

The Association Between School-Related Perceived Financial Pressure and Adolescent Mental Well-being

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ABSTRACT

This study investigated the relationships between adolescents' school-related perceived financial pressure, mental well-being, and their relationship with their parents. A 27-item online questionnaire was designed with three subscales - perceived financial pressure, parent-adolescent relationship, and mental well-being - to examine this. A sample of 40 adolescent students in Auckland, New Zealand, was collected. Correlational relationships between the subscales were measured using Pearson's correlation, and gender differences were investigated using the ANOVA test. The correlational tests revealed that there are significant negative correlations between perceived financial pressure and parent-adolescent relationship, as well as between perceived financial pressure and mental well-being. A positive correlation was identified between parent-adolescent relationship and mental well-being. No significant differences within these subscales were found between genders. The findings suggest that adolescent students' stress related to academics is significantly influenced by how they perceive their parents' financial situation. It is also suggested that financial stress places a strain on parent-adolescent relationships, as consistent with previous research. The results also give reason to assume that male and female adolescents in Auckland experience similar amounts of financial pressure.

Key words: *perceived financial pressure, parent-adolescent relationship, mental well-being, adolescent, academic, stress*

INTRODUCTION

Adolescence is a critical period of identity development, which is greatly influenced by the social circle surrounding them. It is a time spent largely on experiences related to school education. As a result, academic pressure, which can be defined as stress that stems from one's academic performance (Lan et al., 2023), is found to be one of the leading factors that determine the state of an adolescent's mental well-being (Steare et al., 2023). Specifically, numerous studies have identified academic pressures as the most influential causes of perceived stress (Dopmeijer, 2021; Neveu et al., 2012; Mitchell, 2020). This is a serious issue as adolescence is represented by an increased sensitivity to stress. Consequently, adolescents are susceptible to mental health issues (Baik et al., 2019; Alharbi and Smith, 2018). Research has discovered that increased academic pressure is associated with increased depressive and anxiety symptoms (Tang et al., 2020; Steare et al., 2023). Additionally, research discovered a strong positive correlation between perceived stress and the female gender (Farrer et al., 2016), hence suggesting that females may be more mentally affected by academic pressures than males. The delicate nature of mental well-being for individuals at this age results in a need to dive deeper into the nuance of the broad term, academic pressure. This research will help discover solutions that alleviate the intensity of academic pressure and hence its negative effects on mental health. Central factors that will be investigated in this study are parental pressure and financial pressure.

The perceived parental support or pressure in regards to academics plays a key role in an adolescent's development of stress (Kulakow et al., 2021). Parental support can be viewed as a resource, hence, according to Hobfoll's (1989) definition of psychological stress as "a reaction to the environment in which there is (a) a threat to a net of resources, (b) the net loss of resources, or (c) a lack of resource gain following the investment of resources", the opposite of parental support - parental pressure - can be deemed a source of stress. Parental pressure being a stressor is supported by past research that has found that it positively correlates with anxiety (Ringeisen and Raufelder, 2015). This includes general anxiety and test anxiety, which is when an individual experiences extreme stress and anxiety before and during a test (Stankovska et al., 2018). Intriguingly, while girls will view parental support and pressure as opposites, boys are more likely to see them as the same thing (Leff and Hoyle, 1995; Raufelder et al., 2015). This can be explained by the idea that parental pressure and parental support, specifically informational support and not emotional, are opposite ends of the same spectrum - they both involve conveying interest in the child's academic outcomes (Ringeisen and Raufelder, 2015).

In addition to parental pressure, the perceived stress of college students has a strong correlation with their financial situation (Britt et al., 2017). Financial troubles may be a direct contributor to a self-providing individual's academic stress, but for adolescents, it is more likely that it indirectly affects academic pressure by influencing the levels of perceived parental pressure. Economic stress increases parents' emotional distress, decreasing parental warmth and hence decreasing the quality of parent-child relationships (Xiao et al., 2023). However, there is a scarcity of research that directly investigates the effect of parents' financial stress on adolescents' sense of academic pressure.

This study aims to investigate the extent to which parents' financial stress and investment in their New Zealand adolescent child influence the parent-adolescent relationship and adolescents' mental well-being in regard to academic pressure. Given the sensitive nature of adolescents' mental health and the significance of school-related experiences to teenagers, this research is timely. This study's hypotheses

include: (1) levels of perceived financial pressure will negatively correlate with adolescent school-related mental health, (2) the quality of the parent-adolescent relationship will positively correlate with school-related mental well-being, and (3) levels of perceived financial pressure will negatively correlate with the quality of the parent-adolescent relationship. This study will also test the hypothesis that females will generally have worse mental well-being and increased perceived financial pressure.

MATERIALS AND METHODS

Participants and procedure

This study used a convenience sampling method to collect data from 40 adolescent students in Auckland, New Zealand. The participants were 15-19 years old (mean = 17.25, SD = 0.776). 13 participants were male (32.5%), and the remaining 27 participants were female (67.5%). 60% of the participants were Chinese, 20% Korean, and 13% White/Caucasian. One participant was multiracial, and two were of other races. Most of the participants reported their family's socioeconomic status as middle-class (n = 28); six were of high socioeconomic status, and 1 was low-class. The majority of the participants were second-generation immigrants to New Zealand (60%). 33% were first-generation immigrants, and the rest were 3rd or more generations immigrants.

This study followed the ethical standards of a private school system in Auckland, New Zealand. All participants were asked to complete a consent form, which also contained information regarding the details and purpose of the study. The privacy of the participants was ensured by designing the survey questionnaire responses to be anonymous; consent was signed on a separate form so that the names of the participants could not be connected to their responses. No data that could be used to identify individuals was collected. Additionally, all participants were reminded of their right to withdraw before starting the survey.

Measures

A 27-item online questionnaire (Appendix A) was designed specifically to test the hypotheses of this study. It included a background section, along with 3 separately scored sections and an optional open question. Each item in the scored sections was individually scored on a 4-point Likert scale (1-4). The background section involved 5 items that collected information on the participants' demographic: age, gender, ethnicity, socioeconomic status and immigration status. The scored sections were composed of the 3 following domains: perceived financial pressure, parent-adolescent relationship and mental well-being. The final open question was: "How do your parents' expectations affect your mental well-being, if at all?"

Perceived financial pressure. This subscale of the questionnaire was made up of 6 items that measured the adolescent's perception of their parents' general financial stress. It also measured the adolescent's perception of their parents' financial investment in school-related activities, expectations for the child's future repayment, and influence on the adolescent's decisions. An example of a question is: "To what extent does your parents' financial investment in an activity influence your decisions related to said activity?" The minimum score that could be achieved for this section was 6, and the maximum was 24. A higher score represented a higher level of perceived financial pressure. This section also included a follow-up item that the participant would be required to answer depending on their response to the

previous question, “How often do you consider your parents’ financial contributions when making decisions?” This follow-up question was not included in the scoring, as it collected qualitative answers that did not lie on a scale. The follow-up item was: “Which word best describes why you consider your parents’ financial contributions?”, with the answer options of: “Gratitude”, “Obligation”, “Dependence”, and “Guilt”.

Parent-adolescent relationship. This subscale was comprised of 7 scored items and 1 non-scored item (“I always do what my parents tell me to”). The minimum score that could be obtained for this subscale was 7, and the maximum was 28. A higher score would correspond with worse parent-adolescent relationship quality. In this study, a lowered parent-adolescent relationship quality is characterised by increased general parent strictness, influence and pressure on the child, along with a decreased sense of openness from the child to the parent.

Mental well-being. Mental well-being was measured by 7 items, again all scored on a 4-point Likert scale. This subscale focused on general stress, stress related to school, uncertainty and overall life satisfaction. A question from this section is “How stressed do you get during exam periods due to pressure from parents to do well?” The participants could score a minimum of 7 and a maximum of 28. The higher the score, the worse the participant’s mental well-being.

Data Analysis

The digital analysis program, JASP, was used to analyse the data collected by the questionnaire. Scores collected from each subscale of the questionnaire (perceived financial pressure, parent-adolescent relationship, mental well-being) were separated into three separate data sets. These three sets of data were first tested to determine which correlation test would be suitable. They were plotted into scatter graphs to confirm that they had linear relationships with one another. Additionally, a Shapiro-Wilk value was calculated for each subscale to test whether the data within each set was normally distributed. This test was used as it is suitable for data sets of samples smaller than 50. Concluded from the information gathered in the above analysis, Pearson’s correlation was used to analyse the correlational relationships between the subscales. The following correlational relationships were investigated to test the hypotheses: perceived financial pressure v parent-adolescent relationship, perceived financial pressure v mental well-being, and parent-adolescent relationship v mental well-being. The p-values obtained from each Pearson’s r-value will be compared with the alpha level of 0.05; in other words, a p-value smaller than 0.05 will indicate a significant correlation.

In addition to correlational tests between subscales, the differences in data between males and females will be investigated. A one-way ANOVA test method will be used to determine whether there is a significant difference in the data collected within each subscale between the different genders. The Brown-Forsythe test was first used to confirm the homogeneity of variance between data sets. Like with the correlational tests, an alpha level of 0.05 will be established for the ANOVA tests.

RESULTS

Descriptive Statistics

Table 1. Descriptive Statistics

		Parent-Adolescent Relationship	Mental Well-being
Valid	40	40	40
Mean	13.275	15	17.425
Std. Deviation	3.146	3.187	3.186
Shapiro-Wilk	0.962	0.947	0.962
P-value of Shapiro-Wilk	0.191	0.06	0.192
Minimum	8	7	12
Maximum	21	23	25

Table 1 presents the descriptive statistics of each data set of the three subscales within the questionnaire. This includes the mean, standard deviation, and Shapiro-Wilk test values. The p-values of the Shapiro-Wilk test for each data set were 0.191, 0.060, and 0.192 for the variables perceived financial pressure, parent-adolescent relationship, and mental well-being, respectively. Since all the p-values were above 0.05, the results for the Shapiro-Wilk test were not significant, and hence the data within each subscale can be assumed to be normally distributed. This confirms that Pearson’s correlation can be used to analyse the relationship between the subscales.

Correlations

Table 2. Pearson’s Correlations

	Pearson's r	p	Effect size (Fisher's z)	SE Effect size
Perceived Financial Pressure – Parent-Adolescent Relationship	0.35*	0.027	0.366	0.164
Perceived Financial Pressure – Mental Well-Being	0.687***	< .001	0.841	0.164
Parent-Adolescent Relationship – Mental Well-Being	0.437**	0.005	0.469	0.164

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 2 displays the results of Pearson's Correlational tests. This includes Pearson's r value, the p -value, and the effect size (Fisher's z) of the three pairs of data sets. All relationships had a p -value smaller than 0.05, so they were all significant. Additionally, a positive correlation was found for each relationship. The relationship between perceived financial pressure and mental well-being was the most positively associated ($r = 0.687$, $p < 0.001$), and had the largest effect size ($z = 0.841$). Parent-adolescent relationship and mental well-being had a smaller positive association ($r = 0.437$, $p = 0.005$) with a moderate effect size ($z = 0.469$). Perceived financial pressure and the parent-adolescent relationship were most weakly positively related ($r = 0.350$, $p = 0.027$) and had the smallest effect size ($z = 0.366$).

Gender

Table 3. ANOVA - Perceived Financial Pressure

Cases	Sum of Squares	df	Mean Square	F	p
Gender	3.354	1	3.354	0.333	0.567
Residuals	382.621	38	10.069		

Table 4. ANOVA - Parent-Adolescent Relationship

Cases	Sum of Squares	df	Mean Square	F	p
Gender	2.849	1	2.849	0.275	0.603
Residuals	393.151	38	10.346		

Table 5. ANOVA - Mental Well-Being

Cases	Sum of Squares	df	Mean Square	F	p
Gender	2.333	1	2.333	0.225	0.638
Residuals	393.442	38	10.354		

Within each subscale, the data were separated into two groups: male and female. The results of the Brown-Forsythe test for equality of variance between genders in each subscale all produced a p -value larger than 0.05 (perceived financial pressure, $p = 0.644$; parent-adolescent relationship, $p = 0.611$; mental well-being, $p = 0.889$); hence, the variances within each subscale can be assumed to express homogeneity. Table 3, table 4, and table 5 present the ANOVA test results for the perceived financial pressure, parent-adolescent relationship, and mental well-being subscales, respectively. There is no statistically significant difference between genders in regards to their scores in the perceived financial pressure subscale ($F = 0.333$, $p = 0.567$), as well as for the parent-adolescent relationship ($F = 0.275$, $p = 0.603$) and mental well-being ($F = 0.225$, $p = 0.638$) subscales.

Qualitative data

The non-scored follow-up item under the financial pressure subscale had the options of “guilt”, “gratitude”, “obligation”, and “dependence”. Only two participants were not given the follow-up question, as they answered “Never” to the previous question asking, “How often do you consider your parents’ financial contributions when making decisions?” Out of the 38 participants that answered the follow-up, 25 answered “gratitude”, 3 answered “obligation”, 3 answered “dependence”, and 5 answered “guilt”.

25 participants answered the optional open question, “How do your parents’ expectations affect your well-being, if at all?” 14 (56%) of these answers were interpreted as indicating that the parents had no significant effect on the adolescent’s well-being. The following are examples of some of the answers that were interpreted this way: “it doesn’t”, “a little bit”, “They [...] encourage mental wellbeing and overall happiness [over] the pressures and stress that comes from excessive study and academic work”, “They want for me what I want for myself. I don’t feel that they have unrealistic standards.” 6 (24%) participants expressed that their parents’ expectations had a significant effect on their mental well-being, for example. Of these participants, one said that these impactful expectations were on their sexuality and marriage rather than academics. 5 (20%) participants felt that their own expectations had a greater impact on their mental well-being than their parents’ expectations. Out of all 25 participants, 4 (16%) expressed that their mental well-being is impacted by their own desire to repay their parents: “Sources of stress due to their expectations would rather be due to me feeling the need to ‘repay’ their efforts in funding my education”, “If I don’t get a good job in the future, all the money and time they invested into me is going to be useless”, “my mum’s a really hard worker and I would just like to live up to her expectations as she put her all into raising me”, “[...] I think I’m harder on myself, knowing they have spent so much money and time on me.” Interestingly, of these 4 participants, 3 answered “guilt” in the follow-up question while the other responded with “gratitude”.

DISCUSSION

This study aimed to investigate the extent to which parents’ financial stress and investment in their child, as perceived by the adolescent child, influences the parent-adolescent relationship and the adolescent’s mental well-being. This study’s 3 main hypotheses were all confirmed by the results. Hypothesis 1 assumes that levels of perceived financial pressure will negatively correlate with adolescent mental health, meaning that as perceived financial pressure increases, adolescent mental health will worsen. This hypothesis was confirmed as the scores on the perceived financial pressure and mental health subscales had a positive correlation. Since a higher score on each subscale equated to increased pressure and worse mental health, respectively, the positive correlation of the subscale scores corresponds to a negative correlation between perceived financial pressure and adolescent mental health, thus confirming hypothesis 1. This is consistent with previous research that found financial pressure in childhood can affect the individual on a cellular level by causing shortened telomeres, which is associated with psychological illnesses and traumas (Tung et al., 2022). Numerous studies also established a positive correlation between familial financial pressure and a child’s socioemotional difficulties, depression and suicidal ideation (McGill et al., 2022; Yang et al., 2023).

Hypothesis 2 assumes that the quality of the parent-adolescent relationship will positively correlate with mental well-being. This hypothesis was confirmed by the positive correlation that was found between the parent-adolescent and mental well-being subscales. This is, again, consistent with past research that established sub-optimal parenting would result in the child having worse mental health (Stafford et al., 2016). An explanation for this correlation could be that children have an increased sense of loneliness when their relationship with their parents lacks closeness (Yan et al., 2018). This loneliness implies an absence of a sense of safety, which is a consequence of the inadequate emotional and physical care received by the child from the parent. The child is deprived of this opportunity to form emotional connections, which are necessary for developing healthy coping strategies for stressful situations (Yang et al., 2023).

Finally, the 3rd main hypothesis - levels of perceived financial pressure will negatively correlate with the quality of the parent-adolescent relationship - was also proven correct. This hypothesis assumes that an increase in financial pressure will be accompanied by a decrease in the quality of the parent-adolescent relationship. The results found a positive correlation between financial pressure and parent-adolescent relationship subscales' scores, where a higher score in each meant increased financial pressure and decreased quality of parent-adolescent relationship, respectively. Hence, the positive correlation established by the scores corresponded to the relationship assumed in the hypothesis. The perceived financial pressure reported by adolescents is dependent on how their parents present their financial stress. Hence, adolescents would likely experience an increased perceived financial pressure if their parents themselves were experiencing more financial stress. Economic hardships make parents vulnerable to psychological distress, as proven by their positive correlation with depression (Guan et al., 2022). Parents experiencing more mental distress is associated with increased neglect of their child and maladaptive parenting styles (Dadi et al., 2023; Tung et al., 2022).

Although all these relationships were established separately, they can be considered in tandem with each other. Parental financial worry can increase psychological stress which may be reflected by negative parent-child interactions, hence decreasing the quality of the parent-adolescent relationship. These negative interactions, such as neglect and oppressive control, will result in the child feeling an absence of security and, consequently, developing higher levels of anxiety (Thomson et al., 2023). This explanation is supported by studies that found associations between family economic stress, parent-child conflicts, and decreased mental well-being of the child (e.g., Mistry and Elenbaas, 2021).

The hypothesis regarding gender, which assumed females would have worse mental well-being and increased financial pressure, was disproven by the results. No significant statistical differences were found in the scores for the mental well-being, financial pressure, and parent-adolescent relationship subscales between genders. As a result, we can conclude that male and female adolescents are equally susceptible to financial pressures and mental distress. This is inconsistent with previous research that has established a general consensus that women are more vulnerable to worsened mental health, such as increased levels of stress, due to higher sensitivity to external emotional stressors (e.g., Tung et al., 2022; Barbayannis et al., 2022). However, other studies had findings that could be interpreted as contradicting to this. For example, academic burnout prevalence has no significant associations with gender (Shrestha et al., 2021). This study's results can be explained by considering how different genders will interpret external stimuli in different ways. Friends and peers begin to have a larger influence on an individual's mental well-being, while the family's role diminishes. This effect occurs earlier in girls (age 12) than in

boys (age 16) (Budler and Stiglic, 2023). The effect of adolescent girls' general increased sensitivity to familial stress can be assumed to be dampened by their earlier decreased need for parental support compared to boys. In conclusion, the different factors influencing mental well-being balance each other out, resulting in no significant difference between genders.

The qualitative data collected in this study give insight into the well-being and thoughts of the adolescent participants. From this data, it can be assumed that over 50% of the participants felt that their parents' expectations did not have a large impact on their mental well-being. The rest of the participants were divided roughly in half, where one group felt that their parents' expectations had a significant effect, while the other group felt that the effects of their own expectations outweighed those of their parents. This shows that there are more adolescents in Auckland, New Zealand, who don't feel overwhelmed by parental expectations than adolescents who do. A small percentage of participants (around 16%) felt that they needed to prove that the money invested in them by their parents was worth it. It can be assumed that the majority of these participants felt this way due to guilt for not living up to the standards set by the money spent. Since these participants specified that their stress was rooted in the financial investment rather than the parents' explicit expectations, a conclusion can be drawn that financial investment is of the same domain as financial pressure. Thus, parents' financial investment indirectly contributes to academic pressures in adolescents.

Limitations

Some limitations should be considered when taking in the findings of this study. Firstly, the questionnaire collects data in the form of self-reported information. As a result, the participants' responses are subjected to recall biases. However, a self-report was deemed an appropriate and beneficial method, as it allowed for the assessment of the adolescents' internal state and perception. Secondly, this study involved a small sample size of only 40 participants, meaning that it is possible some results were produced by chance. Hence, the results of this study may not be entirely representative of the adolescent community in New Zealand. Lastly, a convenient sampling method was implemented. This resulted in a skewed sample in terms of gender, ethnicity, socioeconomic status, and immigration status. The majority of participants were female, Chinese, middle-class, and 2nd generation immigrants.

Future directions

The current findings describe the effects of perceived financial pressure on adolescent well-being and parent-child relationships. These suggest a need for parents to adjust how they express their financial stress at home in order to maintain their adolescent child's mental health. To help parents better understand what specific areas they should consider when interacting with their child, future studies should examine what factors may contribute to an adolescent's perceived financial pressure. For example, future research should attempt to identify the different effects of financial investment, parental financial stress, or wants versus needs (Mistry and Elenbaas, 2021). A focus should also be placed on discovering the emotions that underlie an adolescent's financial pressure.

The negative correlation between perceived financial pressure and parent-child relationship quality indicates that financial stress leads to family stress (Friedline et al., 2020; Rodrigues et al., 2023). This strain on familial relationships likely arises from dysfunctional parenting practices (Dadi et al.,

2023). Future studies should define distinct aspects of dysfunctional parenting styles and identify which affect child mental well-being most significantly. These aspects may include physical abuse, neglect, parental perfectionism, and harsh parenting (Dadi et al., 2023; Friedline et al., 2020; Streit et al., 2021; Randall et al., 2015).

Future studies may also focus on gender differences regarding financial pressure, parent-child relationships, and well-being related to academics. The ambivalent nature of the results drawn from past research and this current study indicates a need for research to be done in greater detail. Researchers should focus on identifying reasons for gender differences, or lack thereof, that also align reasonably with conclusions from previous research.

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