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RESEARCH ARTICLE

Perfectionism, self-stigma, and coping in students with dyslexia: The central role of perfectionistic self-presentation

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Dyslexia is a prevalent condition, and a significant percentage of students in higher education are dyslexic. Despite this, few studies have investigated dyslexia in university students and what personality dispositions may predict how students feel about help-seeking for dyslexia and how they cope with dyslexia. Against this background, the present study investigated perfectionism, self-stigma, and coping in 115 university students with dyslexia, examining the relationships between dispositional perfectionism (self-oriented and socially prescribed perfectionism) and perfectionistic self-presentation with self-stigma of seeking help and adaptive versus maladaptive coping with dyslexia. Results from regression and mediation analyses showed that perfectionistic self-presentation predicted higher levels of self-stigma and maladaptive coping, and lower levels of adaptive coping. Furthermore, both forms of dispositional perfectionism predicted higher levels of self-stigma and maladaptive coping, and lower levels of adaptive coping, via perfectionistic self-presentation (dispositional perfectionism→perfectionistic self-presentation → self-stigma and coping). The findings suggest that perfectionistic self-presentation plays a central role in the relationships of perfectionism, self-stigma, and coping in students with dyslexia, and that impression

management, aimed at presenting a perfect self-image (and hiding imperfections), represents a significant risk for students seeking help for, and successful coping with, dyslexia.

KEYWORDS
coping, dyslexia, perfectionism, perfectionistic self-presentation, self-stigma

1 | INTRODUCTION

Dyslexia is a prevalent condition among society in many countries. In the UK, for example, 10% of the population are believed to be dyslexic (British Dyslexia Association, 2019). Many students are diagnosed with the condition, including university students. Specific learning difficulties—an umbrella term for dyslexia, dyscalculia, and dyspraxia—is the most common disability reported in higher education, with dyslexia being the most frequent of the three (Higher Education Funding Council for England, 2015). Accordingly, an estimated 11% of all UK students—including undergraduates and postgraduates—enrolled in higher education in 2015–2016 were registered as dyslexic (Higher Education Statistics Agency, 2017).

Students with dyslexia face specific challenges at university that require a range of coping strategies to deal with (Stampoltzis & Polychronopoulou, 2009). Compared to school, the overall workload at university—particularly regarding reading assignments—is usually significantly higher, as is the degree of self-management required to complete essays, coursework, and projects before the submission deadlines which can make university a constant uphill struggle for students with dyslexia. In addition to reading difficulties and problems with time and organizational management, some students with dyslexia experience word-finding difficulties and lack of fluency in expressing ideas, which may cause problems when speaking in class or in group discussion (e.g., Fuller, Healey, Bradley, & Hall, 2004; Riddick, Farmer, & Sterling, 1997; Stampoltzis & Polychronopoulou, 2009; Vickerman & Blundell, 2010).

Responding to the high number of students with dyslexia entering higher education, universities have implemented measures providing help for students with dyslexia, but seeking help to cope with these problems can provoke reactions about what asking for help means, specifically the stigmatization that may be perceived because of turning to Student Support for psychological help (Vogel, Wade, & Haake, 2006). However, there are individual differences in self-stigmatization and coping. Not all students with dyslexia feel stigmatized when asking for help (Vogel et al., 2006), and whereas some students apply coping strategies that are helpful in dealing with dyslexia, others students may apply strategies that are not (Firth, Frydenberg, Steeg, & Bond, 2013; Singer, 2008).

Perfectionism is a personality disposition that has been shown to explain individual differences in self-stigma of seeking help (e.g., Zeifman et al., 2015), and there are numerous studies showing that perfectionism explains individual differences in adaptive versus adaptive coping (e.g., Dunkley & Blankstein, 2000; Flett, Druckman, Hewitt, & Wekerle, 2012). So far, however, no study has examined perfectionism, self-stigma, and coping in students with dyslexia. The present study aims to fill this gap focusing on university students.

1.1 | Perfectionism

Perfectionism is a common personality disposition characterized by exceedingly high standards that are difficult, if not impossible to meet (Stoeber, 2018b). Recent findings indicate that general levels of perfectionism are increasing, and more and more students show high levels of perfectionism (Curran & Hill, 2019). However, perfectionism is a

multidimensional personality disposition comprising various aspects (Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991). One of the most influential and widely researched models of dispositional perfectionism is Hewitt and Flett's (1991). Examining personal and social aspects of perfectionism, Hewitt and Flett identified two main forms of perfectionism: self-oriented perfectionism and socially prescribed perfectionism.[1] The two forms differ in how perfectionism is motivated. Self-oriented perfectionism is mainly internally motivated. Self-oriented perfectionists have exceedingly high personal standards. They strive for perfection and expect to be perfect. In contrast, socially prescribed perfectionism is mainly externally motivated. Socially prescribed perfectionists think that others hold them to exceedingly high standards and expect them to be perfect, and that others will disapprove of them if they are not.

In addition, Hewitt et al. (2003) identified perfectionistic self-presentation as an important aspect of perfectionism. Whereas self-oriented and socially prescribed perfectionism capture individual differences in people's motives underlying dispositional perfectionism, perfectionistic self-presentation captures differences in the interpersonal expression of perfectionism. Perfectionistic self-presentation shows close links with dispositional perfectionism—people high in dispositional perfectionism also tend to be high in perfectionistic self-presentation—but there are distinctive conceptual differences between these two aspects of perfectionism: Dispositional perfectionism reflects a need to be perfect. In contrast, perfectionistic self-presentation reflects a need to appear perfect to others. Hence, perfectionistic self-presentation goes beyond dispositional perfectionism by capturing individual differences in the stylistic expression of perfectionism.

Perfectionistic self-presentation has two aims: promoting the impression that one is perfect, and preventing the impression that one is not. In particular, Hewitt et al. identified three facets of perfectionistic self-presentation: perfectionistic self-promotion, non-display of imperfection, and non-disclosure of imperfection. Perfectionistic self-promotion is focused on creating an impression that one is perfect via displays of faultlessness and a flawless image. In contrast, non-display of imperfection and non-disclosure of imperfection are focused on avoiding the impression that one is not perfect. In this, non-display of imperfection is focused on the avoidance of situations where one's behaviour is under scrutiny that may highlight personal shortcomings, mistakes, or flaws whereas non-disclosure of imperfection is focused the avoidance of verbally expressing or admitting to concerns, mistakes, and perceived imperfections (Hewitt et al., 2003; Hewitt, Habke, Lee-Baggley, Sherry, & Flett, 2008).

Research has shown that socially prescribed perfectionism is a highly dysfunctional form of perfectionism showing consistent positive relationships with indicators of psychological maladjustment (Hewitt & Flett, 2004). In comparison, self-oriented perfectionism is a more “ambivalent” form of perfectionism (Stoeber, Feast, & Hayward, 2009). Not only does self-oriented perfectionism show inconsistent positive relationships with indicators of psychological maladjustment (and the relationships are usually weaker than those of socially prescribed perfectionism). Self-oriented perfectionism sometimes also shows positive relationships with indicators of psychological adjustment (e.g., Stoeber et al., 2009; Stoeber & Corr, 2016).

In contrast, all aspects of perfectionist self-presentation are highly maladaptive showing consistent positive relationships with indicators of psychological maladjustment as well as negative relationships with indicators of psychological adjustment (D'Agata & Holden, 2018; Hewitt et al., 2003, 2008; Roxborough et al., 2012; Stoeber, Madigan, Damian, Esposito, & Lombardo, 2017). Moreover, and importantly, perfectionistic self-presentation has shown to explain variance in these indicators over and above the variance explained by dispositional perfectionism, indicating that the interpersonal expression of perfectionism plays a central role in individual differences regarding psychological adjustment and maladjustment related to perfectionism (Hewitt et al., 2003, 2008; Stoeber et al., 2017). With this, perfectionistic self-presentation not only goes beyond dispositional perfectionism, but may also help explain why dispositional perfectionism predicts differences in psychological adjustment and maladjustment.

1.2 | Self-stigma

Stigma is the perception of being flawed and therefore socially unacceptable because of a personal or physical characteristic (Blaine, 2000). There are two types of stigma: public stigma and self-stigma, and self-stigma has been found

to be a stronger deterrent than public stigma for seeking help (Corrigan, 2004). So far, only two studies have examined how perfectionism relates to self-stigma focusing on self-stigma of seeking help, that is, the belief that relevant others will view those that seek help as less socially acceptable (Vogel et al., 2006). The first study (Zeifman et al., 2015) examined high school students and found a positive relationship between dispositional perfectionism and self-stigma of seeking psychological help, but surprisingly the relationship was significant only for self-oriented perfectionism (not socially prescribed perfectionism) and only in the students reporting low contact with individuals with mental illness (not those reporting high contact). However, the study did not include perfectionistic self-presentation and the sub-sample in which the significant relationship was found was very small (n = 33) which is problematic because findings with small samples tend to be unreliable and unlikely to replicate (Maxwell, 2004). The second study (Shannon, Goldberg, Flett, & Hewitt, 2018) examined perfectionism and self-stigma of seeking help in university students and included perfectionistic self-presentation. The study found that both self-oriented and socially prescribed perfectionism showed significant positive relationships with self-stigma as did all three facets of perfectionistic self-presentation suggesting that both dispositional perfectionism and perfectionistic self-presentation play a role in self-stigma of seeking help.

Furthermore, a study (Abdollahi, Hosseinian, Beh-Pajooh, & Carlbring, 2017) examined dispositional perfectionism, self-concealment, and positive attitudes towards seeking psychological help in high school students which is relevant in the present context because perfectionistic self-presentation is intimately related to self-concealment (D'Agata & Holden, 2018) and self-stigma of seeking help is inversely related to positive attitudes towards seeking help (Vogel et al., 2006). As expected, both socially prescribed perfectionism and self-concealment showed significant negative relationships with positive attitudes towards seeking help, but self-oriented perfectionism showed a significant positive relationship indicating that self-oriented perfectionism may not be as problematic for help-seeking as socially prescribed perfectionism and perfectionistic self-presentation.

1.3 | Coping

Research on coping has shown that there are various ways in which individuals respond to stress and try to deal with challenges, and people apply a range of different coping strategies (Carver, Scheier, & Weintraub, 1989). However, only some coping strategies are considered adaptive such as active and action-oriented coping, problem-focused coping, and seeking social support (consecutively referred to as adaptive coping strategies). Other coping strategies are considered maladaptive such as emotion-focused coping, denial, disengagement, and avoidance (consecutively referred to as maladaptive coping strategies), and this differentiation of adaptive and maladaptive coping is important when examining personality differences in coping (e.g., Sirois & Kitner, 2015).

There is a significant body of research on dispositional perfectionism and coping. Across studies, socially prescribed perfectionism has shown consistent positive relationships with maladaptive coping strategies, and it has shown negative relationships with adaptive coping strategies, but not consistently so (Dry, Rooney, & Kane, 2015; Dunkley & Blankstein, 2000; Eddington, 2014; Flett et al., 2012; Flett, Russo, & Hewitt, 1994; Haring, Hewitt, & Flett, 2003). In comparison, the pattern of findings regarding self-oriented perfectionism and coping is mixed. On the one hand, self-oriented perfectionism has shown positive relationships with maladaptive coping strategies, but these relationships are often non-significant or tend to be smaller than those of socially prescribed perfectionism. On the other hand, self-oriented perfectionism has shown significant positive relationships with adaptive coping strategies particularly strategies reflecting active, problem-focused coping (Dry et al., 2015; Dunkley & Blankstein, 2000; Eddington, 2014; Flett et al., 1994, 2012; Haring et al., 2003), which is in line with conceptions that self-oriented perfectionism is an ambivalent form of perfectionism (Stoeber et al., 2009).

In contrast, only three studies so far investigated the relationships between perfectionistic self-presentation and coping. Findings suggest that perfectionistic self-presentation tends to show positive relationships with maladaptive coping and negative relationships with adaptive coping. The two studies examining coping in medical patients found

perfectionistic self-presentation to show positive relationships with emotional preoccupation (Flett, Baricza, Gupta, Hewitt, & Endler, 2011; Shanmugasegaram et al., 2014); and the study examining coping in medical employees found perfectionistic self-presentation to show negative relationships with social support coping, that is, coping by seeking instrumental and emotional help (Crăciun & Dudău, 2014). Surprisingly, the latter study also found perfectionistic self-presentation to show positive relationships with active coping. However, the sample was small (N = 60), so it is unclear if these findings are reliable.

1.4 | The present study

Against this background, it is clear that further research on perfectionism, self-stigma, and coping is needed—and research examining university students with dyslexia particularly so. Despite the high numbers of students with dyslexia in higher education, the few studies investigating how students cope with dyslexia have focused on school students (e.g., Firth et al., 2013; Singer, 2008), not university students. Furthermore, there are no studies on perfectionism in students with dyslexia, and also no studies investigating self-stigma and coping in dyslexia. Consequently, the present study sought to provide the first investigation of perfectionism, self-stigma, and coping in students with dyslexia examining both dispositional perfectionism and perfectionistic self-presentation.

Based on previous theory and research indicating that socially prescribed perfectionism and perfectionistic self-presentation are dysfunctional aspects of perfectionism as well as the consistent findings from the studies on perfectionism, coping, and self-stigma detailed above, we expected socially prescribed perfectionism and perfectionistic self-presentation to show positive relationships with self-stigma and maladaptive coping. Furthermore, we expected self-oriented perfectionism to show a positive relationship with self-stigma. In contrast, we had no specific expectations regarding the relationships of self-oriented perfectionism with adaptive and maladaptive coping and the relationship of perfectionistic self-presentation with adaptive coping.

Furthermore, the present study aimed to examine whether perfectionistic self-presentation explained variance in self-stigma and coping above dispositional perfectionism (Hewitt et al., 2003; Stoeber et al., 2017) and, if so, further explore whether the relationships would suggest the presence of mediation effects (Baron & Kenny, 1986). Research on perfectionism and subjective well-being (Mackinnon & Sherry, 2012) found perfectionistic self-presentation to mediate the relationships between perfectionistic concerns—including socially prescribed perfectionism—and subjective well-being (Mackinnon & Sherry, 2012). Also, the before-mentioned study on perfectionism, self-concealment, and positive attitudes towards help-seeking suggested that perfectionistic self-presentation mediated the relationships between dispositional perfectionism and help-seeking attitudes (Abdollahi et al., 2017). Consequently, it was conceivable that perfectionistic self-presentation would also mediate the relationships between dispositional perfectionism, self-stigma, and coping. Therefore, the present study aimed to explore whether dispositional perfectionism has indirect effects on self-stigma and coping via perfectionistic self-presentation (dispositional perfectionism—perfectionistic self-presentation—self-stigma and coping).

2 | METHOD

2.1 | Participants and procedure

A sample of 124 students with dyslexia (42 male, 81 female, and 1 preferred not to say) studying at the University of Kent, UK, was recruited via the university's Student Support service. All students were registered as dyslexic with Student Support for the academic year 2016–2017. The mean age of the students was 23.3 years (SD = 7.1). Students volunteered to participate for a chance to win one of two £25 Amazon® vouchers. Students completed the measures using the School of Psychology's Qualtrics® platform and were required to respond to all questions

(to prevent missing data), which was approved by the relevant ethics committee. Students who completed the questionnaire were entered in a raffle to win one of the vouchers. To reduce the reading load on the students (most of whom had reading difficulties), we tried to keep the questionnaire brief and used short forms of the relevant measures where available. Of the 124 students who signed up for the study, 93% completed the questionnaire and were included in the data analyses, so the final sample comprised 115 students (37 male, 77 female, and 1 preferred not to say) with a mean age of 23.3 years (*SD* = 7.2).

2.2 | Measures

2.2.1 | Perfectionism

To measure dispositional perfectionism, we used a 10-item short form of the Hewitt–Flett Multidimensional Perfectionism Scale (HF-MPS; Cox, Enns, & Clara, 2002) capturing self-oriented perfectionism (5 items; e.g., "I strive to be as perfect as I can be") and socially prescribed perfectionism (5 items; "People expect nothing less than perfection from me"), which has been shown a reliable and valid short form of the respective scales from the 45-item HF-MPS (Cox et al., 2002; Stoeber, 2018a). Participants received the standard instruction of the HF-MPS ("Listed below are a number of statements concerning personal characteristics and traits…") and responded to all items on a scale from 1 (strongly disagree) to 7 (strongly agree).

To measure perfectionistic self-presentation, we used the 27-item Perfectionistic Self-Presentation Scale (PSPS; Hewitt et al., 2003) capturing three facets of perfectionistic self-presentation: Perfectionistic self-promotion (10 items; e.g., "I strive to look perfect to others"), non-display of imperfection (10 items; "I hate to make errors in public"), and non-disclosure of imperfection (7 items; "I should always keep my problems to myself"). The PSPS has demonstrated reliability and validity across numerous studies (e.g., Hewitt et al., 2003, 2008; Stoeber et al., 2017). Items were presented with the scale's standard instructions ("Listed below are a group of statements…"), and participants responded to all items on a scale from 1 (strongly disagree) to 7 (strongly agree).

2.2.2 | Self-stigma of seeking help for dyslexia

To measure self-stigma associated with seeking psychological help for dyslexia, we used the 10-item Self-Stigma of Seeking Help Scale (SSOSH; Vogel et al., 2006) adapting the instructions and items to apply to dyslexia and actual help-seeking (instead of hypothetical help-seeking) with a focus on how participants felt when seeking help from Student Support (e.g., "I would feel inadequate if I went to a therapist for psychological help" → "I feel inadequate when I go to Student Support for help"; see SSOSH–Dyslexia in Appendix A). Participants responded to all items on a scale from 1 (strongly disagree) to 5 (strongly agree).

2.2.3 | Coping with dyslexia

To measure how participants coped with their dyslexia, we used the 28-item Brief COPE (Carver, 1997) capturing—with two items each—14 coping strategies: Active coping, planning, positive reframing, acceptance, humour, religion, using emotional support, using instrumental support, self-distraction, denial, venting, substance use, behavioural disengagement, and self-blame. The Brief COPE is a reliable and valid short form of the 60-item COPE (Carver et al., 1989), which is a widely used measure of coping styles, but was deemed unsuitable for the present sample who required a shorter protocol (cf. Carver, 1997). Instructions were modified by telling the participants that the measure asked about how they coped with their dyslexia. Moreover, all items were revised to present tense, and

some items were modified to avoid ambiguity and better apply to dyslexia (e.g., "I refuse to believe that it has happened"→"I refuse to believe that I am dyslexic"; see Brief COPE–Dyslexia in Appendix B). Participants responded to all items on a scale from 1 (I do not do this at all) to 4 (I do this a lot).

2.3 | Preliminary analyses

First, we examined the three facets of perfectionistic self-presentation. Because (a) we did not have differential expectations for the facets, (b) the facets showed high inter-correlations (.68 ≤ *r*s ≤ .79; all *p*s < .001), (c) the facets' correlations with dispositional perfectionism, self-stigma, and coping showed the same pattern (see Table 1), and (d) previous research has combined the three facets to one measure (e.g., Costa, Marôco, Gouveia, & Ferreira, 2016), we combined all PSPS items to a measure of overall perfectionistic self-presentation. Furthermore, when examining the means of the PSPS sub-scales, we noted that the means of all three sub-scales were elevated, particularly non-display and non-disclosure: Whereas the level of perfectionistic self-promotion in the present sample was comparable to what has been reported for clinical samples in previous studies, non-display of imperfection and non-disclosure of imperfection showed significantly higher levels than those previously reported for clinical samples (compare the means in Table 1 with those for clinical samples reported in Hewitt et al., 2003, Table 2, and Hewitt et al., 2008, Table 1).[2]

Next, we examined the 14 coping strategies to see if they would combine to broader coping styles differentiating adaptive and maladaptive coping (cf. Sirois & Kitner, 2015). Consequently, we subjected the 14 strategies to an exploratory factor analyses in IBM SPSS® employing maximum likelihood estimation and oblique rotation (Preacher & MacCallum, 2003). A parallel analysis of the eigenvalues (Patil, Singh, Mishra, & Donavan, 2007) suggested three significant factors, but the three-factor solution had four strategies, showing substantial loadings on more than one factor or no substantial loadings on any factor (venting, acceptance, humour, and religion). After deleting these strategies, a two-factor solution showing simple structure emerged that combined five strategies on

TABLE 1 Perfectionistic self-presentation subscales: bivariate correlations and descriptive statistics

Measure	1	2	3
Perfectionistic self-presentation			
1. Perfectionistic self-promotion			
2. Non-display of imperfection	.79***		
3. Non-disclosure of imperfection	.68***	.78***	
Dispositional perfectionism			
Self-oriented perfectionism	.43***	.37***	.22*
Socially prescribed perfectionism	.45***	.50***	.52***
Self-stigma and coping			
Self-stigma of seeking help for dyslexia	.49***	.54***	.49***
Adaptive coping with dyslexia	−.21*	−.20*	−.37***
Maladaptive coping with dyslexia	.39***	.48***	.34***
M	43.46	48.83	28.05
SD	11.95	12.81	8.68
Cronbach's α	.89	.92	.84

Note: *N* = 115. Scores were computed by summing across items.
*p < .05.
***p < .001.

each factor—Factor 1 (labelled "adaptive coping") combined active coping, planning, positive reframing, using emotional support, and using instrumental support; and Factor 2 (labelled "maladaptive coping") combined self-distraction, denial, substance use, behavioural disengagement, and self-blame—and so we combined the responses from the respective items of the respective Brief COPE–Dyslexia sub-scales to measure adaptive and maladaptive coping with dyslexia.

Because multivariate outliers may distort the results of correlational and multivariate analyses, we examined if any participants showed a Mahalanobis distance larger than the critical value of $\chi^2(6) = 22.46$, $p < .001$ (Tabachnick & Fidell, 2007). This was not the case, so all 115 participants were retained for the main analyses. Finally, we examined the reliability of the measures using Cronbach's alpha. All measures displayed satisfactory alphas≥.79 (see Table 2).

2.4 | Analytic strategy

To examine the relationships between perfectionism, self-stigma, and coping, and explore whether perfectionistic strivings mediated any relationships between dispositional perfectionism with self-stigma and coping, we first computed bivariate correlations between the variables, followed by hierarchical regression analyses (Baron & Kenny, 1986), followed by mediation analyses, examining if dispositional perfectionism had any indirect effects on self-stigma and coping via perfectionistic self-presentation using PROCESS (Hayes, 2013).

3 | RESULTS

3.1 | Bivariate correlations

First, we examined the bivariate correlations (see Table 2). As regards self-stigma of seeking help for dyslexia, socially prescribed perfectionism and perfectionistic self-presentation showed a significant positive correlation with self-

TABLE 2 Bivariate correlations and descriptive statistics

Measure	1	2	3	4	5	6
Perfectionism						
1. Self-oriented perfectionism						
2. Socially prescribed perfectionism	.30**					
3. Perfectionistic self-presentation	.37***	.54***				
Self-stigma and coping						
4. Self-stigma of seeking help for dyslexia	.21*	.41***	.56***			
5. Adaptive coping with dyslexia	.15	−.09	−.28**	−.30**		
6. Maladaptive coping with dyslexia	.17	.48***	.48***	.41***	−.14	
M	27.08	19.32	119.13	29.40	13.00	10.48
SD	5.52	6.38	30.53	8.61	2.76	2.77
Cronbach's α	.83	.79	.95	.90	.79	.80

Note: $N = 115$. Scores were computed by summing across items.
*$p < .05$.
**$p < .01$.
***$p < .001$.

stigma, as did self-oriented perfectionism. As regards coping, socially prescribed perfectionism and perfectionistic self-presentation showed a significant positive correlation with maladaptive coping with dyslexia, but only perfectionistic self-presentation also showed a significant negative correlation with adaptive coping.

3.2 | Regression analyses

Next, we computed a series of hierarchical regression analyses to find out whether perfectionistic self-presentation explained variance in self-stigma and coping above dispositional perfectionism and, if so, if the associated regression weights suggested possible mediation effects. Following Baron and Kenny (1986), the regression analyses comprised two steps. In Step 1, self-oriented and socially prescribed perfectionism were entered simultaneously as predictors; and in Step 2, perfectionistic self-presentation was entered as an additional predictor.

In all three regression analyses, perfectionistic self-presentation was a significant predictor in Step 2—a positive predictor of self-stigma and maladaptive coping, and a negative predictor of adaptive coping—and explained significant variance above dispositional perfectionism (see Table 3). Moreover, the two forms of dispositional perfectionism showed a distinct pattern of significant versus non-significant regression weights depending on the outcome examined.

As regards self-stigma, Step 1 showed that only socially prescribed perfectionism remained a significant predictor when the overlap with self-oriented perfectionism was controlled, indicating that self-oriented perfectionism's positive bivariate correlation with self-stigma was due to its overlap with socially prescribed perfectionism (see Table 2). Furthermore, Step 2 suggested that perfectionistic self-presentation fully mediated the positive relationship between socially prescribed perfectionism and self-stigma because socially prescribed perfectionism ceased to be a significant predictor once perfectionistic self-presentation was entered as an additional predictor.

As regards adaptive coping, Step 1 showed both forms of dispositional perfectionism to be non-significant predictors, dovetailing with the bivariate correlations. When perfectionistic self-presentation was entered in Step 2, however, self-oriented perfectionism showed a significant positive regression weight, indicating that self-oriented perfectionism had a positive direct effect on adaptive coping once the overlap with perfectionistic self-presentation was controlled.

TABLE 3 Hierarchical regression analyses

	Self-stigma of seeking help for dyslexia		Adaptive coping with dyslexia		Maladaptive coping with dyslexia	
Model	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1	.177***		.039		.233***	
Self-oriented perfectionism		.09		.19		.02
Socially prescribed perfectionism		.39***		−.14		.48***
Step 2	.153***		.118***		.067**	
Self-oriented perfectionism		−.02		.29**		−.05
Socially prescribed perfectionism		.16		.06		.33***
Perfectionistic self-presentation		.48***		−.42***		.32**

Note: N = 115.
Abbreviation: β = standardized regression weight.
**p < .01.
***p < .001.

As regards maladaptive coping, Step 1 showed only socially prescribed perfectionism to be a significant positive predictor, dovetailing again with the bivariate correlations. Furthermore, Step 2 suggested that perfectionistic self-presentation partially mediated the positive relationship between socially prescribed perfectionism and maladaptive coping because socially prescribed perfectionism showed a smaller regression weight in Step 2 (β = .33, p < .01) when perfectionistic self-presentation was entered as an additional predictor than in Step 1 (β = .48, p < .001).

Finally, we computed a simple regression analysis to examine whether the two forms of perfectionism predicted perfectionistic self-presentation when their overlap was controlled, which is important to establish before testing possible mediation effects (Baron & Kenny, 1986). Entered simultaneously in a regression, predicting perfectionistic self-presentation, both self-oriented and socially prescribed perfectionism showed significant positive regression weights (self-oriented perfectionism: β = .23, p < .01; socially prescribed perfectionism: β = .47, p < .001; ΔR^2 = .34, p < .001) indicating that both forms of perfectionism had unique effects in the prediction perfectionistic self-presentation. (Figure 1 shows the effects together with all significant effects from Table 3 in one path model.)

3.3 | Mediation analyses

To further examine the possible mediation effects suggested by the regression analyses, we employed PROCESS 3.4 (Hayes, 2019) and tested all possible indirect effects (IEs) of dispositional perfectionism→perfectionistic self-presentation→ self-stigma and coping for significance (see the respective paths in Figure 1). Going beyond Baron and Kenny's (1986) classic approach to mediation analysis, contemporary approaches suggest to test IEs for significance also when a predictor shows no significant total effect (Rucker, Preacher, Tormala, & Petty, 2011; Zhao, Lynch, & Chen, 2010). Consequently, we tested all possible IEs for both self-oriented and socially prescribed perfectionism even when the total effect was non-significant.[3]

In this research, we controlled for the overlap between the two forms of dispositional perfectionism—including socially prescribed perfectionism as a covariate when testing the IEs of self-oriented perfectionism, and self-oriented perfectionism as a covariate when testing the IEs of socially prescribed perfectionism—so to examine the unique IEs of the two forms of perfectionism. When employing 95% and 99% bootstrapped confidence intervals (1,000 bootstrap samples) to test the IEs for significance, results showed that all IEs were significant (see Table 4). Both forms of perfectionism had significant positive IEs on stigma and maladaptive coping, and significant negative IEs on adaptive coping.

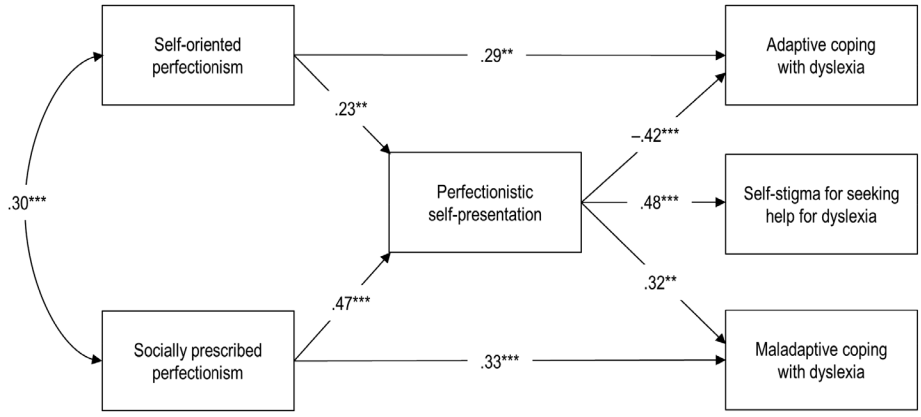

FIGURE 1 Final mediation model (N = 115). All paths are standardized regression weights with only significant paths (p < .05) displayed; **p < .01, ***p < .001

4 | DISCUSSION

4.1 | The present findings

Presenting the first research on perfectionism, self-stigma, and coping in university students with dyslexia, the present study examined the relationships between self-oriented and socially prescribed perfectionism and perfectionistic self-presentation with self-stigma of seeking help for dyslexia and adaptive versus maladaptive coping with dyslexia. As regards dispositional perfectionism, socially prescribed perfectionism—driven by externally motivated beliefs that others think it is important to be perfect—showed large positive correlations with self-stigma and maladaptive coping (cf. Gignac & Szodorai, 2016). In contrast, self-oriented perfectionism—driven by internally motivated beliefs that it is important to be perfect—only showed a medium-sized positive correlation with self-stigma. Both forms of perfectionism, however, showed large positive correlations with perfectionistic self-presentation—impression management aimed at making others believe one is perfect and hiding imperfections—and perfectionistic self-presentation showed large correlations with all three dyslexia-related outcomes: positive correlations with self-stigma and maladaptive coping, and a negative correlation with adaptive coping.

Furthermore, regression analyses found that perfectionistic self-presentation explained variance in self-stigma and coping above variance explained by dispositional perfectionism. Moreover, mediation analyses testing whether dispositional perfectionism had IEs on self-stigma and coping via perfectionistic self-presentation (dispositional perfectionism→perfectionistic self-presentation → self-stigma and coping) showed that both forms of dispositional had significant IEs on self-stigma and coping: Indirect positive effects on self-stigma and maladaptive coping, and indirect negative effects on adaptive coping (see Figure 1). In sum, the present findings indicate that perfectionistic self-presentation plays a central role in the relationships among perfectionism, self-stigma of seeking help with dyslexia, and coping with dyslexia. Higher levels of perfectionistic self-presentation not only predicted higher levels of self-stigma and maladaptive coping, but also lower levels of adaptive coping, suggesting that perfectionistic self-presentation is a meaningful risk factor for students with dyslexia at university.

TABLE 4 Mediation analyses: Indirect effects via perfectionistic self-presentation

Outcome and predictors	IE	95% CI	99% CI
Self-stigma for seeking help for dyslexia			
Self-oriented perfectionism	.11**	[.02; .21]	[.004; .24]
Socially prescribed perfectionism	.22**	[.11; 35]	[.10; .40]
Adaptive coping with dyslexia			
Self-oriented perfectionism	−.10*	[−.19; −.03]	[−.22; .003]
Socially prescribed perfectionism	−.20**	[−.33; −.09]	[−.39; −.06]
Maladaptive coping with dyslexia			
Self-oriented perfectionism	.07*	[.02; .15]	[−.01; .17]
Socially prescribed perfectionism	.15**	[.05; .26]	[.03; .31]

Note: $N = 115$. Total and direct effects are not displayed because—when all variables are standardized—the total effects correspond to the standardized regression weights in Step 1 of Table 3, and the direct effects correspond to the standardized regression weights in Step 2. PROCESS does not compute 99.9% CIs, so significance levels of $p < .001$ are not displayed.CI, confidence interval; IE, fully standardized point estimate of indirect effect.

*$p < .05$.

**$p < .01$.

4.2 | Theory and research implications

The present findings confirm that perfectionistic self-presentation is a key aspect of perfectionism and central in explaining why dispositional perfectionism is dysfunctional, demonstrating the importance of differentiating dispositional perfectionism (reflecting a need to be perfect) and perfectionistic self-presentation (reflecting a need to appear perfect to others) as an expressional style of perfectionistic tendencies (Hewitt et al., 2003, 2008; Stoeber et al., 2017). Furthermore, the findings corroborate previous findings that perfectionistic self-presentation shows positive relationships with maladaptive coping and negative relationships with adaptive coping (Crăciun & Dudău, 2014; Flett et al., 2011; Shanmugasegaram et al., 2014). Moreover, they corroborate previous findings that perfectionistic self-presentation is associated with self-stigma for seeking help (Shannon et al., 2018), and they are in line with findings that perfectionistic self-presentation generally predicts negative reactions to impairment and disability (Read, Hill, Jowett, & Astill, 2019).

In addition, the findings confirm that socially prescribed perfectionism is a highly dysfunctional form of dispositional perfectionism and may predict higher levels of psychological maladjustment above perfectionistic self-presentation (Hewitt et al., 2003; Stoeber et al., 2017). Furthermore, the findings are in line with previous findings, suggesting that—when compared to socially prescribed perfectionism—self-oriented perfectionism is a more ambivalent form of dispositional perfectionism (Stoeber et al., 2009). On the one hand, self-oriented perfectionism showed a positive correlation with self-stigma and had positive IEs on self-stigma and maladaptive coping, and a negative indirect effect on adaptive coping, via perfectionistic self-presentation. On the other hand, self-oriented perfectionism had a direct positive effect on adaptive coping (see Figure 1).

Note that, in mediation analyses, the total effect is the sum of the direct effect and the indirect effect (Hayes, 2013). In the present case, the direct effect of self-oriented perfectionism on adaptive coping was .29 and significant (Table 3, Step 2), and the indirect effect was −.10 and significant (Table 4), but when summing up these effects, the total effect was .19 and non-significant (Table 3, Step 1). This finding suggests that self-oriented perfectionism's positive relationship with perfectionistic self-presentation may suppress the positive relationship of self-oriented perfectionism with adaptive outcomes, or negative relationships with maladaptive outcomes, and consequently "mask" possible adaptive effects of self-oriented perfectionism.[4] A similar effect was recently observed in a study on perfectionism and eating disorder symptoms (Stoeber et al., 2017): Self-oriented perfectionism was associated with higher levels of bulimia when bivariate correlations were regarded, but predicted lower levels of bulimia once the overlap with perfectionistic self-presentation was controlled, indicating the importance to include perfectionistic self-presentation when examining the relationships of perfectionism with adaptive and maladaptive outcomes.

4.3 | Practical implications

Although our study examined perfectionism, self-stigma, and coping in students with dyslexia from a research perspective, focused on personality and individual differences, the findings have implications for practitioners providing help, support, and counselling for individuals diagnosed with dyslexia. The findings suggest that perfectionism is an important individual difference variable that practitioners need to take into account when working with students with dyslexia. In particular, perfectionistic self-presentation plays a central role in having negative effects on how students cope with dyslexia and how they perceive seeking help for dyslexia. In this research, practitioners should take note that perfectionism is best regarded as disposition that to a large extent is learned and socialized and consequently can change (Flett, Hewitt, Oliver, & Macdonald, 2002; Stoeber, Edbrooke-Childs, & Damian, 2018). Furthermore, longitudinal studies, examining risk factors and protective factors in the development of perfectionism, have identified students' perceptions of parents and teachers as contributing factors (e.g., Domocus & Damian, 2018), so practitioners should address these factors when supporting parents and teachers of students with dyslexia.

In addition, practitioners should know that there are established cognitive-behavioural techniques addressing perfectionism (Egan, Wade, Shafran, & Antony, 2014). Unfortunately, these techniques mainly address the personal aspects of perfectionism associated with self-oriented perfectionism, whereas the present findings suggest that the social aspects of perfectionism associated with socially prescribed perfectionism and, in particular, perfectionistic self-presentation pose the greatest problem for self-stigma and coping in students with dyslexia (see again Figure 1). Addressing the social aspects of perfectionism, however, requires interventions that take a relational approach and focus on interpersonal aspects including perfectionistic self-presentation (Hewitt, Flett, & Mikail, 2017).

Finally, note that the university students diagnosed with dyslexia we examined in the present study showed elevated levels of perfectionistic self-presentation. In this research, the students showed an elevated level of perfectionistic self-promotion comparable to what has been found in clinical samples (cf. Hewitt et al., 2003, 2008). However, they showed elevated levels of non-display of imperfection and non-disclosure of imperfection that were higher than any mean in the tables of norms for clinical samples reported in the original Hewitt et al. (2003) publication as well as in the more recent publication examining clinical patients presenting for a clinical interview (Hewitt et al., 2008). This suggests an unprecedented level of perfectionistic self-presentation, particularly regarding the two avoidance-focused aspects of self-presentation, that is, the aspects that focus on avoiding display and disclosure of mistakes, flaws, and shortcomings with the aim of hiding from others an identity perceived as undesired and undesirable (Hewitt et al., 2003). Perfectionistic self-presentation has been associated with a range of symptoms indicative of severe psychological distress such as anxiety, depression, hopelessness, and suicide risk (Hewitt et al., 2003, 2008; Roxborough et al., 2012). Moreover, it has been associated with characteristics indicative of adjustment problems that may severely impede academic success including self-handicapping, social anxiety, and low academic self-esteem (Hewitt et al., 2003).

If the present findings replicate in future research, confirming that perfectionistic self-presentation is highly prevalent in university students with dyslexia, Student Support services should consider establishing targeted intervention programmes tailored to address the beliefs and concerns of perfectionistic students who show elevated levels of perfectionistic self-presentation as these may increase students' use of adaptive coping with dyslexia and decrease maladaptive coping, as well as self-stigmatization for seeking help with dyslexia (cf. Shannon et al., 2018). Such programmes would be important because our findings suggest that students with dyslexia who are high in perfectionistic self-presentation may not seek help by themselves, so it is imperative that colleges and universities proactively reach out to these students in preventive efforts.

4.4 | Limitations and future studies

Our study has a number of limitations. First, the design was cross-sectional, and a proper test of mediation using correlational designs requires longitudinal data. However, note that the predictors in our mediation model were personality dispositions (the two forms of dispositional perfectionism), the mediators were self-presentational expressions of these dispositions (perfectionistic self-presentation), and the dependent variables were domain-specific outcomes (self-stigma of seeking help for dyslexia and coping with dyslexia), which renders reverse pathways (self-stigma and coping–perfectionistic self-presentation–dispositional perfectionism) unlikely. Still, future research should replicate our mediation model with longitudinal data. Second, our study was in parts exploratory, and future studies need to replicate our mediation findings before firm conclusions can be drawn. Moreover, the study examined university students with dyslexia, so future research needs to expand the present research to school students and adult learners in further education or continuous professional development (CPD) with dyslexia to examine whether the findings generalize to all students with dyslexia. Finally, our study focused on self-oriented and socially prescribed perfectionism from Hewitt and Flett's (1991) model of multidimensional perfectionism. Although this is one of the most influential and widely researched models of dispositional perfectionism, future studies may profit from extending the present research to aspects of dispositional perfectionism from other multidimensional models that can be expected to play

a role in students with dyslexia' self-stigma and coping, such as concern over mistakes, doubts about actions, self-worth contingencies, and self-criticism (e.g., Smith, Saklofske, Stoeber, & Sherry, 2016). Furthermore, future studies may profit from exploring—from a person-centred perspective including qualitative analyses—what it means to be a student characterized jointly by the challenges of dyslexia and the pressures of dispositional perfectionism and perfectionistic self-presentation, and examine if these pressures add further threats to the well-being and the lives of students with dyslexia (cf. Alexander-Passe, 2015; Flett et al., 2014).

5 | CONCLUSIONS

Considering that this is the first research examining perfectionism, self-stigma, and coping in students with dyslexia, it is inevitable that the present study has a number of limitations and requires further research to consolidate and build on the present findings. Our hope, however, is that the study has shown that individual differences in perfectionism are relevant to the research on dyslexia, and made practitioners and supporters aware that in particular perfectionistic self-presentation represents a risk for students' help-seeking for, and successful coping with, dyslexia.

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ENDNOTES

[1] They further identified a third form—other-oriented perfectionism (expecting others to be perfect)—which in the present study focusing on the self was disregarded (cf. Stoeber, 2014).

[2] Note that the means of the other measures (see Table 2) could not be compared to previous studies because Cox et al. (2002) did not report any means for the HF-MPS 10-item short form, and the other two scales (SSOSH–Dyslexia, Brief COPE–Dyslexia) were scale adaptations newly created for the present research.

[3] Note that the total effects of the two forms of dispositional perfectionism are represented by the regression weights in Step 1 of Table 2 (Baron & Kenny, 1986; Hayes, 2013).

[4] For a statistical account of suppression effects, see Tabachnick and Fidell (2007); for a discussion of how to interpret suppression effects in dispositional perfectionism, see Stoeber and Gaudreau (2017); and for possible caveats regarding the interpretation of such effects, see Hill (2014).

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APPENDIX A.: SSOSH–DYSLEXIA: INSTRUCTIONS, ITEMS, AND RESPONSE SCALE

Instructions: People at times find that they face problems that they consider seeking help for. This can bring up reactions about what seeking help means. Please use the five-point scale to rate the degree to which each item describes how you feel in situations when you seek help for your dyslexia (e.g., when you contact Student Support).

Items: (1) I feel inadequate when I go to Student Support for help. (2) My self-confidence is NOT threatened when I seek professional help. (3) Seeking professional help makes me feel less intelligent. (4) My self-esteem increases when I talk to Student Support. (5) My view of myself does not change just because I make the choice to see Student Support. (6) It makes me feel inferior to ask Student Support for help. (7) I feel okay about myself when I make the choice to seek professional help. (8) When I go to Student Support, I am less satisfied with myself. (9) My self-confidence remains the same when I seek help for a problem I cannot solve. (10) I feel worse about myself when I cannot solve my own problems. [Items 2, 4, 5, 7, and 9 are reverse-scored.]

Response scale: 1 (strongly disagree), 2 (somewhat disagree), 3 (neither agree nor disagree), 4 (somewhat agree), 5 (strongly agree).

APPENDIX B.: BRIEF COPE–DYSLEXIA: INSTRUCTIONS, ITEMS, AND RESPONSE SCALE

Instructions: These items ask how you cope when you have problems associated with **your dyslexia**. Obviously, different people deal with different things in different ways, but we are interested in how you try to deal with it. Each item says something about a specific way of coping. We want to know to what extent you do what the item says. How much or how frequently. Do not answer based on whether it seem to work or not—just whether you do it. Use these response choices. Try to rate each item separately in your mind from the others. Make your answers as true for you as you can.

Items: (1) I turn to work or other activities to take my mind off things. (2) I concentrate my efforts on doing something about the situation I'm in. (3) I say to myself “this isn't real”. (4) I use alcohol or other drugs to make myself feel better. (5) I get emotional support from others. (6) I give up trying to deal with it. (7) I act to make the situation better. (8) I refuse to believe that I am dyslexic. (9) I say thinks to let my unpleasant feelings escape. (10) I get help and advice from other people. (11) I use alcohol or other drugs to help me cope. (12) I try to see it in a different light, to make it seem more positive. (13) I criticize myself. (14) I try to come up with a strategy about what to do. (15) I get comfort and understanding from someone. (16) I give up the attempt to cope. (17) I look for something good in being dyslexic. (18) I make jokes about it. (19) I do something to think about it less, such as going to movies, watching TV, daydreaming, sleeping, or shopping. (20) I accept the reality of the fact that I have dyslexia. (21) I express my negative feelings. (22) I try to find comfort in my religion and spiritual beliefs. (23) I try to get advice or help from other people about what to do. (24) I learn to live with it. (25) I think hard about what steps to take. (26) I blame myself for things that happen. (27) I pray and meditate. (28.) I make fun of the situation.

Sub-scales (item numbers): active coping (2, 7), planning (14, 25), positive reframing (12, 17), acceptance (20, 24), humour (18, 28), religion (22, 27), using emotional support (5, 15), using instrumental support (10, 23), self-distraction (1, 19), denial (3, 8), venting (9, 21), substance use (4, 11), behavioural disengagement (6, 16), self-blame (13, 26).

Response scale: 1 (I do not do this at all), 2 (I do this a little), 3 (I do this a medium amount), 4 (I do this a lot).