Gender differences in financial socialisation in the home – an exploratory study.

Abstract

Recent literature has stressed the need for research examining the causes of females in general having lower levels of financial literacy than males. This paper uses social cognitive theory of gender development as a framework to propose differing financial socialisation of children in the home by gender as a possible cause of gender differences later in life. Evidence is found of gender based differences in the financial socialisation of eleven to fourteen year olds. Findings include more frequent parent-child discussions being correlated to more positive financial attitudes, but not to saving behaviour. Saving behaviour of children is influenced by attitudes to money along with the presence of parents when spending, which is subject to a same sex gender bias for girls, with large effect sizes. Girls are over 200% more likely to state they save some of their pocket money if their mother is present when they spend their pocket money, compared to having no parent present. This difference does not exist for male children. When a boy is with both parents when spending, they are 245% more likely to report saving some of their pocket money then when neither parent is present. Having a father present when spending does not yield significantly different results to when no parent is present. These findings of gender biased financial socialisation in the home are important considerations for the design of school-based financial literacy programmes. Specifically, these programmes should consider a goal of encouraging discussion and questioning gender based attitudes and roles in the home. They are also important findings in terms of going some way to explaining the existence of a gender difference in financial knowledge in adulthood.

Keywords: Child; education; family; gender; financial; household; shopping; women.

Introduction

Gender based differences in financial literacy.

In recent decades a substantial body of research has confirmed the existence of a gender difference in financial literacy (Chen and Volpe, 2002; Volpe, Chen and Pavkicko, 1996; Goldsmith and Goldsmith, 1997; Fonseca, 2012; Worthington, 2006; Braunstein and Welch, 2002). The implications for females of having lower levels of financial literacy has also been discussed as early as the 1980's by Rettig (1985) when she stated that

> *"The need for financial and consumer education, particularly for women, has never been greater due to the increasing number of single-parent households and the increased life expectancies. The females who do not divorce often outlive their husbands and find it necessary to manage inherited as well as earned assets. Other women who have remained in long-term marriages and not worked outside the household can find themselves with inadequate income in old-age if there are no joint survivor pension benefits. The economic security of women is dependent upon the financial management competencies they acquire"* (p. 6).

Perhaps somewhat surprisingly, similar sentiments are still being echoed more than thirty years later by Bucher-Koenen et al. (2016) when they conclude

> *"The gender differences are present for very basic as well as more advanced measures of financial literacy. This is important because financial literacy has been linked to economic behavior, including retirement planning and wealth accumulation. Women live longer than men and are likely to spend time in widowhood. Thus, improving women's financial literacy is key to helping them prepare for retirement and promoting their financial security"* (p. 1).

Despite acknowledgment of its existence and implications, the reasons for a gender difference in financial knowledge are less well known.

Some studies have examined the role of financial socialisation at a young age on future financial habits. Research such as Webley and Nyhus (2006) has studied the effect of economic socialisation on future saving behaviours, finding “that parental behaviour (such as discussing financial matters with children) and parental orientations (conscientiousness, future orientation) have a weak but clear impact on children s economic behaviour as well as on economic behaviour in adulthood” (p. 140). As part of the study, adults were asked to recount recollections of their childhood experiences, responding to questions such as “When you were growing up, how often did your parents discuss their personal financial decisions with you?” (Webley and Nyhus, 2006, p. 149). A subsequent 2013 study by the same authors found a positive link between parental encouragement and subsequent saving behaviour using a sample of 18 to 32 year olds (Webley and Nyhus, 2013). Using a younger cohort of 14 and 15 year olds they also found small differences in the age of first opening a savings account, having part-time work and receiving pocket money amongst participants from different socioeconomic backgrounds, prompting the authors to state “Variations in the economic socialization by parents highlight the importance of financial education in schools” (Webley and Nyhus 2013, p. 19). There has however been no attempt to examine financial socialisation in the home of youth as a possible cause of gender differences in financial literacy in adulthood.

This gap in the literature contributed to Lusardi and Mitchell (2014) stating that the gender debate was “far from closed” suggesting more research into gender differences in financial literacy was desirable (p. 20). In their summary of existing literature, Bucher-Koenen et al. found “strikingly similar gender differences in financial literacy across countries” (2016, p. 1), leading them to surmise that “more research is needed to understand the sources of gender differences in financial literacy" (2016, p. 25). Bucher-Koenen et al. conclude by remarking that "an important avenue for future research is understanding to what extent gender differences in financial literacy are already present at an early stage in life or at what point they develop" (2016, p. 26). As a framework to help understand how gender based financial socialisation in the home could alter financial behaviour and attitudes in adulthood, it is pertinent to understand theory of gender development.

Research Question and Objectives

This paper applies *Social Cognitive Theory of Gender Development* to financial learning in the home, to establish the extent of gender differences in financial socialisation in childhood. The literature outlined above in addition to a body of literature examining general conversations between parents and children which suggests parental conversations are differentiated by gender (Dunn, Bretherton, & Munn, 1987) informed the decision to use parent-child financial discussions in the home as a measure of financial socialisation. Key findings of the literature were that mothers talk more to daughters than sons, with both mothers and fathers talking differently to their sons compared to their daughters (Pomerantz & Ruble, 1998; Leavell et al., 2012; Leaper, C., Anderson, K. J., & Sanders, P, 1998). As a result of these findings, this research asks two questions:

1. *What gender bias exists in financial interactions between parents and children?*
2. *How are financial interactions between parents and children correlated with financial attitudes and behaviour?*

While there are separate fields of literature examining family socialisation, gender differences in parental conversations with their children, and financial socialisation, the contribution of this paper is to combine these areas using the theories of gender development, to establish correlations between parent-child financial discussions in the home with financial attitudes and behaviours. While previous research has been conducted revealing financial socialisation in the home to be influential, with some suggesting different socialisation experiences based on socioeconomic status (Webley and Nyhus, 2013), the unique contribution this paper makes is to examine the effect of financial socialisation in the home under the lens of gender. This research contributes to the knowledge gap identified by researchers such as Lusardi and Mitchell (2014) and Bucher-Koenen et al. (2016), with the latter specifically identifying research into the causes of gender differences in adulthood as being required.

Literature Review

Theory of Gender Development

In their 1999 article *Social cognitive theory of gender development and differentiation*, Bussey and Bandura identify three major influences on gender development, including modelling (agents such as parents and peers), enactive experience and direct tuition (including in the home), surmising that 'Children develop the stereotypic conceptions of gender from what they see and hear around them. Once they achieve gender constancy – the belief that their own gender is fixed and irreversible – they positively value their gender identity and seek to behave only in ways that are congruent with that conception' (p. 677). These views are not dissimilar to those expressed as *Status Characteristics Theory* by Ridgeway (2001) that gender inequalities are due to status beliefs: "widely held cultural beliefs that link greater social significance and general competence, as well as specific positive and negative skills, with one category of a social distinction (e.g., men) compared to another (e.g., women)" (Ridgeway 2001, 638).

The theories around gender development suggest it is plausible female and male children may experience different financial socialisation in the home growing up, leading to different financial identities, attitudes, knowledge and behaviours as adults; with Danes and Haberman

(2007) concluding that "gendered financial role patterns that are experienced over time become internalized norms" (p. 48), influencing financial expectations and behaviour of children. Specifically, Danes and Haberman (2007) suggested that "…girls are trained to be financially dependent and to seek safety and security rather than become risk-takers…" (p. 49). Research does suggest that the home is an important influence on what children learn about money matters, with the inference that if parents are poor money managers, children are likely to model their parents' poor behaviour (Lusardi, Mitchell and Curto 2010; Clarke, Heaton, Israelsen and Eggert 2005, Danes 1994). Shim and Serido (2011) for example believed parents' influence to be 1.5 times that of financial education and double the influence of friends, while others highlight the amount of experience children acquire from being an observer or participant in the shopping process at an early age (Berti and Bombi, 1988; Karsten, 1996).

The ages of 7 to 11 years old are identified by John (1999) as being an important stage for the development of consumer knowledge and skills, with the 11 to 16 year old age group one where children shape their own identity as consumers while allowing for group expectations. The role of parents in this process cannot be underestimated, with Shim and Serido (2011) of the opinion that financial discussions in the home with children played an important role in developing financial capability in those children later in life.

Parental Gender Bias in Gender Development

Not only has the home has been identified as being influential in developing financial identities, there is also evidence of a gender bias in the way parents interact with children in matters financial. While financial conversations in the home, with same-sex role models are seen as being particularly powerful (Bussey and Perry, 1982) previous findings reveal that fathers have different discussions with their sons than with their daughters (Leavell et al., 2012, p. 55). While Danes and Haberman (2007) found that fathers were more likely to model financial behaviours than mothers, others have found men to be more likely to complete financial surveys as the household financial expert and mothers to be less involved in financial discussions during a child's formative years. With these gender differences not explained by a lack of interest by females in financial matters (Fonseca, Mullen, Zamarro and Zissimopoulos, 2012; Bowen, 2002; Brown and Graf, 2013), financial socialisation of parents on the basis of gender may well be socialising children in the household through modelling, enactive experience and direct tuition.

Agnew and Cameron-Agnew (2015) found that 14 year old females on average had their first financial discussion with parents over eight months later than 14 year old males, with the age of the child when having their first financial discussion in the home negatively correlated with financial literacy quiz scores. While Agnew and Cameron-Agnew did not find a significant difference by gender in financial literacy quiz scores for 14 year olds, they did find such a gender difference in first year tertiary students. These findings mirror those found in the Programme for International Students Assessment (*PISA*) *Students and Money: Financial Literacy* (OECD 2014) study of 15 year olds, where only Italy showed a significant difference in financial literacy test scores between the genders. One possible reason suggested in the *PISA* study for the phenomenon of the gender gap developing in adulthood rather than being present in childhood was that "as boys and girls grow up, they may be exposed to different opportunities to learn and improve their financial competencies….and therefore they may develop different levels of financial knowledge and different financial strategies in adulthood over time" (OECD 2014, p. 81). This hypothesis is supported by McHale, et al. (2003, p. 134) who stated "The extent to which opportunities and personal choices are relatively constrained during childhood and adolescence, the implications of family gender socialization may be most apparent later, for instance, in the kinds of education and career decisions individuals make and in the family roles they assume in their adult lives".

Method

A sample of 1,320 subjects were recruited from schools in London, England along with Wellington and Christchurch, New Zealand. Eleven to fourteen year olds were chosen to establish if financial socialisation was occurring in the home from a younger age. This age groups was chosen as one that is old enough to give accurate recollections, but young enough to have a clear recollection of nuanced gender recollections that may exist from an early age, a major advantage over asking adults or even university aged students of their childhood recollections. For the purposes of this study, the term children refers to eleven to fourteen year olds. A two country study of New Zealand and England was chosen so as to make the results internationally applicable, in the context of English speaking countries, where gender differences in adult financial literacy have been reported in the literature. The sample consists of 805 students from NZ, with 515 from England, made up of 707 males and 613 females. 989 of the participants self-identified as being of white/Caucasian ethnicity. The children completed a questionnaire asking them to mark on a five point Likert scale (1=strongly disagree to 5=strongly agree) their level of agreement with a series of statements about financial attitudes toward financial planning and being conscientious regarding money. While the financial attitude indices developed from these statements have not been tested in previous research, they have been developed in response to previous research, with exploratory factor analysis being used to identify the statements used in table one as measuring financial planning and conscientiousness, as confirmed by the Cronbach alphas.

Table one: Financial attitude indices.

The Likert scale scores were summed for each category to create two indices that could be used in regressions as a measure of financial attitudes. Each index was used as the dependant variable in two ordinary least squares (OLS) regressions to determine the influences on attitudes to money. Independent variables included demographic variables along with variables aimed at measuring gender bias in parental financial socialisation of their children. Testing for the assumptions of linear regression did not raise any concerns.

Logit regressions were also run using a self-reported binary (yes/no) dependant variable of whether the subject usually saved some of their pocket money so they still had some left when their parent(s)/guardian(s) gave them more. This dependant variable was used as a measure of saving behaviour, with the attitudes to money indices included as independent variables.

Results

Table two shows financial discussions broken down by the gender of the parent. Correlations with saving behaviour and attitudes scales as discussed in the method section are shown. Demographic variables show more correlations with the saving pocket money dependent variable than the attitudes to money dependent variables, with gender being significantly correlated. For this reason, the results are stratified by gender for the saving pocket money variable.

Table two: Variable influencing attitudes to money and financial behaviours.

Frequency of financial discussions with parents and friends is positively correlated with attitude to money development, but not to the actual act of saving pocket money. The effect size of parental discussions is larger than those for friends for the *Financial Planning ATM* index. A one unit increase on the three point scale of never, sometimes and a lot in response to the frequency of parental discussions has an effect size of an increased *Financial Planning*

ATM index score of 0.7. So moving from a response of 'never' to a response of 'a lot' equates to a two point increase on the *Financial Planning ATM* which has a mean of 15 out of 20. The effect size of discussions with friends has an effect size of approximately half that of parental discussions. For the *Conscientious ATM* index both parental discussion and discussion with friends frequency have an effect size of 0.5, meaning moving from a response of 'never' to a response of 'a lot' equates to a one and a half point increase on the index. Neither of the attitude indices are significantly influenced by the gender of the parent that is having the most discussions with the child.

While causality between attitudes to money and financial discussions is unclear, a stronger argument can be made for causality when examining the correlations between the gender of the parent present when spending pocket money and attitudes to money. Relative to no parent being present, more positive attitudes to money is positively correlated with the presence of just the mother, and the presence of both parents when pocket money is being spent. There is no such significant difference between the presence of the father and no parent being present when pocket money is being spent. In terms of the *Financial Planning ATM* index the presence of both parents when pocket money is being spent has a coefficient of approximately 0.7, the same effect size as the frequency of discussion with parents variable. A similar sized coefficient of nearly 0.79 was found for the *Conscientious ATM* index when both parents were present when pocket money is spent, with an even larger coefficient of 0.94 when just the mother is present. These findings suggests that the spending modelling and enactment of mothers may play an important role in the financial attitude development of their children, especially given the power of modelling identified in the *Social Cognitive Theory* literature. Interestingly; having completed a financial literacy class at school was not correlated with either attitude to money index.

In an effort to ascertain the effect of financial socialisation on financial behaviour, a logit regression was run with a dependent variable of 'do you usually save some of your pocket money so you will still have some left when your parent(s)/guardian(s) give you more?'

Table Three: Odds ratios for variables influencing whether a child saves all of their pocket money or not.

As the results in table three show, financial discussions are not significantly correlated with saving behaviour, although they are indirectly through the *ATM Financial Planning* variable. The gender variable is significant with a large effect size, with males 50% more likely to have saved some of their pocket money than females. The same pattern as for attitudes to money is found - children are 91% more likely to save some of their pocket money if their mother is present, and 89% more likely to save some of their pocket money if both parents are present, relative to no parent being present. When the sample is split by gender, a clear relationship is established between female children and their mothers, with the finding that children are more likely to save some of their money if their mother is present significant only for female children, and not for male children. The effect size is very large, with female children over 200% more likely to save some of their pocket money if their mother is present when spending compared to no parent being present. It is the male children driving the more likely to save when both parents are present than no parents present result, with an increase in odds of 245%. A higher score on the *Financial Planning ATM* index was significant for both male and female students, with a similar effect size of a one point higher score on the index meaning an approximately 30% higher probability of saving some of their pocket money. As for the attitude to money results, having done a financial literacy course at school was not significantly correlated with saving pocket money. Data was also collected on how much pocket money each participant received, although the data was not as complete, with some students not completing the question. When the variable was included in the logit regressions it was not significant, and did not change the significance of any other variables. There was also only a negligible change in the effect sizes of the significant variables.

Discussion

The findings of this paper support those found in previous research that parents play an important role in the home in educating their children. Specifically, the frequency of financial discussions with parents plays an important role in financial attitude development within children. While financial discussions with friends also play a part, their effect is less than that of parents. This finding is supportive of national financial literacy strategies such as New Zealand's, which explicitly includes talking about money as part of a national strategy to improve financial well-being. One of the goals of the national strategy is to enable a culture where it is easy to talk about money, with the 'talk' activity stream encouraging informal learning with the outcome that people talk openly with family members and friends about money (Commission for Financial Capability, 2014). While the previous research mentioned in the introduction suggested that differential treatment between male and female children accounted for differences in financial literacy knowledge, encouragingly, the gender of the parent having financial discussions with their child does not significantly impact on the child's financial attitude in this study. While more frequent financial discussions with parents are correlated with more positive financial attitudes, there is no significant difference in financial attitudes between male and female children, further suggesting financial attitude development is not subjected to differential financial socialisation based on gender. This finding is not necessarily at odds with previous findings in that the type of financial discussion that results in greater financial knowledge could still be subject to a gender bias. Using Bussey and Bandura's (1999) previously mentioned identification of three influences on gender development, better or more regular direct tuition from a parent is more likely to lead to greater financial knowledge, while it is possible for financial attitudes to be shaped through more general, less instructional discussions with parents that do not necessarily increase specific financial knowledge. It could be that parents are having more instructional financial discussions with sons than daughters leading to greater financial knowledge later in life for sons, while still shaping the financial attitudes of both. Of course, the causality of these financial discussions is not established through correlations, with parental conversations potentially being prompted by inquisitive children rather than instructional parents. What can be deduced however, is that if financial discussions are less frequent, no matter what the catalyst for the discussion, less positive financial attitudes are developed.

Positive financial attitudes are also developed through enactive experience and modelling, both of which can be experienced by the child while in the act of spending. The correlations between the presence of a particular parent during the act of spending and financial attitudes are subject to gender differences. The presence of the father during spending was not significantly different to no parent being present in terms of influencing financial attitudes. The presence of the mother or both parents when spending are positively correlated with financial attitudes relative to no parent being present when spending. It could be that mothers are encouraging better financial attitudes during spending when with their child, or it could be that mothers and fathers engage in different types of spending when with their children. If spending with the father is usually in a social setting such as at a sporting event or on special occasions, an intuitive argument could be constructed as to why luxury or impulsive type spending could be perceived as more acceptable in the context of spending with only the father present. Contrast this to a child who does most of their spending with their mother when doing regular shopping for groceries. In this setting impulsive spending could be less condoned, with some form of direct tuition around acceptable levels of spending possible. While this intuitive argument may explain differences in financial attitude formation when mothers are present for spending then when fathers are present, it does not explain why there is no significant difference in attitude formation between the father being present for spending and neither parent being present. It is hard to imagine spending with the father only being in a more social spending conducive of impulse spending then when the child is under the supervision of neither parent when spending.

Whatever the explanation for the differing correlations between mothers and fathers presence when the child is spending, when answering the research question *what gender bias exists in financial interactions between parents and children* these findings show that the presence of the mother or both parents when a child is spending is beneficial to positive attitude formation. The presence of the father when a child is spending has no effect on attitude formation relative to no parent being present. These results occur irrespective of the gender of the child, and are suggestive of differing roles of parents in the financial socialisation of their children.

When considering the financial behaviour of children, there is a more clear-cut gender bias present, in that spending undertaken with a mother or both parents present is more likely to result in some money being saved than when spending is undertaken with neither parent present. When the sample is stratified by the gender of the child, 'same-sex' correlations emerge. Girls are more likely to save some pocket money when they are spending with their mother, and boys are more likely to save some pocket money when spending with both parents, relative to no parent being present. Again, these differences may be due to different spending environments when mothers are spending with their children compared to when both parents are, but this does not explain why a daughter spending with her mother would save more than when no parents is present, while a son spending with his mother saves no more than when no parents is present. This result is suggestive of a differential experience of financial socialisation for boys and girls depending on the gender of the parent present when spending.

When answering the second research question *how are financial interactions between parents and children correlated with financial attitudes and behaviours,* more frequent financial discussions between parents and children are correlated with more positive financial attitudes of children, but not directly to their financial behaviours. Financial discussions are indirectly correlated with the financial behaviour of saving through financial attitudes, with more positive financial attitudes correlated with greater saving. This correlation exists for both male and female children. The presence of the mother or both parents is correlated with more positive financial attitudes and greater levels of saving, depending on the gender of the child, with a strong 'mother effect' for female children.

Conclusions

These findings support the proposition that differing financial socialisation occurs in the home, based on the gender of the child. While positive financial attitudes are significantly correlated with more frequent financial discussions with parents, the gender of the parent the child is having financial discussions with is not significant in attitude formation. Given previous findings that boys have earlier financial discussions than girls, a correlation between financial discussions and attitudes is an important one, however more research is needed to establish causality. Saving behaviour of children is influenced by attitudes to money along with the presence of parents when spending, which is subject to a same sex gender bias. Given the findings of *Social Cognitive Theory* literature which suggests that socialisation in the home in childhood is influential on outcomes in adulthood, the results in this paper of gender biased financial socialisation in the home are important considerations for the design of school-based financial literacy programmes. Specifically, these programmes should consider a goal of encouraging discussion and questioning gender based attitudes and roles in the home. Extending the reach of school-based financial literacy programmes to include educating parents could also be of benefit. Making parents aware that gender-based social conditioning in the home, which parents may or may not be cognisant of, may be influential in developing a child's financial attitudes and behaviours in the future is important. Teaching parents that the presence of a particular gender of parent for a particular type of spending is correlated with future spending habits, along with the link between parent-child discussions and financial attitude formation, may be important for the future financial well-being of children, as well as being illuminating for the parent. They are also important findings in terms of going some way to explaining the existence of a gender difference in financial knowledge in adulthood.

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Table One: Financial attitude indices.

Index	**Cronbach Alpha**	**n = 1,343**
Attitude To Money (ATM) – Financial Planning	0.739	It is important to plan for the future when thinking about what to do with my money. I try to put money aside in case I need it more when I'm older. I keep track of how much money I have to spend. I am careful with how I spend my money.
Attitude To Money (ATM) - Conscientious	0.763	It is important to help my parent(s)/guardian(s) save money by being careful with how I spend their money. When my parent(s)/guardian(s) buy me things it is important to pay them back by helping them out when I can. I am cautious when spending my parent(s)/guardian(s) money. I should be responsible about how I spend my parent(s)/guardian(s) money.

Table Two: OLS Coefficients for variables influencing attitudes to money.

n = 1,343	**ATM Financial Planning**	**ATM Conscientious**
	Total	**Total**
NZ	0.266 (1.138)	0.584*** (2.667)
Age	0.082 (0.617)	0.170 (1.366)
White	-0.349 (-1.466)	-0.340 (-1.524)
Number of bedrooms	-0.073 (-0.445)	-0.078 (-0.509)
Male	0.335 (1.638)	0.133 (0.695)
With mum more often when spending	0.492 (1.965)	0.944*** (4.027)
With dad more often when spending	-0.062 (-0.119)	-0.341 (-0.692)
With both parents more often when spending	0.668** (2.581)	0.788*** (3.255)
Most financial discussions with dad	0.232 (0.875)	0.355 (1.431)
Most financial discussions with mum	0.066 (0.283)	0.033 (0.152)
Frequency of discussions with parents (Never, sometimes, a lot)	0.712*** (3.342)	0.541*** (2.716)
Frequency of discussions with friends (Never, sometimes, a lot)	0.381** (2.149)	0.511*** (3.085)
Completed a financial literacy class at school	0.076 (0.354)	-0.191 (-0.956)
Adjusted R^2	0.026	0.046

*** p< 0.01, ** p<0.5

Table Three: Odds ratios for variables influencing whether a child saves all of their pocket money or not.

n = 1,343	Save Some Pocket Money	Save Some Pocket Money – Female	Save Some Pocket Money - Male
NZ	1.005	1.364	0.709
Age	0.985	0.835	1.176
White	0.637	1.034	0.299***
Number of bedrooms	1.645***	1.945***	1.330
Male	1.498**	----	----
With mum more often when spending	1.907**	3.062***	1.004
With dad more often when spending	0.635	2.182	0.370
With both parents more often when spending	1.887**	1.530	2.457**
Most financial discussions with dad	1.212	0.981	1.511
Most financial discussions with mum	1.128	1.012	1.204
Frequency of discussions with parents (Never, sometimes, a lot)	1.087	1.518	0.846
Frequency of discussions with friends (Never, sometimes, a lot)	1.216	1.360	1.152
Completed a financial literacy class at school	0.922	0.924	0.796
ATM – Financial Planning	1.325***	1.353***	1.319***
ATM – Conscientious	0.961	0.965	0.950

Nagelkerke R^2	0.183	0.239	0.197
Chi^2 goodness of fit test	38.626***	64.115***	53.958***

*** $p < 0.01$, ** $p<0.5$