below are sentences describing a wide range of child-rearing attitudes and behaviours. Please read each sentence and indicate how much it is descriptive of you in your parenting of your child who is participating in this study, by circling the suitable number between 1 (=not at all descriptive of me) to 5 (= extremely descriptive of me).

If you have other children, please refer specifically to your child who is participating in the study.

Democratic Participation:
1) I take into account my child’s preferences in making family plans
2) I allow my child to give input into family rules
3) I take my child’s desires into account before asking my child to do something
4) I encourage my child to freely express him/herself even when disagreeing with parents
5) I channel my child’s misbehavior into a more acceptable activity

Non-Reasoning, Punitive Strategies:
1) I punish by taking privileges away from my child with little if any explanation
2) I punish by putting my child off somewhere alone with little if any explanation
3) I use threats as punishment with little or no justification
4) When two children are fighting, I discipline first and ask questions later
5) I appear to be more concerned with my own feelings than with my child’s feelings
6) When my child ask why he/she has to conform, I state: because I said so, or I am your parenting and I want you to

Directiveness:
1) I tell my child what to do
2) I demand that my child does/do things
3) I scold and criticize to make my child improve
4) I scold or criticize when my child’s behavior doesn’t meet our expectations
Appendix B: Coping with Children’s Negative Emotion Scale

Instructions: In the following items, please indicate on a scale from 1 (very unlikely) to 7 (very likely) the likelihood that you would respond in the ways listed for each item. Please read each item carefully and respond as honestly and sincerely as you can. For each response, please circle a number from 1-7.

<table>
<thead>
<tr>
<th>Response Scale:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very Unlikely</td>
<td>Medium</td>
<td>Very Likely</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. When I see my teenager becoming angry at a close friend, I usually:
   a. become uncomfortable and uneasy in dealing with his/her anger  
   b. encourage him/her to express his/her anger  
   c. talk to him/her to calm him/her down  
   d. tell him/her not to make such a big deal out of it  
   e. get angry at him/her for losing his/her temper  
   f. help him/her think of things to do to solve the problem

2. When my teenager gets down because he/she has had a bad day, I usually:
   a. tell him/her that he/she really has nothing to be sad about  
   b. try to get him/her to think of good things that happened  
   c. listen to him/her talk about his/her feelings  
   d. become obviously uncomfortable when I see he/she is feeling down  
   e. help him/her think of things to do to get his/her problem solved  
   f. tell him/her to straighten up and stop sulking around the house

3. When my teenager gets anxious about performing in a recital or a sporting event, I usually:
   a. help him/her think of things to do to make sure he/she does his/her best  
   b. yell at him/her for becoming so anxious  
   c. try to calm him/her down by helping him/her take his/her mind off things  
   d. tell him/her not to make such a big deal out of it  
   e. encourage him/her to talk about what is making him/her so anxious  
   f. get anxious about dealing with his/her nervousness
<table>
<thead>
<tr>
<th>Response Scale:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</tbody>
</table>

### 4. When my teenager gets angry because he/she can’t get something that he/she really wants, I usually:

a. try to make him/her feel better by making him/her laugh 1 2 3 4 5 6 7
b. help him/her think of other ways to go about getting what he/she wants 1 2 3 4 5 6 7
c. get upset with him/her for becoming so angry 1 2 3 4 5 6 7
d. become uncomfortable and don’t want to deal with him/her 1 2 3 4 5 6 7
e. tell him/her he/she is being silly for getting so angry 1 2 3 4 5 6 7
f. encourage him/her to talk about his/her angry feelings 1 2 3 4 5 6 7

### 5. When my teenager gets sad because he/she has had his/her feelings hurt by a friend, I usually:

a. get nervous dealing with his/her sad feelings 1 2 3 4 5 6 7
b. encourage my teenager to talk about what is bothering him/her 1 2 3 4 5 6 7
c. try to cheer him/her up 1 2 3 4 5 6 7
d. tell him/her that things aren’t as bad as they seem 1 2 3 4 5 6 7
e. get angry at him/her for not being more in control of things 1 2 3 4 5 6 7
f. help him/her think of ways to help make the problem better 1 2 3 4 5 6 7

### 6. When I see my teenager become anxious about something at school, I usually:

a. tell him/her that he/she is making too big a deal out of it 1 2 3 4 5 6 7
b. become nervous and uneasy in dealing with his/her anxiety 1 2 3 4 5 6 7
c. get angry at him/her for not dealing with things better 1 2 3 4 5 6 7
d. encourage him/her to talk about what is making him/her nervous 1 2 3 4 5 6 7
e. help him/her think of things to do to solve the problem 1 2 3 4 5 6 7
f. help comfort and soothe his/her anxious feelings 1 2 3 4 5 6 7
7. When my teenager gets angry at a family member, I usually:
   a. try to help them resolve the conflict 1 2 3 4 5 6 7
   b. threaten to punish him/her 1 2 3 4 5 6 7
   c. tell him/her he/she is over-reacting 1 2 3 4 5 6 7
   d. try to help him/her calm down 1 2 3 4 5 6 7
   e. encourage him/her to let his/her angry feelings out 1 2 3 4 5 6 7
   f. become very uneasy and avoid dealing with him/her 1 2 3 4 5 6 7

8. When my teenager gets upset because he/she misses someone he/she cares about, I usually:
   a. become nervous dealing with him/her and his/her feelings 1 2 3 4 5 6 7
   b. encourage him/her to talk about his/her feelings for this person 1 2 3 4 5 6 7
   c. try to get him/her to think of other things 1 2 3 4 5 6 7
   d. tell him/her he/she has nothing to be upset about 1 2 3 4 5 6 7
   e. get upset with him/her for not being in control of his/her feelings 1 2 3 4 5 6 7
   f. help him/her think of ways to get in touch with the person he/she misses 1 2 3 4 5 6 7

9. When my teenager becomes nervous about some social situation that he/she has to face (such as a date or a party), I usually:
   a. try to calm him/her down by pointing out how much fun he/she will have 1 2 3 4 5 6 7
   b. give him/her advice about what to do in the social situation 1 2 3 4 5 6 7
   c. get angry at him/her for being so emotional 1 2 3 4 5 6 7
   d. prefer not to deal with his/her nervousness 1 2 3 4 5 6 7
   e. encourage him/her to express his/her feelings 1 2 3 4 5 6 7
   f. tell him/her he/she is making a big deal about nothing 1 2 3 4 5 6 7
Appendix C: Mutual Reciprocity Domain Measure

Instructions for the questionnaire:

Below are sentences describing a wide range of child-rearing attitudes and behaviours. Please read each sentence and indicate how much it is descriptive of you in your parenting of your child who is participating in this study, by circling the suitable number between 1 (=not at all descriptive of me) to 5 (= extremely descriptive of me).
If you have other children, please refer specifically to your child who is participating in the study.

The rating scale:

| How descriptive is each sentence of you in your parenting of your child? | How descriptive of me: |
|---|---|---|---|---|
| | Not at all | A little | Moderately | Very | Extremely |
| 1 | Item text | 1 | 2 | 3 | 4 | 5 |

Mutual Reciprocity:

1) My child and I enjoy spending time with one another and doing things together.
2) It's hard for me to find interest or enjoyment in spending time together with my child. [R]
3) I frequently laugh, play and have fun with my child.
4) My child and I have a mutual hobby that we do together, like friends (for example, movies, hiking, sports, etc.).
5) My child and I have many things that we particularly enjoy doing together (for example, watching TV, cooking, sports, computers, etc.).
6) I take into account my child's preferences in making family plans.
7) I ask my child for his/her opinion regarding various family decisions, and take that into account.

8) When my child approaches me with a request, I try to make time for it even if I'm busy.

9) When my child approaches me with a reasonable request, I try to comply with it even if it requires a good deal of effort on my behalf.

10) My child has many good and useful ideas about how to do things (tasks, activities) and I therefore like to ask for his/her opinion.
Appendix D: Group Participation Domain Measure

Instructions for the questionnaire:

Below are sentences describing a wide range of child-rearing attitudes and behaviours. Please read each sentence and indicate how much it is descriptive of you in your parenting of your child who is participating in this study, by circling the suitable number between 1 (=not at all descriptive of me) to 5 (= extremely descriptive of me).

If you have other children, please refer specifically to your child who is participating in the study.

The rating scale:

<table>
<thead>
<tr>
<th>How descriptive is each sentence of you in your parenting of your child?</th>
<th>How descriptive of me:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
</tr>
<tr>
<td>1</td>
<td>Item text</td>
</tr>
</tbody>
</table>

1) I monitor the television programs that my child watches, so that he/she doesn't watch content that is inappropriate in my opinion.

2) I try to prevent my child from spending time with children whose behaviour is problematic in my opinion.

3) Before choosing our place of residence, I gave a great deal of thought to the social and educational environment that my child will be exposed to.

4) In our family we have many joint activities in which we all do something together (e.g., a trip, game, family outing, etc.).
6) In our family, all of us always celebrate family events, holidays, etc. together.

7) In our family it’s important we all get together on special occasions.

8) Our family is very united and we like doing many things together.

9) I think it’s really important to set the right example for my child.

10) I try to act and speak in a way that I want my child to act and speak.

11) I think it’s important in child rearing for one to always practice what one preaches.

12) In our family, we feel that is important that we eat dinner together.

13) In our family everyone has specific chores to do around the house.

14) Our family has traditions and customs.
Appendix E: Guided Learning Domain Measure

Instructions for the questionnaire:

Below are sentences describing a wide range of child-rearing attitudes and behaviours. Please read each sentence and indicate how much it is descriptive of you in your parenting of your child who is participating in this study, by circling the suitable number between 1 (=not at all descriptive of me) to 5 (= extremely descriptive of me).

If you have other children, please refer specifically to your child who is participating in the study.

The rating scale:

| How descriptive is each sentence of you in your parenting of your child? | How descriptive of me: |
|---|---|---|---|---|---|
| | Not at all | A little | Moderately | Very | Extremely |
| 1 | Item text | 1 | 2 | 3 | 4 | 5 |

1) I prefer doing things for my adolescent or in his/her place (tasks, errands, etc.), because it's simpler and more efficient than teaching him/her to do them by himself/herself. [R]

2) Before teaching my adolescent something, I first try to understand what he/she already knows and understands about the topic.

3) When my adolescent faces a big and complicated task, I teach him/her how to break it down into a number of smaller tasks, so that he/she could handle it better.

4) If I notice my adolescent is having trouble studying for a test/writing a paper, I guide him/her to think about ways that would help him/her cope (e.g., how to organize the materials, manage his time, etc.).
5) When I am having a conversation with my child I ask questions in order to make sure that we understand each other.