

Maladaptive and Adaptive Perfectionism Impact Psychological Wellbeing Through Mediator Self-Efficacy Versus Resilience

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Abstract

The transition through university is often challenging and can negatively impact students' mental health. Identifying protective factors and opportunities aimed at promoting students' psychological wellbeing is therefore paramount. Maladaptive and adaptive perfectionism have been found to impact students' psychological wellbeing. However, less is known about how sociocognitive factors such as self-efficacy and resilience impact this relationship. The current study investigated whether self-efficacy and resilience mediate the relationship between maladaptive perfectionism, adaptive perfectionism and psychological wellbeing, controlling for gender, study mode, study method and COVID-19 lockdowns. Australian university students ($N = 193$; 86.53% female) aged 18–66 ($M = 27.80$, $SD = 10.45$) studying full-time (68.39%) and online (72.02%) completed the Frost Multidimensional Perfectionism Scale, the General Self-Efficacy Scale, the Brief Resilience Scale and the Warwick-Edinburgh Mental Wellbeing Scale. The indirect effect of maladaptive perfectionism on psychological wellbeing through self-efficacy was significant ($b = -0.09$, $SE = .03$, 95% CI [-0.15, -0.04]). The indirect effect of adaptive perfectionism on psychological wellbeing through self-efficacy was also significant ($b = 0.09$, $SE = .04$, 95% CI [0.02, 0.18]). However, resilience did not indirectly impact the relationship between maladaptive perfectionism, adaptive perfectionism and psychological wellbeing. This study demonstrates the importance of building self-efficacy for maladaptive and adaptive perfectionist students and highlights an opportunity for universities to create self-efficacy-based programs to promote students' psychological wellbeing.

Keywords: adaptive perfectionism, covid-19, maladaptive perfectionism, psychological wellbeing, resilience, self-efficacy

1. Introduction

1.1 Overview

The unique challenges students face while transitioning through university often adversely impact students' mental health. As a result, a higher prevalence of psychological distress (i.e., depression and anxiety symptomology) has been found among university students compared with the general population (Sanci et al., 2022). Previous research has therefore primarily focused on identifying factors contributing to students' psychological distress and how to reduce negative symptoms, with less consideration given to positive domains of students' mental health such as psychological wellbeing (Xie, 2013). With more than 1.6 million students attending Australian universities yearly (Department of Education, 2022), an opportunity exists to identify effective ways to support university students' mental health holistically. Advancing our understanding of the factors that impact students' psychological wellbeing would provide valuable guidance to university student support services who are tasked with creating interventions and prevention programs to promote students' psychological wellbeing at scale (Stallman, 2012).

1.2 Maladaptive Perfectionism, Adaptive Perfectionism and Psychological Wellbeing

Perfectionism has been found to impact psychological wellbeing and is prevalent among university student populations as students are encouraged to strive for excellence (Newman et al., 2019). Previously, perfectionism was portrayed solely as a negative characteristic with pathological implications for the individual (Stoeber & Otto, 2006). As a result, prior research into perfectionism has predominantly focused on negative domains of

students' mental health such as psychological distress (Hamilton & Schweitzer, 2000; Hewitt & Flett, 2002; Klibert et al., 2014; Sheppard & Hicks, 2017). However, it is now thought that perfectionism includes both maladaptive and adaptive facets. Maladaptive perfectionism is characterized by the persistent striving to meet excessively high standards and the tendency to be self-critical, whereas the hallmark of adaptive perfectionism is the exhibition of high personal standards alongside high levels of organization and planning (Frost et al., 1990; Hawkins et al., 2006; Stumpf & Parker, 2000). The inclusion of adaptive perfectionism within the perfectionism dichotomy has led to researchers beginning to investigate how perfectionism impacts positive domains of students' mental health such as psychological wellbeing.

There is support in the literature for maladaptive perfectionism negatively impacting psychological wellbeing and adaptive perfectionism positively impacting psychological wellbeing (Gnilka et al., 2013; Newman et al., 2019; Park & Jeong, 2015). Maladaptive perfectionists have an unrelenting desire to appear competent, a fear of failure and impaired cognitive flexibility, making it difficult for maladaptive perfectionist students to use practical and creative thinking to navigate assessment demands and transitional stressors (Egan et al., 2007; Klibert et al., 2014). Conversely, adaptive perfectionists appear to possess additional skills to help them better manage their academic expectations and maintain their motivation to pursue goals, resulting in a stronger sense of purpose in life and environmental mastery (Newman et al., 2019; Park & Jeong, 2015).

However, research into adaptive perfectionism is relatively new and there is still some debate surrounding how much adaptive perfectionism versus non-perfectionism positively impacts psychological wellbeing (Park & Jeong, 2015). Furthermore, there is an opportunity to explore how maladaptive and adaptive perfectionism negatively and positively impact psychological wellbeing respectively. For example, it is not clear how adaptive perfectionism promotes psychological wellbeing. Additionally, whilst research indicates that maladaptive perfectionists are at an increased risk of developing psychological impairment, it is also known that some with this tendency avoid such impairment (Chang et al., 2004; Suh et al., 2017). An explanation for this could be that sociocognitive factors impact the relationship between maladaptive perfectionism, adaptive perfectionism and psychological wellbeing.

1.3 Self-Efficacy

A sociocognitive factor that has been found to be independently related to maladaptive perfectionism, adaptive perfectionism and psychological wellbeing is self-efficacy. Self-efficacy is defined as an individual's belief in their ability to accomplish a task (Bandura, 1994). The literature has demonstrated that maladaptive and adaptive perfectionism negatively and positively impact self-efficacy, respectively (Chan, 2007; Kim & Kim, 2022; Kurtovic et al., 2019; Locicero & Ashby, 2000; Stoeber et al., 2008). Certain characteristics that maladaptive perfectionists possess, such as a fear of failure, may result in a lack of self-efficacy to capably complete a task, leading to individuals avoiding tasks where their desired outcomes are not guaranteed (Kurtovic et al., 2019). Conversely, adaptive perfectionists maintain high levels of organization and planning, a feature that overlaps with the ability of highly self-efficacious individuals to remain motivated to complete tasks (Bandura, 1994; Freire et al., 2018).

Self-efficacy has also been found to directly promote psychological wellbeing (Priesack & Alcock, 2015; Tamannaifar & Motaghedifard, 2014). Eudaimonic perspectives of psychological wellbeing highlight environmental mastery as a key dimension (Ryff, 2014). As mastery is integral to the concept of self-efficacy, self-efficacy is well-positioned as an antecedent to psychological wellbeing. Bandura (1994, 2004) proposed that self-efficacious individuals have access to self-regulatory processes that allow them to approach challenging tasks as mastery opportunities, persevering and increasing their effort when they face failure. When setbacks occur, it is also thought that self-efficacy can act as a protective barrier that allows individuals to recover quickly and continue progressing, in turn positively impacting their psychological wellbeing. A growing body of literature adds empirical support to the existence of a positive relationship between self-efficacy and psychological wellbeing (Cobo-Rendón et al., 2020; Freire et al., 2018; Tamannaifar & Motaghedifard, 2014).

There is limited research investigating the role of self-efficacy as a mediator between maladaptive perfectionism, adaptive perfectionism and psychological wellbeing. Preliminary findings from Chan (2007) suggest that a pathway from maladaptive and adaptive perfectionism to psychological wellbeing through self-efficacy may exist. A recent study by Kim and Kim (2022) adds further support to Chan's proposal, finding that self-efficacy mediated the relationship between self-oriented perfectionism, self-critical perfectionism and life satisfaction (hedonic wellbeing) among South Korean adults. However, it is thought that psychological wellbeing encompasses elements from both the hedonic perspective (life satisfaction) and eudaimonic perspective (effective functioning; Ryan & Deci, 2001). Therefore, an opportunity exists to investigate whether self-efficacy

is the mechanism through which maladaptive and adaptive perfectionism impact university students' overall psychological wellbeing.

1.4 Resilience

Another sociocognitive factor that has been found to be independently related to maladaptive perfectionism, adaptive perfectionism and psychological wellbeing is resilience. Resilience is defined as a flexible set of attitudes and beliefs that help individuals successfully navigate acute or long-term adversities (Neenan, 2018). The relationship between maladaptive perfectionism and resilience appears complex. Possessing maladaptive perfectionism has been associated with low levels of resilience (Hewitt & Flett, 2002). However, high levels of resilience may buffer against the negative impacts of maladaptive perfectionism (Klibert et al., 2014; Sheppard & Hicks, 2017). High levels of resilience have also been found to enhance the effect of adaptive perfectionism protecting against negative outcomes for students such as academic procrastination (Huang et al., 2023).

The literature also supports resilience as a regulator of psychological wellbeing (Min et al., 2013). The underlying attitudes of resilience, such as finding purpose and meaning during times of conflict and change, as well as the skills gained relating to control, optimism, curiosity and openness, promote psychological wellbeing through the practice of effective problem-solving (Krumpfer, 1999; Steinhardt & Dolbier, 2008). When faced with challenges and change, resilient individuals tend to approach these situations in a positive manner, enabling them to recover from stressful situations, which in turn protects their psychological wellbeing (Tugade & Fredrickson, 2004). Resilience intervention programs conducted with university students have also been found to reduce levels of depression and stress, as well as increase emotion regulation and mindfulness (Akeman et al., 2019).

There is a gap in the literature investigating the role of resilience as a mediator between maladaptive perfectionism, adaptive perfectionism and psychological wellbeing. Sheppard and Hicks (2017) found that resilience mediated the relationship between maladaptive perfectionism and psychological distress (combined levels of anxiety, depression and stress) among university students. Whilst the findings from Sheppard and Hicks present a compelling argument for why resilience might also be the mechanism through which maladaptive and adaptive perfectionism impact psychological wellbeing, this is yet to be empirically demonstrated.

1.5 The Current Study

The literature has established that maladaptive perfectionism negatively impacts psychological wellbeing, whereas adaptive perfectionism impacts psychological wellbeing more favourably (Gnilka et al., 2013; Newman et al., 2019; Park & Jeong, 2015). However, there is a lack of research investigating how maladaptive and adaptive perfectionism impact psychological wellbeing in this way. Self-efficacy and resilience are well placed as mediators and have been found in the literature to have independent relationships with maladaptive and adaptive perfectionism (Chan, 2007; Hewitt & Flett, 2002; Huang et al., 2023; Kim & Kim, 2022; Klibert et al., 2014; Kurtovic et al., 2019; Sheppard & Hicks, 2017; Stoeber et al., 2008), and psychological wellbeing (Akeman et al., 2019; Chan, 2007; Cobo-Rendón et al., 2020; Freire et al., 2018; Kim & Kim, 2022; Min et al., 2013; Priesack & Alcock, 2015; Tamannaefar & Motaghedifard, 2014; Tugade & Fredrickson, 2004). Recent research has begun to explore elements of these pathways separately (Chan, 2007; Kim & Kim, 2022; Sheppard & Hicks, 2017). However, there is no known research including maladaptive perfectionism, adaptive perfectionism, self-efficacy, resilience and psychological wellbeing within the same model. This could help determine whether self-efficacy or resilience play a more important role in promoting the psychological wellbeing of maladaptive and adaptive perfectionist university students, in turn guiding the development of programs for university support services to ensure their often-limited resources are utilized effectively. Furthermore, students' gender, study mode (full-time versus part-time), study method (online versus on campus) and COVID-19 lockdown status were identified as potential confounds as these factors have been found to impact students' psychological wellbeing (Lister et al., 2023; Lyons et al., 2020; Maynard et al., 2015; Prowse et al., 2021).

The aim of the current study was therefore to determine whether self-efficacy and/or resilience mediate the relationships between maladaptive perfectionism, adaptive perfectionism and psychological wellbeing among university students in Australia. The following two hypotheses were developed:

H1: There will be an indirect effect of maladaptive perfectionism on psychological wellbeing through (i) self-efficacy and (ii) resilience, controlling for gender, study mode, study method and COVID-19 lockdown status.

H2: There will be an indirect effect of adaptive perfectionism on psychological wellbeing through (i) self-efficacy and (ii) resilience, controlling for gender, study mode, study method and COVID-19 lockdown status.

2. Method

2.1 Participants

A total of 193 university students aged 18–66 years ($M = 27.80$ years, $SD = 10.45$) participated in the study. The sample was predominantly female (86.53%), studying full-time (68.39%) and online (72.02%), and in a COVID-19-related lockdown (80.31%) at the time of participation (see Table 1). Participants were required to be aged 18 years or over, currently studying at an Australian university and proficient in the English language.

2.2 Sampling Procedure

Prior ethical approval was granted, and participation was voluntary and anonymous. Participants were primarily recruited using convenience sampling via advertisements posted on social media. Six weeks of recruitment occurred between August and early October 2021.

A total of 251 Australian university students accessed the survey. The data for 51 students were deleted based on the study's exclusion criteria (e.g., not 18 years or over) or if they had withdrawn from the survey before its completion. A further seven participants were removed throughout the data-cleaning process. Based on a G*Power analysis (Faul et al., 2009), the study was adequately powered, with the final sample size of $N = 193$ exceeding the required sample size of 151 students for seven predictors in each of the two parallel mediation models. Participants who completed the study had the opportunity to enter a competition to win one of four \$50 gift vouchers as compensation for their time.

2.3 Procedure

The survey was accessed online and took less than 20 minutes to complete. Participants were required to read an explanatory statement on the study's purpose and exclusion criteria. Participants were informed about their right to withdraw from the study at any time prior to their submission of the survey. Once consent was obtained, participants answered a series of exclusion criteria and demographic questions. Participants who did not fit the study's criteria were redirected to the exit statement. Eligible participants were invited to answer the questionnaire.

2.4 Measures

The data for the study were collected using Qualtrics. Participants self-reported their age and gender, study mode (full-time versus part-time), study method (online versus on campus) and COVID-19 lockdown status.

2.4.1 Maladaptive and Adaptive Perfectionism

The Frost Multidimensional Perfectionism Scale (FMPS; Frost et al., 1990) was used to measure the extent to which an individual exhibits perfectionistic tendencies. The concern over mistakes (CM) and doubts about actions (DA) subscales measured maladaptive perfectionism, and the personal standards (PS) and organization (O) subscales measured adaptive perfectionism. The questionnaire demonstrated excellent internal consistency in the current study for maladaptive and adaptive perfectionism (Cronbach's $\alpha = .91$ & $\alpha = .85$, respectively).

2.4.2 Self-Efficacy

The General Self-Efficacy scale (GSE; Schwarzer & Jerusalem, 1995) is a self-report measure of general self-efficacy comprising 10 items that assess an individual's belief in their ability to deal with setbacks and respond to novel or difficult situations. The questionnaire demonstrated good internal reliability in the current study (Cronbach's $\alpha = .83$).

2.4.3 Resilience

The Brief Resilience Scale (BRS; Smith et al., 2008) is a validated 6-item scale that was used to measure individuals' resilience. Participants were required to reflect on and answer statements relating to challenges and adversity. The questionnaire demonstrated excellent internal reliability in the current study (Cronbach's $\alpha = .91$).

2.4.4 Psychological Wellbeing

The Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS; Stewart-Brown & Janmohamed, 2008) is a widely used and validated 14-item scale that was utilized in the current study to measure individuals' psychological wellbeing. Participants were presented with statements that related to common thoughts and feelings and were required to reflect on how these related to their state of psychological wellbeing in the

previous two weeks. The WEMWBS demonstrated excellent internal consistency (Cronbach's $\alpha = .94$).

2.5 Design

The current study utilized a cross-sectional design. Two independent parallel mediation models were created to address H1 and H2. Maladaptive and adaptive perfectionism served as the predictor variables in the first and second model, respectively. Self-efficacy and resilience served as the mediating variables and psychological wellbeing was the outcome variable. Gender, study mode, study method and COVID-19 lockdown status were included in the analysis as covariates.

3. Results

3.1 Preliminary Analyses (Descriptive Statistics)

Mean scores, standard deviations and score ranges were calculated for the five key variables (maladaptive perfectionism, adaptive perfectionism, self-efficacy, resilience and psychological wellbeing). Frequencies and percentages were also calculated for the four covariates (study mode, study method, gender and COVID-19 lockdown status; see Table 1).

Table 1. Descriptive Statistics for Predictors, Mediators, Outcome Variable and Covariates

Variable	<i>M</i>	<i>SD</i>	Range	Frequency	Percent
MP	40.56	10.30	14–64		
AP	49.59	7.41	29–64		
GSE	30.39	3.87	17–39		
RES	3.06	0.87	1–5		
PSYWB	43.99	9.73	16–68		
Mode					
Full-time				132	68.39
Part-time				61	31.61
Method					
Online				139	72.02
On campus				54	27.98
Gender					
Female				167	86.53
Male				26	13.47
Lockdown					
Yes				155	80.31
No				38	19.69

Note. $N = 193$. MP = Maladaptive Perfectionism, AP = Adaptive Perfectionism, GSE = General Self-Efficacy, RES = Resilience, PSYWB = Psychological Wellbeing, Mode = Full-time versus part-time, Method = Online versus on campus, Gender = Female versus male, Lockdown = COVID-19 lockdown status (yes versus no).

Pearson's correlations were calculated for all variables and are presented in Table 2. Maladaptive perfectionism was significantly negatively correlated with self-efficacy, resilience and psychological wellbeing. Adaptive perfectionism was significantly positively correlated with self-efficacy.

Table 2. Bivariate Correlations for all Variables Entered into the Mediation Model

Variable	1	2	3	4	5	6	7	8	9
1. MP	—								
2. AP	.20**	—							
3. GSE	-.36***	.22**	—						
4. RES	-.42***	.02	.62***	—					
5. PSYWB	-.56***	.09	.51***	.47***	—				
6. Mode	-.21**	-.04	.13	.10	.14*	—			
7. Method	.13	.03	-.05	-.07	-.07	-.35***	—		
8. Gender	-.02	-.14*	-.06	-.02	.03	-.07	.16*	—	
9. Lockdown	.09	.04	.20**	.06	.14	.17*	-.13	.11	—

Note. $N = 193$. MP = Maladaptive Perfectionism, AP = Adaptive Perfectionism, GSE = General Self-Efficacy, RES = Resilience, PSYWB = Psychological Wellbeing, Mode = Full-time versus part-time, Method = Online versus on campus, Gender = Female versus male, Lockdown = COVID-19 lockdown status (yes versus no).

* $p < .05$ two-tailed; ** $p < .01$ two-tailed; *** $p < .001$ two-tailed.

Two parallel mediation analyses were conducted using PROCESS version 4.1 (Model 4; Hayes, 2022) with a 5,000 bootstrapped sample.

3.2 Model 1: Maladaptive Perfectionism

The first model examined whether self-efficacy and/or resilience mediated the relationship between maladaptive perfectionism and psychological wellbeing, controlling for study mode, study method, gender and COVID-19 lockdown status. The mediation model accounted for significant variance (45%) in psychological wellbeing, $R^2 = .45$, $F(7, 185) = 21.50$, $p < .001$. This represents a large effect, $f^2 = .81$ (Allen et al., 2018). Maladaptive perfectionism (13.99%), general self-efficacy (3.76%) and COVID-19 lockdown status (1.28%) contributed a significant amount of unique variance to the model.

The total effect model accounted for a significant amount of variance (35%) in psychological wellbeing, $R^2 = .35$, $F(5, 187) = 20.53$, $p < .001$. The total effect of maladaptive perfectionism on psychological wellbeing, controlling for study mode, study method, gender and COVID-19 lockdown status, was significant and negative ($b = -0.55$, $SE = .06$, $p < .001$, 95% CI [-0.67, -0.44]). COVID-19 lockdown status was the only covariate that was found to significantly impact psychological wellbeing in this model.

In the mediation model, the direct effect of maladaptive perfectionism on psychological wellbeing while holding self-efficacy, resilience, study mode, study method, gender and COVID-19 lockdown status constant was also significant ($b = -0.41$, $SE = .06$, $p < .001$, 95% CI [-0.53, -0.29]). COVID-19 lockdown status was the only covariate that was found to significantly impact psychological wellbeing in this model.

3.2.1 Self-Efficacy

The indirect effect of maladaptive perfectionism on psychological wellbeing through self-efficacy, controlling for study mode, study method, gender and COVID-19 lockdown status, was significant ($b = -0.09$, $SE = .03$, 95% CI [-0.15, -0.04]; see Figure 1 for the constituent components of the indirect pathway). COVID-19 lockdown status was the only covariate to significantly impact self-efficacy ($b = 2.42$, $SE = .66$, $p < .001$, 95% CI [1.12, 3.73]).

3.2.2 Resilience

The indirect effect of maladaptive perfectionism on psychological wellbeing through resilience, controlling for study mode, study method, gender and COVID-19 lockdown status, was not significant ($b = -0.05$, $SE = .03$, 95% CI [-0.12, 0.01]; see Figure 1 for the constituent components of the indirect pathway). None of the covariates were found to significantly impact resilience.

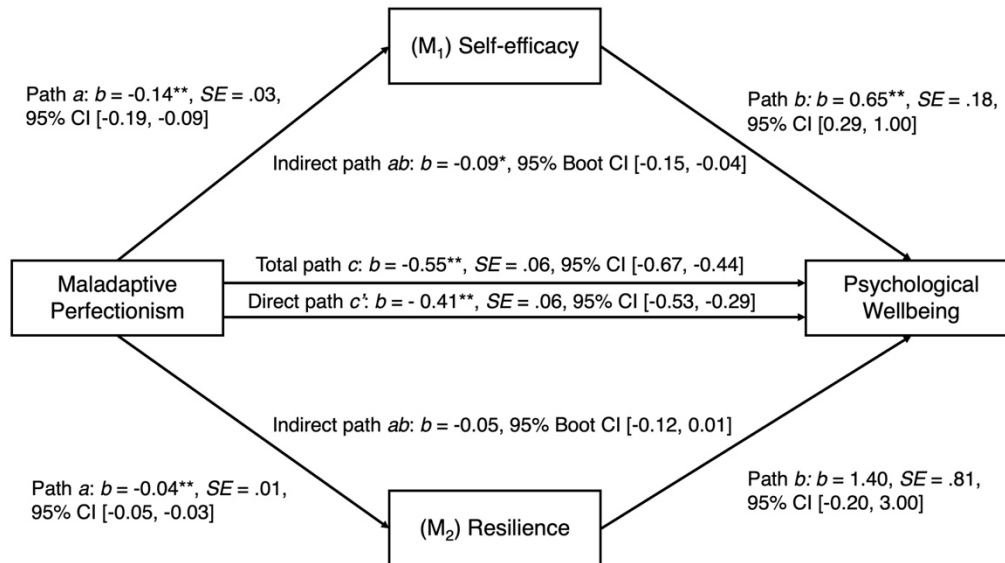


Figure 1. Parallel Mediation Model for Maladaptive Perfectionism

Note. $N = 193$. Covariates impacting M_1 , M_2 and psychological wellbeing included study mode (full-time versus part-time), study method (online versus on campus), gender (female versus male), COVID-19 lockdown status (yes versus no).

* $p < .05$; ** $p < .001$

3.3 Model 2: Adaptive Perfectionism

The second model examined whether self-efficacy and/or resilience mediated the relationship between adaptive perfectionism and psychological wellbeing, controlling for study mode, study method, gender and COVID-19 lockdown status. The mediation model accounted for significant variance (31%) in psychological wellbeing, $R^2 = .31$, $F(7, 185) = 11.86$, $p < .001$. This represents a large effect, $f^2 = .45$ (Allen et al., 2018). General self-efficacy (6.05%) and resilience (3.92%) contributed a significant amount of unique variance to the model.

The total effect model did not account for significant variance (5%) in psychological wellbeing, $R^2 = .05$, $F(5, 187) = 1.78$, $p = .119$. The total effect of adaptive perfectionism on psychological wellbeing, controlling for study mode, study method, gender and COVID-19 lockdown status, was not significant ($b = 0.13$, $SE = .10$, $p = .163$, 95% CI [-0.05, 0.32]). None of the covariates were found to significantly impact psychological wellbeing in this model.

In the mediation model, the direct effect of adaptive perfectionism on psychological wellbeing while holding self-efficacy, resilience, study mode, study method, gender and COVID-19 lockdown status constant was not significant ($b = 0.04$, $SE = .08$, $p = .668$, 95% CI [-0.13, 0.20]). None of the covariates were found to significantly impact psychological wellbeing in this model.

3.3.1 Self-Efficacy

The indirect effect of adaptive perfectionism on psychological wellbeing through self-efficacy, controlling for study mode, study method, gender and COVID-19 lockdown status, was significant ($b = 0.09$, $SE = .04$, 95% CI [0.02, 0.18]; see Figure 2 for the constituent components of the indirect pathway). COVID-19 lockdown status was the only covariate that was found to significantly impact self-efficacy ($b = 1.75$, $SE = .70$, $p = .013$, 95% CI [0.38, 3.12]).

3.3.2 Resilience

The indirect effect of adaptive perfectionism on psychological wellbeing through resilience, controlling for study mode, study method, gender and COVID-19 lockdown status, was not significant ($b = 0.01$, $SE = .03$, 95% CI [-0.05, 0.07]); see Figure 2 for the constituent components of the indirect pathway). None of the covariates were found to significantly impact resilience.

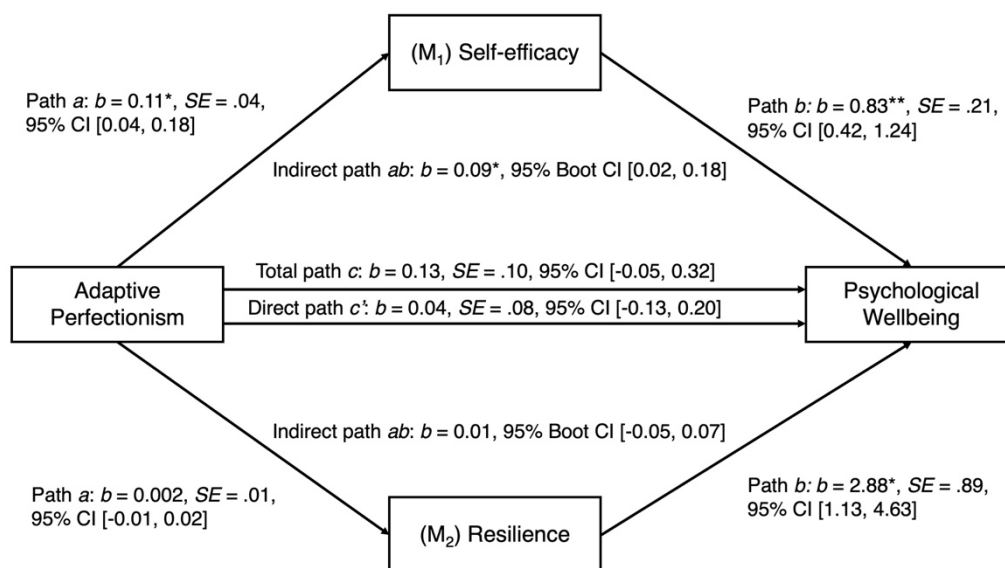


Figure 2. Parallel Mediation Model for Adaptive Perfectionism

Note. $N = 193$. Covariates impacting M_1 , M_2 and psychological wellbeing included study mode (full-time versus part-time), study method (online versus on campus), gender (female versus male), COVID-19 lockdown status (yes versus no).

* $p < .05$; ** $p < .001$

4. Discussion

This study aimed to investigate whether self-efficacy and/or resilience were the mechanisms through which maladaptive and adaptive perfectionism impact the psychological wellbeing of university students in Australia. Both hypotheses, H1 and H2, were partially supported as self-efficacy was found to mediate the relationship between maladaptive and adaptive perfectionism and psychological wellbeing. Unexpectedly, however, a mediating effect for resilience was not found. These findings highlight the complex nature of the relationship between maladaptive perfectionism, adaptive perfectionism and psychological wellbeing.

4.1 Maladaptive Perfectionism, Adaptive Perfectionism and Psychological Wellbeing

The moderate-to-high levels of maladaptive and adaptive perfectionism reported in the current study are consistent with the levels reported for other student populations (Chang et al., 2004; Kurtovic et al., 2019; Sheppard & Hicks, 2017). The significant negative relationship found between maladaptive perfectionism and psychological wellbeing is consistent with studies that have found maladaptive perfectionists experience higher levels of psychological distress and lower levels of psychological wellbeing (Gnilka et al., 2013; Hamilton & Schweitzer, 2000; Hewitt & Flett, 2002; Klibert et al., 2014; Newman et al., 2019; Park & Jeong, 2015; Sheppard & Hicks, 2017). However, the current study did not find support for the positive relationship between adaptive perfectionism and psychological wellbeing previously found in the literature (Chan, 2007; Newman et al., 2019).

The lack of support for a direct relationship between adaptive perfectionism and psychological wellbeing found in this study could be due to the way adaptive perfectionism was conceptualized (high personal standards and organization). Previous studies have included a greater number of affective and behavioral tendencies (e.g., emotion regulation) within adaptive perfectionism student profiles (Newman et al., 2019), and emotion regulation processes such as reappraisal have been identified as positive correlates of psychological wellbeing (Richardson et al., 2014). Interestingly, other studies that have utilized similar conceptualizations of adaptive perfectionism have yielded results that are more consistent with the findings from the current research (Kim & Kim, 2022; Park & Jeong, 2015). It is also possible that for Australian university students a significant direct relationship between adaptive perfectionism and psychological wellbeing truly does not exist.

4.2 The Mediating Role of Self-Efficacy

The principal finding from this study is that self-efficacy mediates the relationship between maladaptive and adaptive perfectionism and psychological wellbeing. This is consistent with the literature demonstrating that maladaptive perfectionism can lead to low self-efficacy, which in turn results in students experiencing diminished psychological wellbeing, whereas adaptive perfectionism can positively impact self-efficacy, in turn promoting psychological wellbeing (Chan, 2007; Freire et al., 2018; Kim & Kim, 2022; Kurtovic et al., 2019; Stoeber et al., 2008). The current study adds empirical support to the proposal from Chan (2007) that self-efficacy may mediate the relationship between positive and negative perfectionism and subjective wellbeing among gifted Chinese students. Furthermore, this study extends the research by Kim and Kim (2022), who demonstrated that self-efficacy mediates the relationship between self-oriented perfectionism, self-critical perfectionism and life satisfaction for South Korean adults. The current study uniquely contributes to the literature by utilizing a Western university student sample and employing a measure of psychological wellbeing that includes both hedonic and eudaimonic perspectives.

Social cognitive theory (SCT; Bandura, 1986) provides a framework to help explain why self-efficacy appears to mediate the relationship between maladaptive perfectionism, adaptive perfectionism and psychological wellbeing. The findings from this study suggest there are differences in how maladaptive and adaptive perfectionists cultivate self-efficacy. Self-efficacy is believed to play an important role in students' development of self-regulatory strategies, which equip students to better manage challenging situations and persevere when mistakes are made, in turn positively impacting their psychological wellbeing (Bandura, 1993, 1994, 2004; Priesack & Alcock, 2015). Maladaptive perfectionism is a trait that is highly correlated with self-presentation (i.e., one's attempt to control how others view them). Therefore, students possessing this trait do not readily acknowledge their imperfections and mistakes for fear they will appear to others as incompetent (Hewitt et al., 2003). In turn, this may restrict maladaptive perfectionists' capacity to engage in behaviors and ways of thinking that could help them develop their self-efficacy (e.g., mastery experiences; Bandura, 1997). The diminished psychological wellbeing self-reported by maladaptive perfectionists in the current study may therefore have been due to a lack of self-belief in their capacity to perform the behaviors necessary to achieve their desired outcomes. Although the current study did not explicitly assess the different characteristics of maladaptive perfectionism, such as fear of failure and overconcern for mistakes, it is plausible that such characteristics may lead to task avoidance among maladaptive perfectionists, in turn impairing their belief in their capability to complete tasks. This appears to be consistent with the strong link found between students' maladaptive perfectionism and academic procrastination (Kurtovic et al., 2019). Concerningly, this may be exacerbated for maladaptive perfectionists in the university context, where task demands (e.g., completing assignments on time) and various stressors (e.g., financial hardship) are common (Eisenberg et al., 2007).

Conversely, adaptive perfectionism (i.e., one's realistic striving for excellence) appears as something to be promoted, and improved self-efficacy may be the mechanism through which this occurs. High levels of organization and planning are unique attributes found among adaptive perfectionists (Frost et al., 1990; Stumpf & Parker, 2000). This may mean that while adaptive perfectionist students also hold themselves to high standards, their strong organizational skills ensure they plan effectively towards achieving their goals. This may in turn foster their self-efficacy, giving them the sense that they are capable of successfully fulfilling task demands (Bandura, 1994). The higher self-reported levels of psychological wellbeing among adaptive perfectionists in the current study may therefore be due to greater self-belief in their capacity to perform the behaviors necessary to achieve their desired outcomes. Adaptive perfectionists likely approach challenging tasks as potential mastery experiences, increasing their effort levels to achieve them as opposed to viewing them as threats to avoid. Additionally, they are more likely to attribute any failures to a lack of skill, something they are able to learn, rather than a general lack of ability (Bandura, 1993). As Locicero and Ashby (2000) explain, possessing self-regulatory processes such as these may give adaptive perfectionist students the ability to successfully meet the high personal standards they set themselves, resulting in a low sense of discrepancy between what they set out to achieve and what they accomplish. Realistic goals and accomplishing tasks have been found to be associated with positive outcomes (Locicero & Ashby, 2000). Therefore, this may be how self-efficacy promotes the psychological wellbeing of these students. Demonstrating that self-efficacy further enhances adaptive perfectionistic tendencies, which in turn results in higher levels of psychological wellbeing, provides a unique insight into why adaptive perfectionist students can successfully navigate the demanding university environment (Stoeber et al., 2008).

4.3 The Role of Resilience

An unexpected finding from this research was that resilience did not mediate the relationship between maladaptive or adaptive perfectionism and psychological wellbeing, a divergence from the findings by Sheppard and Hicks (2017). However, Sheppard and Hicks utilized the Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003), where participants were required to respond to 25 statements that measured a diverse range of characteristics (e.g., adaptation, secure relationships and attitudes to challenges). In comparison, the Brief Resilience Scale (BRS; Smith et al., 2008) used in the current study required participants to respond to six statements measuring only characteristics related to how one handles and recovers from stressful events. Therefore, the current study's non-significant findings may have resulted from differences in individuals' resilience characteristics, whereas a broader, more robust resilience measure may have detected a mediating effect.

An explanation for why possessing self-efficacy appears to be comparatively more important than resilience for maladaptive and adaptive perfectionist university students may be related to the construct of psychological wellbeing. Psychological wellbeing and self-efficacy are inherently positive constructs, meaning self-efficacy appears well-positioned as an antecedent to psychological wellbeing. For example, maladaptive and adaptive perfectionist students who retain belief in their competence and persevere to achieve their goals will exhibit greater psychological wellbeing (Chan 2007; Kim & Kim, 2022). Resilience, however, may be more important for university students when they encounter adversity. Therefore, this trait may protect maladaptive and adaptive perfectionist students from psychological distress as opposed to directly promoting their psychological wellbeing. The effect of this may not have been fully captured in the current study and warrants further investigation.

4.4 Strengths, Limitations and Future Directions

Including the four covariates in the main analysis improved model accuracy and reduced the probability of making a Type I error (Tabachnick & Fidell, 2019). COVID-19 lockdown status significantly impacted self-efficacy for both maladaptive and adaptive perfectionists and psychological wellbeing among maladaptive perfectionists. However, as this was controlled for, the findings from this research can be generalized to periods outside of the COVID-19 pandemic. There are, however, several limitations of the current study to consider. Additional dimensions of perfectionism have been found to impact self-efficacy and psychological wellbeing that were not captured in this study. For example, Hewitt and Flett (1991) identified self-oriented, other-oriented, and socially-prescribed perfectionism. Furthermore, the conceptualization of adaptive perfectionism remains a challenge. Although the adaptive perfectionism scale utilized in the current study possessed strong reliability, the construct validity may have been impacted as some of the personal standards subscale items on the FMPS (Frost et al., 1990) appear to align more closely with maladaptive versus adaptive perfectionism (Hawkins et al., 2006). Future research should therefore explore the validity of creating a perfectionism dichotomy from the FMPS utilising a larger, more diverse university student sample.

5. Conclusion

The current study found that self-efficacy versus resilience was a more important sociocognitive resource for maladaptive and adaptive perfectionist university students in Australia. The finding that resilience did not mediate the relationship between maladaptive perfectionism, adaptive perfectionism and psychological wellbeing was unexpected. Further research is therefore required to determine how best to measure and include resilience within the model.

In accordance with social cognitive theory (SCT; Bandura, 1986), it is proposed that increasing self-efficacy for maladaptive perfectionist university students may help protect against maladaptive perfectionists' fear of failure and overconcern for mistakes. Furthermore, increasing self-efficacy for adaptive perfectionist university students may enhance the strong organizational skills individuals with this trait possess, ensuring the standards adaptive perfectionists set for themselves are high, yet realistic. This is a rich area of research with plentiful opportunities for future studies to uncover additional pathways through which maladaptive and adaptive perfectionism impact psychological wellbeing. The SCT framework is a causal structure in which self-efficacy impacts goal-setting, outcome expectations and the perception of sociostructural facilitators and impediments, which in turn impact behavior (Bandura, 2004). Adaptive perfectionists are known to set high, yet realistic goals. However, further research is required to fully understand the underlying goal-setting processes adaptive perfectionists undertake (Flett et al., 1995; Lee & Anderman, 2020). Furthermore, there is an opportunity to explore how alternative frameworks of learning motivation (Cook & Artino, 2016) could be utilized in order to explain how adaptive perfectionists accomplish the high, yet realistic standards they set themselves.

The current study provides a valuable theoretical contribution to the positive psychology literature. There is a

large body of research investigating the relationship between negative aspects of perfectionism and psychopathology, whereas comparatively less research exists investigating whether perfectionism results in positive outcomes and the mechanisms through which this can occur (Stoeber & Otto, 2006). The findings from this study also provide practical guidance to university student support services. Demonstrating that building self-efficacy among maladaptive and adaptive perfectionist university students is more important than building resilience provides university student support services with clear guidance to enable them to more effectively allocate their often-limited resources. Self-efficacy is a dynamic factor, and it is well-known that through mastery experiences, social persuasion and vicarious experiences an individual's level of self-efficacy can be increased (Bandura, 1993, 1994). In order to promote the psychological wellbeing of their students, universities are advised to consider how they could develop online or on-campus programs that allow students to practice the key skills required for their course (mastery experiences) while receiving real-time feedback (social persuasion) and witnessing other classmates working and succeeding alongside them (vicarious experiences). Promoting students' psychological wellbeing through building their self-efficacy would likely have numerous benefits, including reducing the prevalence of psychopathology that burdens university systems and their students (Friere et al., 2018).

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Data Availability Statement

The data will be stored in accordance with Monash University policies. The data collected from the questionnaire and the follow-up contact details will be digitally stored by the research team in password-protected files. The electronic data will be stored in LabArchives for five years, after which time it will be destroyed.

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