

Explorations into Adolescents' Perceived Maturity with Parents and Peers

by

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Abstract

Many social relationships have the potential to influence perceived maturity. Previous research has not examined the possibility of distinct perceptions emerging from different relationships. This initial investigation focuses on parents and peers as the two groups with which social perceptions of maturity might vary. This investigation also addresses potential changes in perceived maturity over time, and its association with chronological age and gender of the adolescent. Additionally, Moffitt's (1993) developmental taxonomy and an alternative model for adolescents' association with deviant peers are tested. Three hundred and twenty six adolescents (129 boys, 197 girls) from a high school in a large urban city in western Canada participated in this study. Students ranged from 12 to 17 years of age and were in grades 8 through 11 at the first wave of data collection. Two waves of data, one year apart, were used.

Analyses found support for a differentiation between perceived maturity with parents and peers for about 40% of participants. Changes in perceived maturity over a one-year period were also found for parents (53%) and for peers (52%). Results indicated that there was no statistically significant relationship between chronological age or gender of the adolescent and perceived maturity. Neither Moffitt's (1993) model nor the alternative model was supported. Implications for the differences in perceived maturity between parents and peers as well as changes in perceived maturity are discussed.

Preface

The protocol for this study was reviewed and found acceptable by The University of British Columbia Behavioural Research Ethics Board (certificate number: B04-0500).

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Dedication

To my family

Introduction

Traditionally, research has assessed global perceptions of adolescents' maturity (Barker & Galambos, 2005; Coleman & Hendry, 1990; Galambos, Barker, & Tilton-Weaver, 2003; Galambos, Kolaric, Sears, & Maggs, 1999; Galambos & Tilton-Weaver, 2000; Hurrelmann & Engel, 1989; Tilton-Weaver, Kakihara, Marshall, & Galambos, 2010; Peterson, 1996). Although this is a valuable way of exploring how adolescents see themselves, it could mask differences in perceived maturity with different social relationships. This investigation examines adolescents' perceptions of maturity with two important social relationships: parents and peers.

Research has demonstrated that, during adolescence, the roles of family and friends change (Arnett, 2007; Berndt, 1996; Bukowski, Newcomb, & Hartup, 1996; Fergusson, Vitaro, Wanner, & Brendgen, 2007; Gifford-Smith, Dodge, Dishion, & McCord, 2005; Sumter, Bokhorst, Steinberg, & Westenberg, 2009). As children transition into adolescence, they demonstrate more independence from their parents and their peer relationships gain importance. These changes in adolescents' important relationships may influence adolescents' perceptions of maturity with their parents and peers. This study will examine if there are differences in adolescents' maturity perceptions with parents and peers, as well as changes in perceptions of maturity over time. The hypothesized link between perceived maturity and association with deviant peers will also be tested. This will further overall understanding of adolescent maturity by exploring the possibility of simultaneously maintaining different perceptions of maturity with different social groups and the behaviour associated with perceived maturity.

The present investigation draws on a multidimensional model of perceived maturity categories, developed by Tilton-Weaver, et al. (2010). Their model is built on previous research

and theoretical conceptualizations of maturity, to create perceived maturity categories (Caspi & Moffitt, 1995; Galambos, Barker, & Tilton-Weaver, 2003; Galambos & Tilton-Weaver, 2000; Greenberger & Steinberg, 1986; Moffitt, 1993; Tilton-Weaver, Galambos, & Vitunski, 2001; Tilton-Weaver et al., 2010). However, these categories have been used in reference to global perceptions of maturity. This study will build on Tilton-Weaver and colleagues' (2010) model by assessing perceived maturity with regards to adolescents' relationships with their parents and peers. This is a unique contribution to the research in that it utilizes these two social relationships to explore potential differences in perceived maturity.

Perceived Maturity Categories

The perceived maturity categories proposed by Tilton-Weaver et al. (2010) are based on the disparity or lack of disparity between perceived and desired maturity treatment. Three categories have been proposed: maturity gap, maturity overfit, and maturity fit. These categories are summarized in Table 1. This study will extend these categorizations by investigating them separately in terms of adolescents' perceptions with parents and peers.

Table 1

Conceptual guide to types of perceived maturity

Types of fit	Description
<i>Maturity gap</i>	Desired maturity treatment is greater than perceived maturity treatment
<i>Maturity overfit</i>	Desired maturity treatment is less than perceived maturity treatment
<i>Maturity fit</i>	Match between perceived and desired maturity treatment

Adapted from Tilton-Weaver, Kakihara, Marshall, and Galambos, 2010.

Maturity gap.

The maturity gap group in Tilton-Weaver and colleagues' (2010) categories is founded on Moffitt's (1993) developmental taxonomy. Moffitt conceptualized the maturity gap as a mismatch where adolescents desire to be treated more maturely than they feel they are currently being treated. She hypothesized that experiencing the maturity gap was driving adolescents to associate with deviant peers in order to engage in deviant behaviour. Moffitt's explanation of the occurrence of a maturity gap in adolescence is that in modern, western society, adolescents physically mature into adults well before society grants them the rights and privileges of adulthood. Adolescents are thought to yearn for these privileges, which creates a disparity between desired treatment and perceived treatment. In order to resolve this disparity, adolescents engage in deviant behaviour to attain the perception of maturity. Tilton-Weaver and colleagues (2010) included the maturity gap as a type of perceived maturity in their typology but, unlike Moffitt, they also included additional ways in which adolescents might perceive their maturity, namely maturity overfit and maturity fit.

Maturity overfit.

The perceived maturity category termed 'maturity overfit' represents a group of adolescents who may feel as though they are being treated *more maturely* than they desire to be treated. This maturity overfit group is an important group to identify as their situation differs greatly from Moffitt's (1993) maturity gap adolescents, and very little research has been done to investigate their experiences. This group is also unique in that no one has identified how these adolescents respond to being treated more maturely than they desire to be treated and whether they are able to change this disparity over time. These adolescents might shift their expectations of treatment over time or the situation might change.

While there is no theoretical explanation that specifically addresses the maturity overfit group, there could be multiple reasons for adolescents to feel as though they are being treated more maturely than they desire to be treated. They may feel less mature than their peers and, in comparison, feel as though they are being treated more maturely than they desire to be treated. They may also feel as though they are being treated more maturely than is age appropriate and therefore desire to be treated less maturely. This could come from taking on adult-like roles and responsibilities that adolescents feel are not age appropriate. Adolescents who have had to take on the responsibilities of a parent may feel as though they are treated more maturely than they would like to be treated. For example, when there are problems in the home, the child may switch roles with the parent, where the child assumes executive responsibilities in the family such as managing the household and caring for siblings. Minuchin (1974) refers to these children as “parental children”, and there are potential detrimental effects for taking on this role. Boszormenyi-Nagy and his colleagues (Boszormenyi-Nagy & Krasner, 1986; Boszormenyi-Nagy & Sparks, 1973) refer to a similar idea and termed this “parentification”. They observed that, in addition to physical care, children can also emotionally take care of family members. They may provide support for a depressed parent or serve to mediate conflicts in the family. The parentified role is considered problematic if the child is fulfilling this role without reciprocity or support within the family. If this behaviour is prolonged, it can impair the social and emotional development of the adolescent (Jurkovic, 1997).

Another possible explanation for the occurrence of a maturity overfit could be early physical maturation among girls. The physical changes that girls undergo during puberty may garner girls more sexually mature attention than they feel prepared for (Moffitt & Caspi, 2001). Girls’ physically developed bodies might contribute to them feeling and being treated older than

they desire. Research has suggested that pubertal timing, early or late, has a greater influence on emotional and behavioural problems among girls than the occurrence of puberty itself (Buchanan, Eccles, & Becker, 1992). For example, Caspi and colleagues (1993) argue that "others attribute greater social maturity to [early physically maturing girls] than is warranted by their chronological age." (p.30) Additional research has reported similar findings that when girls physically mature earlier than their peers, they are more vulnerable to peer and sexual pressure exerted by older males in their circle of friends (Simmons & Blyth, 1987).

Where girls' early pubertal development may be associated with negative attention, boys' pubertal growth and weight gain are desirable as it represents the hypermasculine, hypermuscular male body ideal of the mature adolescent (Labre, 2002). Boys tend to report that they are more satisfied with their development than girls (e.g., Richards, Boxer, Petersen, & Albrecht, 1990). However, both boys and girls experiencing early physical maturation are vulnerable to being treated more maturely than they might desire.

Maturity fit.

The maturity fit group is a diverse group as it includes all adolescents who are experiencing no disparity between how they want to be treated and how they feel they are being treated. This group includes adolescents who feel as though they should be treated very maturely and perceive that they are being treated very maturely. It also includes those who perceive being treated immaturely but have low desires to be treated maturely. As long as the adolescents' desires are being met by their perceived treatment, they are considered to be part of the maturity fit group (Tilton-Weaver et al., 2010).

Moffitt's (1993) taxonomy made some predictions about why adolescents may not experience a maturity mismatch. This could be because of a late onset of puberty or no strong

desire for autonomy or independence from family. Other individual characteristics could also exclude the adolescent from interacting with a variety of peer groups. Additionally, adolescents might have access to roles respected by adults, which Moffitt argues precludes adolescents from experiencing the maturity gap.

Differences in Perceived Maturity Representations with Parents and Peers

Tilton-Weaver and colleagues (2010) advanced research in perceived maturity by defining the three maturity groups and the unique characteristics of each group. The current investigation will expand on their work by examining all three perceived maturity categories, focusing on the relationship with parents and with peers. Exploring perceived maturity with different social relationships is important, as it will provide a foundation for whether perceived maturity should be thought of as a global perception or related to particular relationships.

There are many aspects of interpersonal relationships that have the potential to influence perceived maturity. In this initial investigation, I focus on parents and peers as these two groups have been identified as generally the most important social relationships during adolescence (Berndt, 1982; Hirsh & Dubois, 1991; Savin-Williams & Berndt, 1990; Steinberg, 1990; Steinberg, 2001; Sullivan, 1953). Previous research on perceived maturity has not examined the possibility of distinct perceptions emerging from different relationships. Most research has focused on general perceptions of parental treatment, since parents are usually the ones who can grant the rights and privileges of adulthood (Galambos & Tilton-Weaver, 2000; Tilton-Weaver et al., 2010). For example, Tilton-Weaver and colleagues' (2010) research only examined parenting and differences in parenting associated with general perceived maturity categories. Similarly, Moffitt (1993) does not specify when she defines the maturity gap whether the

disparity is in relation to treatment by parents, peers, or other social groups (Caspi & Moffitt, 1995; Moffitt 1993; 1994; 1997; Moffitt et al., 2001).

Addressing perceived maturity with parents and peers enables an examination of different social groups, as these two groups start to take on different roles during adolescence (Berndt, 1979). One can imagine that adolescents may feel as though they should be treated one way by parents and a different way by peers. Their perceptions of their treatment may also differ with peers and parents. These concepts need to be explored to determine whether or not there is congruency between these two social groups.

Patterns of Change Over Time

Investigating different social groups is an important initial step in the investigation of perceived maturity. Another aspect that has been underdeveloped is how perceived maturity might change over time. Moffitt (1993) argues that as adolescents transition to adulthood they will resolve their maturity gap. Her developmental taxonomy is the only theory to date that makes predictions with regards to the patterns of change in perceived maturity over time. Unfortunately, Moffitt's hypothesis is limited in that it only focuses on the maturity gap group. She proposes that adolescents who are experiencing a maturity gap will resolve this gap by seeking out deviant peers and mimicking their behaviour as a way of demonstrating autonomy and maturity. Engaging in deviant behaviours with peers is thought to be the adolescents' way of experiencing the rights and privileges of adulthood they feel they are being denied. Once the desired maturity representation is attained, these deviant behaviours decrease, explaining the spike and subsequent drop in deviant behaviour during middle to late adolescence and young adulthood (Moffitt, 1993). This theory matches reported deviancy trends in adolescence, but no

one has empirically tested whether adolescents transition out of a perceived maturity gap or simply desist their engagement in deviant behaviour.

While Moffitt's (1993) developmental taxonomy addresses the maturity gap, there is no theory that addresses the maturity overfit or maturity fit groups. It is unclear as to how maturity overfit adolescents resolve the discrepancy they feel. The mobility of maturity fit adolescents is also questionable. In the maturity fit situation, the adolescents' perceived and desired treatments are the same, but how stable is this state of being? Changes in this group are unpredictable as the stability of desired treatment and perceived treatment are unknown. This study will explore all three groups and investigate if there are changes in perceived maturity categories with parents and peers over a one-year time period.

Chronological Age

In addition to considering changes in maturity perceptions over time, the relationship between chronological age and maturity perceptions will be assessed. Subjective age research has emphasized the role of chronological age in perceptions of maturity (Barnes-Farrell & Piotrowski, 1989; Baum & Boxley, 1983; Galambos, Kolaric, Sears, & Maggs, 1999; Galambos, Turner, & Tilton-Weaver, 2005; Heckhausen, 1997; Hubley & Hultsch, 1994; Markides & Boldt, 1983; Montepare, 1996; Montepare & Clements, 2001). People often have an idea of what kind of maturity should be attributed to different chronological ages. Research has reported that adolescents (ages 9 to 17) typically feel older than their chronological age (Galambos, Kolaric, Sears, & Maggs, 1999). Changes in perceptions occur at about age 25.5 (Galambos, Turner, & Tilton-Weaver, 2005) so that adults age 30 and older often describe themselves as feeling younger or the same as their actual age (Barnes-Farrell & Piotrowski, 1989; Baum & Boxley, 1983; Heckhausen, 1997; Hubley & Hultsch, 1994; Montepare, 1996). These age-related social

conceptions of maturity may or may not be related to perceived maturity, which focuses on individuals' desired and perceived maturity treatment. Chronological age is also linked to many adult privileges in society. As adolescents age into more social responsibilities, their maturity perceptions in society might also change. Moffitt (1993) suggests that adolescents who have access to adult privileges do not experience the maturity gap. It is possible that access to new privileges at specific ages might change maturity perceptions. This could contribute to a relationship between age and perceived maturity. To examine this relationship, I will test whether there are significant age differences between the three perceived maturity groups with respect to parents and peers.

Gender

The relationship between gender and perceived maturity is another aspect that needs further examination. Moffitt (1993) states that there should be no gender differences between boys and girls in terms of experiencing a maturity gap. However, the majority of the research has focused on the maturity gap group and problematic behaviour among boys (see Moffitt, Caspi, Rutter, & Silva, 2001), prompting some researchers to question whether or not girls fit into the taxonomy or require a separate theory to represent their experiences (Silverthorn & Frick, 1999). In describing her taxonomy, Moffitt (1993) cautions that girls may not have access to antisocial peers to use as role models, and that girls are more physically vulnerable than boys to personal victimization (e.g., pregnancy, or injury from dating violence) if they affiliate with antisocial male peers. This may or may not influence how girls perceive their experiences of maturity with parents and peers.

A study focusing on maturity gap and gender found that girls and boys are nearly equivalent in rates of perceived maturity gap (Caspi, Lynam, Moffitt, & Silva, 1993). These

findings indicate that Moffitt's taxonomy may be incorrect and girls are finding other ways to model antisocial behaviour, as their rates of maturity gap are still quite high when compared to males. Using the Dunedin sample, Moffitt and colleagues (2001) found that the sex ratio among male and female adolescents reporting a maturity gap was 1.5:1 and in another sample of 1,000 youth, researchers found a 2:1 ratio of male and female adolescents (Fergusson, Horwood, & Nagin, 2000). Kratzer and Hodgins (1999) studied a Swedish sample of 13,000 youth and found a 4:1 ratio of reported maturity gap with male and female adolescents. With the ratio of male to female adolescents reporting a maturity gap varying among studies, it seems appropriate to address gender differences among the perceived maturity groups. The present study will explore potential gender differences in maturity gap and the other perceived maturity categories with parents and peers.

Perceived Maturity and Adolescents' Association with Deviant Peers

Moffitt's (1993) model.

In addition to examining aspects of perceived maturity, this study will also address the hypothesis that perceived maturity can lead to association with deviant peers. Moffitt (1993) predicted that when adolescents are not granted the privileges of adulthood that they desire, they seek out and mimic deviant peers. These activities symbolize maturity among peers and separation from their childhood persona. Implicit in Moffitt's model is the idea that parents and other adults are withholding the rights and privileges of adulthood, and it is this perceived treatment by parents that contributes to the maturity gap. To deconstruct Moffitt's hypothesis, this study will be focusing on the argument that experiencing a maturity gap with parents leads to association with deviant peers. Since Moffitt's hypothesis is predicated on the idea of parents

withholding the rights and privileges of adulthood, only perceived maturity with parents will be used to test this model.

Two studies to date have attempted to test Moffitt's (1993) hypothesis. Felson and Haynie (2002) claim to have tested the maturity gap, but they only used adolescent employment as an indicator of being treated maturely. Adolescent employment is a behaviour, not a perception. Moffitt's (1993) hypothesis is concerned with adolescents' perceptions of a gap between how they want to be treated and how they think they are being treated. Further, employment experiences are frequently negative (e.g., Dupré, Inness, Connelly, Barling & Hopton, 2006; Keashly, Trott, & MacLean, 1994); such treatment may not contribute to adolescents' perceptions that they are being treated maturely. A second study, conducted by Piquero and Brezina (2001), assessed whether physical maturity was associated with rebellious delinquency, behavioural autonomy with peers, and desire for autonomy. This study is a limited test of Moffitt's (1993) hypothesis because it only assesses physical maturity and does not capture the perception of experiencing a maturity gap.

Additional research in support of Moffitt's (1993) argument demonstrates that, as children develop into adolescents, they begin to admire aggressive peers and find good students at school less attractive (Bukowski, Sippola, & Newcomb, 2000; Luthar & McMahon, 1996). Another finding consistent with Moffitt's (1993) model is that adolescents who showed high concern for appearing immature were more likely to also be high on measures of delinquency (Zebrowitz, Andreoletti, Collins, Lee, & Blumenthal, 1998) and aggression which becomes increasingly associated with social prominence during adolescence (Bukowski, Sippola, & Newcomb, 2000). Adolescents who self-identified as feeling older than their chronological age were more likely to engage in problem behaviour, such as substance abuse, disobeying parents,

and general antisocial behaviour (Galambos et al., 1999; Stattin & Magnusson, 1990). Also, a recent longitudinal study found that adolescents who reported having sex, drinking alcohol and smoking, also reported feeling older (Galambos, Albrecht, & Jansson, 2009), which supports Moffitt's (1993) proposal that these antisocial acts promote feelings of maturity. However, these research findings could just as easily support an alternative model to explain the relationship between perceived maturity and association with deviant peers.

Alternative model.

Moffitt (1993) predicts that a maturity gap with parents drives adolescents to seek out deviant peers to model in order to gain the perception of maturity they feel they deserve. But what if the model starts with adolescents associating with deviant peers and leads to a maturity gap with parents? Empirical evidence has shown that, when young people enter adolescence, they begin to admire aggressive peers and find good students less attractive (e.g., Bukowski, Sippola, & Newcomb 2000; Luthar & McMahon, 1996). It has also been shown that adolescents imitate each other's risky or oppositional behaviour (e.g., Alexander, Piazza, Mekos, & Valente, 2001; Dishion & Dodge, 2005; Vitaro, Tremblay, Keer, Pagani, & Bukowski, 1997), particularly when the imitated adolescent is considered to be popular (Cohen & Prinstein, 2006). This is consistent with Moffitt's (1993) model; however, there may be another reason for hanging out with deviant peers. Maggs, Almeida, and Galambos (1995) found the best predictor of early adolescents' engagement in deviant behaviours was because it was fun, and engaging in those risky behaviours contributed to later peer acceptance. One can imagine, though, what parents might think about when their adolescent is having fun hanging out with deviant peers.

Many parents watch their children's peer associations closely as children enter adolescence (Marshall, Young, & Tilton-Weaver, 2008; Tilton-Weaver & Galambos, 2003). If

parents find out about associations with problematic peers they may try to manage their adolescents' friendships (Tilton-Weaver & Galambos, 2003). However, research suggests that adolescents are not very tolerant of parents' attempts to control their choice of friends and social activities (Kakihara & Tilton-Weaver, 2009; Youniss & Smollar, 1985) because adolescents believe they should have control over these personal areas of their lives (Nucci, 1996; Nucci & Smetana, 1996; Smetana, 1988, 1995). Adolescents may perceive having parents step into a personal area of their lives, such as friendships, as immature treatment. Controlling behaviour on the part of the parent may contribute to the adolescent experiencing a maturity gap with their parents. Therefore, the counter hypothesis predicts that associating with deviant peers would lead to a maturity gap with parents; the opposite of Moffitt's (1993) prediction. No study to date has tested whether perceived maturity with parents leads to later engagement with deviant peers or vice versa. This study will test Moffitt's (1993) hypothesis and the alternative hypothesis using two waves of data in order to fully investigate the time ordering of the hypothesized relationship between perceived maturity and association with deviant peers.

In summary, this study will examine potential differences in perceived maturity with parents and peers focusing on four research questions. Are adolescents' perceptions of their maturity congruent with parents and peers? Do perceived maturity groups change over time? Are chronological age and gender related to perceived maturity? And, is there a relationship between perceived maturity and adolescents' association with deviant peers?

Method

Sample

Participants ($N = 326$; 129 boys, 197 girls), were students registered, at wave 1, in grades 8 through 11 at a high school in a large urban city in western Canada. Students ranged in age from 12 to 17 years ($M_{\text{age}} = 13.89$, $SD = 1.18$) at the first wave of data collection. Respondents self-reported their ethnicity. One hundred and eighty-five (56.7%) students indicated their ethnicity as Caucasian/European, 86 (26.4%) as East Asian, 39 (12%) reported other ethnicities (e.g., First Nations, African, Hispanic), and 16 (4.9%) did not report any ethnicity. Respondents also reported their living situations. Two hundred and twenty-eight (69.94%) reported living with both parents who are married and/or living together, 45 (13.80%) with a single (mother or father) parent, 32 (9.82%) with a parent who had re-partnered, 4 (1.23%) lived equal time with both parents who were not living together, 15 (4.60%) lived in some other family form (i.e., with a grandparent, sibling, or homestay), and 2 (0.61%) participants did not report this information.

Procedures

The university ethical review board, school board, and school administration approved the study protocol prior to administration of the survey. Consent forms were distributed to parents of all students (except those in special education classes) at the beginning of each school year. The survey was completed during regular class time during the third month of each school year. Trained researchers explained assent to the participants and highlighted issues of confidentiality along with the purpose of the survey. Students were given approximately one hour and twenty minutes to complete the survey, which contained additional measures to those used in this report.

Measures

Demographics.

The adolescents reported their chronological age in years, living situation with family members, ethnicity, and sex. Living situation and ethnicity were reported for the purposes of sample description.

Perceived maturity.

Adolescents' perceptions of maturity were assessed with items from the Desired and Perceived Maturity Treatment scales (Tilton-Weaver et al., 2010). These scales assess the extent to which adolescents perceive themselves as being treated maturely by others (i.e., *perceived maturity treatment*) and the importance of being treated as mature by others (i.e., *desired maturity treatment*). In this study, I used only the two items pertaining to desired and perceived maturity treatment in relation to parents and peers¹. The perceived maturity treatment items are “My parents [My friends] treat me as a mature person” and “My parents [My friends] do not treat me like a child.” The desired maturity items are the same except each item begins with “It is very important that...”. Participants responded to these items using a 5-point Likert-type scale ranging from “Not at all true” (1) to “Very true” (5). Perceptions of *maturity* were then formed by computing the difference between the desired and perceived maturity treatment items. Specifically, I subtracted “My parents [my friends] treat me as a mature person” rating from the parallel item beginning “It is very important that...”. I then repeated this process with the items, “My parents [my friends] do not treat me like a child” and the parallel “It is very important that...”. I then averaged these two new assessments of maturity to create one measure for perceived maturity with parents and one for perceived maturity with peers.

¹ Desired and perceived maturity items were presented in different sections of the survey.

Perceived maturity categories. To create the perceived maturity categories, the *maturity* scores were grouped into three groups with regards to parents and peers. All scores less than zero were collapsed into the *maturity overfit* category. This was done because the negative scores on the measure indicated that these adolescents' desired maturity treatment was less than their perceived maturity treatment on at least one item in the measure. All of the values with scores greater than zero were grouped into the *maturity gap* category because this indicates that adolescents' desired maturity treatment was greater than their perceived maturity treatment. This description is in line with the way both Moffitt (1993) and Tilton-Weaver et al. (2010) define the maturity gap group. Those adolescents with a zero score were grouped into the *maturity fit* category because this indicates a fit between the adolescents' desired and perceived maturity treatment. These groupings generate the three perceived maturity groups: maturity gap, maturity fit and maturity overfit for parents and for peers.

Deviant peers.

Participants' perceptions of their peers' deviant behaviours were assessed with three items previously used by Galambos and Maggs, (1991) and Tilton-Weaver and Galambos (2003). An example item is, "My friends often do things their parents say not to do." Participants responded to these statements on a 5 point Likert-type scale ranging from 'not at all true' to 'very true'. Mean scores were generated so that higher scores indicate the adolescent perceives friends to be engaged in higher levels of deviant behaviour. Cronbach's alphas were .72 and .77 for waves 1 and 2 respectively.

Results

Plan for Analysis

To address the research questions of whether perceived maturity with reference to parents and peers are similar or distinct, changes in perceived maturity over time, and gender differences, initial Chi-square tests of independence were conducted. Statistically significant associations were followed up with exact cellwise analyses of a contingency table using Bergman and El-Khoury's (2002) EXACON to examine specific group differences.

To examine age differences in perceived maturity groups, a one-way analysis of variance was used to investigate if there are significant differences in mean age (in years) between the three perceived maturity groups. Post-hoc Fischer's LSD tests were used to compare groups. To test Moffitt's (1993) hypothesized model and the alternative model, a regression analysis and a multinomial logistic regression were used respectively.

Perceived Maturity Representations with Parents and Peers

Recall that measures of perceived maturity were assessed in relation to parents and peers. The separate measures enabled exploration of perceived maturity with different reference groups. To examine the relationship between perceived maturity with parents and peers, a Chi-square test for independence was conducted. The results indicated a significant association between perceived maturity with parents and perceived maturity with peers in year one, $\chi^2(4, n = 314) = 59.21, p < .001$, Cramer's $V = .30$, which denotes a medium effect size (using Cohen, 1988 guidelines). In addition to an omnibus test of significance, the exact cell wise analysis (see Table 2) demonstrated that there were statistically significant differences in the observed and expected values within the categories of perceived maturity with parents and peers. As can be seen in row one of the table, there were more adolescents who were in the maturity gap group with both

parents and peers than would be expected if there was no statistically significant relationship between parents and peers in year one. There were fewer than expected adolescents reporting a maturity gap with parents and a maturity fit with peers in year one. In row two of this table, there were more adolescents than expected who had a maturity overfit with parents and a maturity overfit with peers. Row two also highlights a statistically significant difference where there were fewer than expected adolescents reporting a maturity overfit with their parents and a maturity fit with their peers. Next, in row three, all comparisons were statistically significant. The first comparison between maturity fit with parents and maturity gap with peers indicates that there were fewer members in this group than would be expected if there was no relationship. The next comparison between maturity fit with parents and maturity overfit with peers, also indicates a less than expected value. Finally, in the last comparison between maturity fit with parents and maturity fit with peers, there was a greater than expected number of adolescents.

Table 2

Cross-tabulation of Perceived Maturity with Parents Year 1 and Perceived Maturity with Peers Year 1 using EXACON (n = 323)

Maturity with Parents Year 1/ Peers Year 1	Peers Gap Year 1	Peers Overfit Year 1	Peers Fit Year 1	Total
Parent Gap Year 1				
observed	35	23	26	84
expected	18.72	19.50	45.77	
<i>p</i>	.000	.183	.000	
Parent Overfit Year 1				
observed	15	28	26	69
expected	15.38	16.02	37.60	
<i>p</i>	.522	.000	.001	
Parent Fit Year 1				
observed	22	24	124	170
expected	37.89	39.47	92.63	
<i>p</i>	.000	.000	.000	
Total	72	75	176	323

Note. Expected values are based on analysis of types or antitypes based on exact tests (one-tailed hypergeometric). This represents the probability of obtaining the observed value if there was no relationship between the two variables. Expected values do not sum to totals due to rounding.

The same procedure was repeated using year two data with parents and peers to examine the consistency of the findings. The Chi-square test indicated a statistically significant association, $\chi^2(4, n = 315) = 73.92, p < .001$, Cramer's $V = .14$, with a small effect size (using Cohen, 1988 guidelines). The exact cell wise analysis (see table 3), demonstrates that there was both statistically significant differences and similarities in perceived maturity with parents and peers. These group differences were the same differences found in the year one data with the exception of the comparison between maturity overfit with parents and maturity gap with peers. With year one data, the difference between maturity overfit with parents and maturity gap with

peers was non-significant. In year two data, this comparison was significant with fewer than predicted adolescents in this group.

In both years of data, there was variability between how adolescents perceived their maturity treatment with peers and with parents. Adolescents who had a match between their perceived maturity with parents and peers represented 57.89 % of the total in year one and 59.37% in year two. This indicated that about 40% of the adolescents reported that they were not experiencing a match in their perceptions with their parents and peers.

Table 3

Cross-tabulation of Perceived Maturity with Parents and Peers Year 2 using EXACON (n = 315)

Maturity with Parents Year 2 /Peers Year 2	Peers Gap Year 2	Peers Overfit Year 2	Peers Fit Year 2	Total
Parent Gap Year 2				
observed	39	23	32	94
expected	19.10	20.59	54.31	
<i>p</i>	.000	.282	.000	
Parent Overfit Year 2				
observed	5	29	31	65
expected	13.21	14.24	37.56	
<i>p</i>	.002	.000	.044	
Parent Fit Year 2				
observed	20	17	119	156
expected	31.70	34.17	90.13	
<i>p</i>	.001	.000	.000	
Total	64	69	182	315

Note. Expected values are based on analysis of types or antitypes based on exact tests (one-tailed hypergeometric). This represents the probability of obtaining the observed value if there was no relationship between the two variables. Expected values do not sum to totals due to rounding.

Patterns of Change Over Time

In addition to perceived maturity with parents and peers, this study also addressed changes in perceived maturity over time. These analyses compared perceived maturity over a one-year period. First, perceptions with parents were investigated, then perceptions with peers. Chi-square test for independence indicated a statistically significant association between perceived maturity with parents in year one and year two, $\chi^2(4, n = 314) = 12.97, p = .01$, Cramer's $V = .14$, which suggests a small effect size (using Cohen, 1988 guidelines). Next, exact cell wise analysis was conducted. Results are displayed in Table 4. Row one contains two significant comparisons. First, there were more adolescents reporting a maturity gap in year 1 than year 2. There were also fewer than expected adolescents reporting a maturity gap in year one and fit in year two. In row two, there were no significant comparisons. In the third row, there were fewer than expected adolescents with a maturity fit in year one and a maturity overfit in year 2. There was also a greater than expected number of adolescents reporting a maturity fit in both years.

Table 4

Cross-tabulation of Perceived Maturity with Parents Year 1 and Year 2 using EXACON (n = 314)

Maturity with Parents Year 1/ Year 2	Gap Year 2	Overfit Year 2	Fit Year 2	Total
<hr/>				
Gap Year 1				
observed	34	19	31	84
expected	24.88	17.39	41.73	
<i>p</i>	.009	.359	.004	
Overfit Year 1				
observed	17	19	31	67
expected	19.84	13.87	33.29	
<i>p</i>	.243	.060	.311	
Fit Year 1				
observed	42	27	94	163
expected	48.28	33.74	80.98	
<i>p</i>	.077	.041	.002	
Total	93	65	156	314

Note. Expected values are based on analysis of types or antitypes based on exact tests (one-tailed hypergeometric). This represents the probability of obtaining the observed value if there was no relationship between the two variables. Expected values do not sum to totals due to rounding.

The next analysis addressed perceived maturity with peers over time. Perceived maturity with peers in year one was compared to year two. A Chi-square test for independence indicated a significant association, $\chi^2(4, n = 312) = 10.23, p = .04$, Cramer's V = .13, with a small effect size (using Cohen, 1988 guidelines). Exact cell wise analysis (see Table 5) demonstrated few statistically significant comparisons. In row one, there are no statistically significant comparisons over time. Row two has one statistically significant comparison between overfit in year one and fit in year two, where there was a less than expected number of adolescents in that group. Row three has two statistically significant comparisons. There were fewer adolescents in year one

with a maturity fit and year two with a maturity gap. There were also more adolescents who reported maturity fit in year one and maturity fit in year two than would have been expected.

Table 5

Cross-tabulation of Perceived Maturity with Peers Year 1 and Year 2 using EXACON (n = 312)

Maturity with Peers Year 1/ Year 2	Gap Year 2	Overfit Year 2	Fit Year 2	Total
<hr/>				
Gap Year 1				
observed	20	15	37	72
expected	14.77	15.69	41.53	
<i>p</i>	.060	.481	.136	
Overfit Year 1				
observed	18	20	33	71
expected	14.56	15.47	40.96	
<i>p</i>	.163	.096	.021	
Fit Year 1				
observed	26	33	110	169
expected	34.67	36.83	97.50	
<i>p</i>	.011	.179	.003	
Total	64	68	180	312

Note. Expected values are based on analysis of types or antitypes based on exact tests (usually the one-tailed hypergeometric probabilities are used which are the bottom figures in each of the cells). This represents the probability of obtaining the observed value if there was no relationship between the two variables. Expected values do not sum to totals due to rounding.

Overall, there was change and stability in perceived maturity over time. Examining perceived maturity changes with parents showed that 46.82% of the adolescents reported a match between their perceived maturity over time. Of the 53.18% of the adolescents experiencing a perceived maturity mismatch with parents over time, the statistically significant movement was to change to a maturity overfit or maturity fit group in year two. Perceived maturity with peers over time indicated that only 48.08% of the adolescents reported a match in their perceptions over time. The remaining 51.92% of adolescents changed perceptions and their statistically significant movements were different from that seen with parents. With perceived maturity with

peers, result indicated a shift towards the maturity gap or maturity fit groups as opposed to maturity overfit or maturity fit groups.

Chronological Age

The next analysis addressed the association between chronological age and perceived maturity. The objective was to determine if there are statistically significant differences in chronological age among the three perceived maturity categories with both parents and peers. The analysis was done with year one and year two data to explore the consistency of the findings. A one-way between-groups analysis of variance was conducted with post hoc Fisher's LSD comparisons for statistically significant omnibus tests. The assumptions of independence of observations, normal distribution of scores, and homogeneity of variance were met with the exception of the Kolmogorov-Smirnov statistic, which was significant. All other measures of the distribution of scores indicated that the assumption was met and so the analysis was conducted as planned.

The first set of tests compared perceived maturity with parents and age of the adolescent. Year one and year two data were used. There were no statistically significant differences at the $p < .05$ level in age of the adolescent for the three perceived maturity categories with parents in year one, $F(2, 321) = 1.38, p = .253$. The effect size, using eta squared was small (.01) according to Cohen's (1988) guidelines. There was a statistically significant difference in age and perceived maturity with parents in year two, $F(2, 315) = 3.04, p = .049$. Despite reaching statistical significance, the actual difference in mean scores between the groups was quite small. The effect size, calculated using eta squared, was .02, which using Cohen's (1988) classification, is small. Post hoc comparisons using Fisher's LSD test indicated that the mean age for the maturity gap group ($M = 14.08, SD = 1.23$) was statistically significantly different from the

maturity overfit group ($M = 13.63$, $SD = 1.08$). The mean age of the maturity fit group ($M = 13.84$, $SD = 1.15$) was not statistically significantly different from either of the other groups.

The second set of tests examined the association between perceived maturity with peers and age of the adolescent, using year one and year two data. There were no statistically significant differences in age for perceived maturity groups with peers in year one: $F(2, 320) = 2.32$, $p = .10$, eta squared = .01 or year two, $F(2, 312) = .50$, $p = .60$, eta squared = .003. Both effect sizes were considered small using Cohen's guidelines (1988).

Gender

Gender differences among the three perceived maturity groups, were examined next. A Chi-square test for independence indicated no statistically significant association between sex of the adolescent and perceived maturity with parents in year one: $\chi^2(2, n = 324) = .32$, $p = .85$, or in year two, $\chi^2(2, n = 316) = 2.30$, $p = .29$.

Next, a Chi-square test for independence between sex of the adolescent and perceived maturity with peers was conducted using year one and year two data. The Chi-square for both year one: $\chi^2(2, n = 323) = 1.48$, $p = .48$, and year two, $\chi^2(2, n = 315) = .77$, $p = .68$ were not statistically significant.

Perceived Maturity and Adolescents' Association with Deviant Peers

This study also addresses adolescents' behaviour associated with perceived maturity. Moffitt, in her 1993 developmental taxonomy, made the claim that, when adolescents experience a maturity gap with their parents, they will associate with deviant peers. To test Moffitt's hypothesis, perceived maturity with parents in year one was used to predict association with

deviant peers in year two. An alternative hypothesis also tested whether association with deviant peers in year one predicts perceived maturity with parents in year two.

An initial independent samples t-test for sex differences in association with deviant peers was conducted using year one and year two data as previous studies have reported statistically significant differences (see Berkout, Young, & Gross, 2011). In year one, there was a statistically significant difference in scores for males ($M = 2.48$, $SD = .97$) and females, ($M = 2.21$, $SD = .94$); $t(323) = 2.47$, $p = .01$ (two-tailed). The magnitude of the differences in the means (mean difference = 0.27, 95% CI: .05 to .48) was small with an overall small effect size (eta squared = .02) (Cohen, 1988). In year two, there was also a statistically significant difference between scores for male ($M = 2.68$, $SD = 1.02$) and female adolescents, ($M = 2.36$, $SD = 1.01$); $t(320) = 2.77$, $p = .01$ (two-tailed). The magnitude of the differences in the means (mean difference = 0.32, 95% CI: .09 to .55) was small with a small (Cohen, 1988) effect size (eta squared = .02). Given these statistically significant differences in association with deviant peers among sex of the adolescent, further model testing was conducted separately by sex of the adolescent.

In the first model, Moffitt's (1993) hypothesis that perceived maturity will lead to association with deviant peers was examined over a one year period. A regression analysis was conducted where dummy codes were used to include the three perceived maturity categories with parents in year one as predictors of association with deviant peers in year two. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity. For male adolescents, perceived maturity with parents in year one explained only 0.07% of the variance in deviant peers in year two, $F(2, 123) = 0.43$, $p = .65$. For female adolescents, perceived maturity with parents in year one explained only 2.00%

of the variance in deviant peers in year two, $F(2, 193) = 1.99, p = .14$. Neither the model with male nor female adolescents was statistically significant.

In the second model, the reverse was tested where association with deviant peers in year one was used to predict perceived maturity with parents in year two. The model was split by gender. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity. A multinomial logistic regression was conducted. In the male adolescent model, a chi-square test to examine the decrease in unexplained variance from the baseline model to the final model was examined, $\chi^2(2, n = 129) = 5.60, p = .06$. The final model did not explain a statistically significant amount of the variance beyond using the intercept. In the female adolescent model, the chi-square test also indicated a non-significant model, $\chi^2(2, n = 197) = 5.25, p = .06$.

Discussion

Explorations into perceived maturity have traditionally focused on an overall sense of maturity, encompassing perceptions from a range of social relationships (Barker & Galambos, 2005; Coleman & Hendry, 1990; Galambos, Barker, & Tilton-Weaver, 2003; Galambos, Kolaric, Sears, & Maggs, 1999; Galambos & Tilton-Weaver, 2000; Hurrelmann & Engel, 1989; Peterson, 1996; Tilton-Weaver, Kakihara, Marshall, & Galambos, 2010). This study expands the research by exploring perceived maturity with different social relationships. Specifically, this study focused on four questions: whether there are differences in perceived maturity with parents and peers, if perceived maturity changes over time, whether chronological age and gender are related to perceived maturity, and whether there is a relationship between perceived maturity and association with deviant peers.

Findings suggest that there are differences in how adolescents see themselves with regards to their relationship with their parents and with their peers. About forty percent of the adolescents reported a mismatch between their perceptions with parent and peers (42.10% and 40.63%, year one and two respectively). The adolescents with a maturity mismatch would not have been fully represented in a measure of global perceptions of maturity. Global perceptions do not capture these differences or the different ways that adolescents might act or feel with different social groups. The people and the relationships that make these maturity perceptions are important.

Results indicated that there were also a statistically significantly greater number of adolescents who reported coherence in their perceived maturity with parents and peers. This match in perceived maturity categories only represents similarity in the disparity in their perceived and desired maturity treatment. The experience of a maturity gap, overfit, or fit with

parents could be qualitatively different from adolescents' experiences with peers. Because adolescents' can simultaneously maintain different perceptions with their parents and peers, the way that they experience their maturity with these groups could also differ. For example, in adolescents' relationships with parents, being treated less maturely than desired could result from parents finding out the adolescents are engaging in activities that parents do not approve of. In adolescents' relationship with peers, being treated less maturely than desired could be due to the adolescents not engaging in the same social activities as their popular peers. A maturity mismatch with peers could also be seen as more important than one with parents as peer relationships gain importance during adolescence. We, as researchers, have yet to understand how adolescents experience their perceived maturity with parents and peers. Global measures of maturity need to consider whether it is appropriate to average maturity perceptions that may represent qualitatively different experiences. This may be significant during adolescence when maturity with peers may be linked to popularity and deviant behaviour, whereas, maturity with parents may be seen as taking on roles and responsibilities.

The second component of this study examined perceived maturity over time. Overall, results indicate that just over half of the adolescents reported a difference in their perceived maturity over time (53.18% with parents and 51.92% with peers). Interestingly, the changes in perceived maturity from year one to year two were not all directed towards the maturity fit group. Only among parents was there a move towards the fit group, indicating that perceived maturity did not always reflect a resolution to a maturity mismatch. Adolescents with a maturity fit with parents moved to the maturity overfit group over time, however, this pattern was not found with peers. Adolescents who had a maturity fit with peers moved to a maturity gap over time. This could be a representation of a change in responsibilities over time with parents but a

shift in wanting to be seen as more mature with peers over time. There was also a statistically significant shift from overfit in year one to fit in year two among peers. This represents a change from feeling overly mature to a match in maturity perceptions with peers. There are many factors that can change in adolescents' lives that might lead to changes in maturity perceptions. As adolescents experience different life events, they may begin to see themselves differently or feel as though they are being treated differently. This could provoke changes in perceptions.

Additionally, there appears to be a change in perceptions with parents and peers when comparing year one to year two data. In year one, the group comparison between overfit with parents and fit with peers was not statistically significant. In year two, this comparison was statistically significant with fewer than expected adolescents in this group. This could be because this group is the least desirable group to be in during adolescence. These adolescents feel as though they are being treated overly maturely at home and not maturely enough with peers. In school, these adolescents probably represent a subgroup of youth that focus on responsibilities. Tilton-Weaver and colleagues (Tilton-Weaver, Galambos, & Vitinski, 2001) found that adolescents described a similar group of peers as being too serious and that these youth were unable to enjoy themselves. They engaged in work, socialized with adults over peers, and showed an inability to have fun; these features distinguished them from those who were seen as genuinely mature adolescents. The adolescents described in Tilton-Weaver and colleagues' study were viewed as intelligent and responsible among their peers, but they were not accepted by their peer group. The overfit group found in this study consistently represented the fewest number of adolescents, and there was a statistically significant shift out of this group over time. This is probably due to the subjects gaining more experience with high school peers and becoming more apt at socializing with them.

To understand differences in maturity perceptions with parents and peers, as well as changes in perceived maturity over time, research will need to examine what actions by others adolescents see as important in defining their maturity treatment. Since social relationships contribute differently to perceived maturity, perhaps particular actions by others are more influential in forming maturity perceptions. For example, certain acts on the part of parents, such as inquiries into friendships, might be interpreted by adolescents as being treated immaturely; whereas, inquiries into academics might not. Similarly, different actions on the part of peers may also be interpreted by adolescents as signs of mature or immature treatment. This idea is very much in line with Bartusch and Matsueda's work (1996; also see Matsueda, 1992) which suggests differing perceptions with significant others leads to different behaviours during adolescence. There may be certain actions by peers or parents that are seen as reflections of maturity and are more salient to adolescents' sense of maturity than other interactions. Understanding what actions by others are thought of as important in forming a sense of perceived maturity will be pivotal in understanding changes in perceived maturity over time.

The next component of the study focused on perceived maturity with parents and peers and its relationship to chronological age and gender. Because of the way society links maturity and chronological age (Barnes-Farrell & Piotrowski, 1989; Baum & Boxley, 1983; Heckhausen, 1997; Hubley & Hultsch, 1994; Markides & Boldt, 1983; Montepare, 1996), as well as age-related access to privileges (such as smoking, drinking, driving a car), this relationship was investigated. Results from this study showed that there was no relationship between perceived maturity with parents or peers and chronological age. Interestingly, chronological age is associated with measures of subjective age (e.g., Montepare, 1996b; Galambos, Turner, & Tilton-Weaver, 2005) yet chronological age is unrelated to perceived maturity. Measures of

subjective age focus on a comparison between the individual and their same age peers. Perceived maturity measures focus on the desired and perceived maturity of the individual. When age-related comparisons are removed from the measure of maturity, so too is the relationship with chronological age. This indicates that all age groups could be experiencing one of the perceived maturity categories, because perception groups are based on the disparity between desired and perceived treatment. Adolescents' and adults' descriptive experience of their desired and perceived maturity treatment could be different but they could both experience a similar disparity. Separating maturity perceptions from the interactions with others that make up these perceptions enables the perceived maturity groups to span age ranges.

The association between gender and perceived maturity was also examined as previous research has found gender differences in the prevalence of the maturity gap (Moffitt et al., 2001; Caspi et al., 1993; Fergusson, Horwood, & Nagin, 2000; Kratzer & Hodgins, 1999). No relationship was found in this study between gender and any of the perceived maturity groups. This could be because perceived maturity was measured differently than in previous studies and the maturity gap was measured separately with regards to parents and peers. The finding of no gender differences suggests that while the behaviours male and female adolescents engage in may differ, they report their relationships between desired and perceived maturity treatment in similar ways.

The final component of this study addresses the hypothesized relationship between perceived maturity and association with deviant peers. Two models were tested. The first model is a representation of Moffitt's (1993) developmental taxonomy suggesting that perceived maturity with parents predicts association with deviant peers. Moffitt argues that adolescents desire adult privileges, and when they are not granted these privileges, they seek out and mimic

deviant peers, who are seen as engaging in mature or adult activities. The second model proposes the opposite hypothesis that association with deviant peers predicts perceived maturity with parents. When adolescents associate with deviant peers, their parents try to discourage the association and, in so doing, contribute to adolescents' perception of maturity. Both models were tested to determine the direction of the hypothesized relationship between perceived maturity with parents and association with deviant peers.

Neither Moffitt's (1993) model nor the alternative model was supported. Moffitt originally developed her hypothesis to explain the spike in official rates of crime during adolescence. Both the reported prevalence and incidence of offending appear highest during adolescence. Rates peak sharply at age 17 and then drop by over 50% during young adulthood (Moffitt, 1993). She argued that this spike in adolescent antisocial behaviour encompassed rebellious acts conducted by adolescents before they matured into adult roles and responsibilities. Previous research supports the finding that deviant behaviour peaks in adolescence (see Moffitt, Caspi, Rutter, & Silva, 2001) and that adolescents report experiencing a maturity gap (Moffitt & Caspi, 2001; Tilton-Weaver et al., 2010), but it is still unclear whether there is a relationship between these two concepts.

A missing component that might need to be considered in future research are the differences in the way adolescents handle any disparity in how they want to be treated and feel they are being treated. Perhaps, perceived maturity needs to be thought of in terms of a reflected-appraisal process (originally defined by Cooley, 1902) in order to understand how adolescents interpret their maturity perceptions. Adolescents' perceived maturity is based on appraisals of their desired and perceived maturity treatment by others. These appraisals influence the way adolescents see themselves and their behaviour. We, as researchers, have yet to investigate how

adolescents resolve a disparity in how they desire to be treated and how they perceived their maturity treatment. If adolescents think of their perceived maturity as something that can be changed through action, they might take action in a positive or negative way. For example, research has shown that taking on adult-like roles and responsibilities prevents the maturity gap from forming during adolescence (Moffitt 1993), but engaging in antisocial behaviour may enhance social perceptions of maturity with peers (Cillessen & Mayeux, 2004; Rodkin, Farmer, Pearl, & Van Acker, 2000; Rose, Swenson, & Waller, 2004; Sandstrom & Cillessen, 2006). Both behaviours reduce the disparity in how adolescents desire to be treated and how they perceive their maturity treatment but in different ways.

Alternatively, adolescents might not take action in the form of behaviour to resolve the maturity disparity they experience. They might see their reflected appraisal as a true representation of themselves and adjust their own perceptions to match the appraisal. If adolescents interpret their maturity treatment by important others in a certain way, they may begin to see themselves in that way and act accordingly. Therefore, there may be at least two different approaches for dealing with a maturity disparity rather than one as Moffitt (1993) suggested. Adolescents might try to change other people's perceptions of themselves through changes in behaviour or they might change their own perceptions to be in line with their reflected appraisals. Additional research needs to examine how adolescents experience and resolve disparities in their perceived maturity.

Limitations

Some limitations of this study should be mentioned. First, the measurement of desired maturity is difficult to approach in quantitative research, as the questions asked need to address how adolescents feel they should be treated. This study focused on the *importance* of not being

treated as a child and being treated maturely. Using the word importance can be problematic as participants could report low importance because they have always been treated maturely and not because they do not desire to be treated maturely. If some participants in this study interpreted the question of the importance of being treated maturely as not important because they have always been treated maturely, this might affect two of the four questions that contribute to the perceived maturity categorizations. Additional items that address multiple questions about desired maturity treatment in different social relationships should be included in future research to enhance the perceived maturity treatment measure developed by Tilton-Weaver et al. (2010). Specifically, additional questions could address how adolescents feel they have been treated in the past, how important it is to maintain or change these perceptions in the future, and how important it is to be thought of as a mature person by others.

Another problem with the desired and perceived maturity measure was that it was used to make categories from difference scores. In doing this, the range of responses was reduced, and so the variability in scores was limited. There may be more than three maturity groups, but for this preliminary study, comparing groups of adolescents that reported a maturity fit, overfit and gap, was an important initial step. Now that this research has demonstrated differences and similarities among these three groups, future studies can explore the possibility of additional groups.

Second, the alternative model was not a complete model as there was no measure of parental knowledge of their adolescents' association with deviant peers. In reflecting on the alternative model, parents' knowledge of their adolescents' friendships could have served as a mediator in the model. The alternative model assumes that parents know if their adolescents are associating with deviant peers, but this was not confirmed. Adding a measure of parental

knowledge to the alternative model could aid in understanding the relationship between adolescents' behaviour and maturity perceptions with parents. Future research should consider including questions on parental knowledge of peer associations and activities.

Future Research

To further research into perceived maturity, studies should focus on how adolescents conceive of discrepancies in their perceived maturity treatment, the factors that contribute to these perceptions, and the ways in which adolescents attempt to control maturity perceptions. This will be pivotal in understanding changes in perceived maturity over time and the relationship between maturity perceptions and behaviour. In a similar way to Tilton-Weaver and colleagues' (2001) description of the five images of maturity in adolescence, research needs to be conducted to understand how adolescents experience disparities in their perceived maturity, focusing on maturity gap, maturity overfit, and maturity fit with different social relationships. Specifically, research could address how adolescents come to understand their maturity treatment and if they think that they have the ability to change the way that others treat them.

Additionally, although perceptions of maturity are based on individuals' interpretations, future studies could benefit from incorporating an external measure of physical maturity. This would include a measure of the adolescents' visible body development that could influence others' perceptions of their maturity. This might aid in understanding why some adolescents feel as though they are being treated more or less maturely than they desire to be treated.

Conclusion

This study expands the area of maturity perceptions by highlighting the importance of specific relationships in research on perceptions of maturity. Global perceptions of maturity overlook the complex social relationships that contribute to these perceptions. The finding that adolescents can simultaneously maintain different perceptions with different people has implications for other measures of maturity and how maturity has been defined. Having different maturity perceptions in different social groups could mean that adolescents also define maturity differently with peers and parents. Behaving in a certain way with one social group might be seen as acting maturely while in another, the same behavior might represent immaturity. Understanding that there are differences in the way adolescents interpret their maturity within different social relationships brings into question the way maturity has been conceived of in the past and how researchers approach maturity perceptions in the future.

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