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Running head: GENDER AND HELP-SEEKING

Barriers to academic help-seeking: the relationship with gender-typed attitudes.

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Abstract

In recent years, male students at UK schools and universities have been falling behind their female peers in academic achievement. Previous studies have shown that male students are less likely than female students to seek academic help, but have not investigated the relationship between gender-typical attitudes and reluctance to seek academic help. In the present study, 162 students at six UK universities completed the Help-Seeking Scales and the Traditional Gender Script Questionnaire. Data from this survey were analysed using MANOVA and multiple linear regression. The main findings were that reluctance to seek help was predicted by higher scores on the masculine gender script subscale *Mastery and Control* of feelings for both male ($\beta = .448, p < .01$) and female students ($\beta = .497, p < .001$). For male participants, being a *Fighter and a Winner* also predicted reluctance to seek help ($\beta = -.322, p < .05$) whereas, for female students, greater help-seeking was associated with more interest in creating *Family Harmony* ($\beta = -.272, p < .05$). These findings suggest that the help-seeking behaviour of both male and female students is related to specific gender-typical attitudes. We suggest that awareness of these attitudes can serve to inform educational practice by facilitating access to academic assistance and encouraging all students to seek academic help.

Keywords academic help-seeking; learning goals; gender scripts; gender role strain

Introduction

There are many good reasons why students should take full advantage of their educational opportunities and maximize their achievement. Students can overcome the challenges of education by seeking help, but it can be tragic to see a student fail their studies without having sought support. Clearly it is desirable to identify those students who are most prone not seeking help when they need it.

Academic help-seeking

Help-seeking is defined as seeking assistance or support when faced with difficulties (Sullivan, 2011). Academic help-seeking is a learning and problem-solving strategy used by students to help them understand academic materials (Zusho and Barnett, 2011), concepts and procedures. In general, students who seek academic help have greater success in solving academic problems and increasing their knowledge than those who do not (Kessels and Steinmayr, 2013). Within an educational context, help-seeking can therefore be an adaptive learning tactic which leads to better academic outcomes by increasing understanding and perceived mastery (Wimer and Levant, 2011).

Factors that contribute to a desire or reluctance to seek help

One aspect of help-seeking reluctance relates to the perception of task difficulty; Puleo, Keen, Lehman & Griffin (2011) found that despite University students recognising that they needed help when completing a difficult task, the majority of students did not ask for help when given the opportunity. In addition to task difficulty, several other variables, including age, socio-economic status and class size have been implicated in help-seeking is avoidance (Karabenick, 2003; Perrine, Lisle and Tucker, 1995; Puleo, Keen, Lehman &

Griffin, 2011).

Situational and personal characteristics which influence help-seeking include help-seeking style, student age and experience. According to Karabenick (2003), help-seekers tend to be instrumental learners who are motivated to improve their knowledge and understanding; they are proactive in seeking assistance when faced with a task or challenge that is difficult or ambiguous. Conversely, students who are reluctant to seek help when it is needed often engage in maladaptive behaviours such as guessing, knowingly providing an incorrect answer, or cheating (Karabenick, 2003). When reluctant help-seekers do request help they often use an executive style where they seek just enough assistance to solve their problem without understanding the mechanics of how to arrive at the solution (Wimer and Levant, 2011; Karabenick, 2003; Newstead et al 1996; Ryan, Shim, Lampkins-uThando & Thompson, 2009).

In a US investigation of university students, class size and student age affected willingness to seek help from instructors regardless of whether or not offers of help were explicitly made. Younger students (under 25 years) in comparison to older students (25 years and over) were less willing to seek help and it is suggested that younger students may not realise the appropriateness and acceptability of seeking help, especially if they perceive that there are threats involved in seeking help (Perrine, Lisle and Tucker, 1995). Similarly, Fischer and Cohen (1972) found that first year US students were less likely to seek help from their tutors than students who had progressed further in their studies.

Sex differences in academic achievement in the UK

Much of the previous research relates to US studies where educational practice differs from that in the UK, where the disparity between the sexes in academic outcomes continues to widen and is observable across the whole educational piste (Marrs, Brammer

and Sigler, 2012; Stoet, 2015). A review of the academic performance of students in UK secondary school education revealed that girls have been outperforming boys in General Certificate of Secondary Education (GCSE) grades since 1993 (Bramley, Vidal Rodeiro, & Vitello, 2015; DfE, 2014; Lindsay and Mujis, 2006). A similar trend has been observed in further education, with male students, achieving fewer A*- E Advanced Level (A Level) grades or vocational qualifications than their female peers (DfE, 2014; Smithers, 2014). Moving through the educational trajectory it has been noted that in general, male university students are underperforming in academic attainment when compared to their female counterparts. A lower proportion of men enrol in higher educational courses and their dropout rates are increasing (Bosworth & Kersley, 2015).

The finding that male students seek academic help less than females (Kessels and Steinmayr, 2013) may have relevance to the 'gender-gap' in higher education settings, where male university students typically lag behind their females in academic success (Kessels and Steinmayr, 2013; Marrs, Brammer and Sigler, 2012; Stoet, 2015; Wimer and Levant, 2011). The ability to resolve academic issues impacts upon course continuation and subsequent levels of success (Kessels and Steinmayr, 2013), and it therefore might be useful to explore the degree to which 'gender-specific' attitudes and behavioural scripts relate to help-seeking ability.

Course content has also been found to influence attitudes toward help-seeking. Those studying science, technology, engineering and mathematics (STEM subjects) tend to be more reluctant to seek help compared to students of the social sciences (Fischer and Cohen, 1972). Fischer and Cohen (1972) suggest that this may be because social sciences students are more liberal in their views and attitudes towards help-seeking compared to the more conservative students who undertake classical STEM subjects. Another explanation is based on the finding that increase in perceived task difficulty is negatively associated

with help-seeking (Puleo, Keen, Lehman & Griffin, 2011), thus if students perceive STEM subjects as more difficult, help-seeking may be reduced. However because the gender ratio of students can vary across courses, with proportionally more males engaged in STEM subjects, the possible influence of gender needs to be taken into account when comparing help-seeking across disciplines (Bosworth & Kersley, 2015).

Gender differences in help-seeking

Previous research on the relationship between academic help-seeking and gender has focussed mostly on children and adolescents (Kessels and Steinmayr, 2013) rather than higher education. Previous research has also predominantly centred on US students (Marrs, Brammer and Sigler, 2012; Wimer and Levant, 2011).

Developmental studies have shown that sex differences in help-seeking behaviour appear early. For example, Kuhn, Nash, & Bruckner (1978) found that two and three year old US children perceived asking for help as a “female-typed” behaviour. Higher frequencies of help-seeking have been found in girls than in boys and, correspondingly, US parents have been observed to provide more positive reinforcement towards girls who ask for help than they do for help-seeking boys (Fagot, 1978). An indication that such gender-typed attitudes may still be prevalent across societies and also relate to older children comes from a study of male German adolescent students reporting greater reluctance to being helped and fewer intentions to seek help than their female classmates (Kessels & Steinmayr, 2013).

Within UK universities, male students are less likely to express a current or anticipated need for requiring academic support services and are less likely to proactively seek help; in contrast, female students who considered withdrawing from their course were more likely to seek support and had greater expectations that support services would help

them to resolve academic issues than did males (Equality Challenge Unit, 2012).

Mechanisms implicated in help seeking behaviour

To better understand why traditional notions of masculinity and femininity might impact academic help-seeking behaviour in males and females, it may be helpful to define the constructs of sex and gender. Within a research context, sex can be defined as the objective definitions of male, female or transgender, based upon defined biological characteristics. Gender on the other hand refers to socially constructed attitudes and beliefs about the attributes and behaviours associate with males and females (Worell and Remer, 2003). Characteristics are traditionally classified as masculine and feminine according to the degree to which they reflect gender norms (Stewart and McDermott, 2004).

According to a social constructionist viewpoint, gender norms can be enacted via gender scripts. Gender scripts are social schemas describing how men and women 'ought to' behave and what it means to be masculine and feminine in a traditional or even archetypal sense (Seager, Sullivan and Barry, 2014). Over time, gender scripts become normative and can be seen as obligatory within a society (Levant and Richmond, 2016). The ideals include scripts outlining how a man or woman is supposed to act in order to demonstrate masculinity or femininity (Mahalik, Good and Englar-Carlson, 2003; Wimer and Levant, 2011). Seager et al (2014) found that male scripts typically presume a man be competitive, a provider and protector, and having mastery and control over their emotions. Traditional feminine gender scripts presume that a woman will strive to be attractive, bear and nurture children and engage in family life (Seager, et al., 2014).

Especially in contemporary Western contexts, gender scripts can be enacted independently of biological sex, for example, men can enact femininity or each sex might enact a combination of both scripts (Paver and Gammie, 2005). However, enacting

traditional gender scripts that are aligned to one's biological sex is still often encouraged, and failure to comply can result in the experience of gender role strain (Pleck, 1995). Gender role strain is the cognitive conflict that results when an individual challenges or is unable to live up to traditional gender norms (Pleck, 1995). Greater endorsement of traditional masculine ideology has been associated with higher levels of gender role strain and lower help seeking behaviour (Yousaf, Popat & Hunter, 2014). Endorsement of particular aspects of masculinity such as being strong, being independent and repressing emotions are antithetical to help seeking (Wimer and Levant, 2011) and those (males and females) who endorse such traditional scripts may be less likely to seek help, thereby avoiding gender role strain. Evidence relating masculinity to help-seeking is complex however, and simple causal implications do not always apply. For example, a meta-analysis of 34 studies concluded that traditional masculine ideals can offer positive resources for men coping with depression (Krumm et al, 2017).

In a notion termed "effortless achievement", Jackson and Dempster (2009) noted that young men felt that it was 'uncool' to be viewed by peers as engaged in academic life as this was in opposition to traditional masculine ideology. This has been reported in university students, though to a lesser extent than in secondary school students. Therefore, for some people, not exerting effort in academic studies is a way to validate masculinity (Kessel and Steinmayr, 2013) and these attitudes may impact on help-seeking behaviour.

Conversely, endorsement of particular facets of traditional femininity such as being agreeable, cooperative and interdependent, which are encapsulated within a "harmony" script, may encourage more positive attitudes towards seeking help. Those who endorse traditional feminine gender scripts may be more likely to seek help as this behaviour does not threaten their self-esteem (Kessels and Steinmayr, 2013) or desired identity. Costs to self-esteem and self worth have been identified as impacting upon willingness to seek help

when asking for help is experienced as threatening (Karabenick, 2003; Kessels and Steinmayr, 2013).

To explore the underlying mediators of sex differences in help-seeking behaviour among American psychology undergraduate students, Wimer and Levant (2011) questioned whether greater endorsement of masculinity influenced male help-seeking avoidance. When using Levant et al.'s (2007), revised scale of the male role norms inventory (MRNI-R), they found that endorsement of particular aspects of traditional masculine ideology such as extreme self-reliance, dominance and the avoidance of femininity were associated with greater reluctance to seek academic help. These findings indicate that masculinity may be a construct which potentially hinders academic help-seeking, a finding that has also been reported in the psychological health field literature (Addis & Mahalik, 2003; Yousaf, Popat & Hunter, 2014). Central to the masculine ideal was the rejection of engaging in what were considered to be typically feminine behaviours (Marrs et al, 2012). In Western educational culture, interest and engagement in academic work, reading and studying may be seen as engendering feminine behaviours (Marrs et al, 2012).

Marrs et al.'s (2012) investigation of the impact of masculinity and femininity on academic help-seeking behaviour in American students used the Bem Sex-Role inventory (Bem, 1974) to measure masculinity, femininity, and androgyny. They found that both male and female students who classified themselves as feminine rather than masculine had higher mean help-seeking scores. Similarly, Kessel and Steinmayr (2013) found that adolescent students who endorsed femininity more highly had more positive attitudes towards seeking academic help. Thus, these findings suggest that feminine attitudes and traits (such as being compliant, warm and understanding) encourage help-seeking behaviour to a greater extent than masculine traits, such as independence, confidence and ambition (Marrs et al, 2012).

It is difficult to accurately generalise the findings on academic help-seeking from one country to another for various cultural reasons, including the differences between educational systems. For example, the US the educational culture typically offers greater support for students than in the UK, where greater emphasis has been placed on independent study. This might explain the view that UK students may be more reluctant to seek help than those in the US (Council for Industry and Higher Education, 2008). Very little has been reported on the relationship between gender attitudes and academic help-seeking behaviour in UK university settings and the present study seeks to address this omission in the literature.

The present study

The present study had two aims. Firstly, to find out whether there is a sex difference in the degree of academic help-seeking behaviour among students in UK higher educational settings. Secondly, to assess the degree to which various gender-typical attitudes predict academic help-seeking.

The hypotheses are:

H₁: There will be sex differences in the help-seeking behaviour of students

H₂: Adherence to male gender scripts will be a better predictor of help-seeking reluctance than adherence to female gender scripts.

Method

This study used a survey design and data were analysed using Multivariate Analysis of Variance (MANOVA) and multiple linear regression. These statistical

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The impact of female gender scripts has typically been neglected in favour of examining the impact of masculinity on help-seeking, therefore, this research also investigates the role of female gender scripts in this area. ¶

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techniques are useful in helping us to identify differences and relationships between multiple variables. In simple terms, MANOVA is like a t-test, but is extended to allow us to assess the impact of more than one independent variable (or factor) on more than one dependent variable. Multiple linear regression extends the simple correlation in a way which allows us not only to (a) identify the degree of correlation between a set of 'predictor' variables and an outcome variable, but also allows us to (b) see the strength of the correlation between any of the predictor variables and the outcome variable, while taking into account the influence of the other predictor variables.

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To test whether there were sex differences in academic help-seeking reluctance, total help-seeking scores were analysed using a one-way between groups multivariate analysis of variance (MANOVA). The three dependant variables were: *help-seeking avoidance*, *help-seeking threat*, and the composite of both of these, *help-seeking reluctance*. Help-seeking avoidance included items such as 'I would rather do worse on an assignment I couldn't finish than ask for help'. Help-seeking threat included questions such as 'I would feel like a failure if I needed help in class'. The independent variables were student sex (male/female), age (in years) and type of course studied (STEM or Non-STEM). A further analysis of variance test was conducted to determine predictors for total scores on help-seeking reluctance.

Multiple linear regression was used to find out which gender scripts best predicted help-seeking reluctance. The criterion variable was help seeking reluctance, and the predictors were the gender script scores. Three regression models were explored. In the first model, two predictors - the total male script and total female script scores - were entered along with the criterion variable- help-seeking reluctance scores- to assess whether the scores on the gender scripts overall predicted help-seeking reluctance. The second model explored the relationship between help-seeking reluctance and the nine gender script subscales i.e.

mastery and control (e.g. 'you should be able to cope with problems on your own'); *fight and win* (e.g. 'in life it's important to keep ahead of the competition'); *racing* (e.g. 'I don't like being overtaken on the roads'); *protect* (e.g. 'women and children should come first'); *family harmony* (e.g. 'I won't be truly happy until I have produced a child'); *parenting* (e.g. 'the importance of traditional family roles is overrated'); *looks* (e.g. 'I feel there is too much pressure on me to be attractive'); *fertility* (e.g. 'an infertile person can't reach their full potential as a human being'); *family pressure* (e.g. 'I feel that society unfairly pressures me to have children'). The second model aimed to assess whether specific aspects of the gender scripts predicted help-seeking reluctance. The third model extended on the second model by analysing the data separately for males and females because of the known differences in help-seeking behaviour.

Power analysis

The sample size was based on the main statistical tests in this study, the multiple linear regressions. The formula $N > 50 = 8 * M$ was used (Tabachnick and Fidell, 2007) where M is the number of predictor variables. The model consisted of 9 predictors (the nine Gender Script subscales), thus the minimum number of participants needed was 122.

Participants

A convenience sample of one hundred and seventy four students enrolled in six UK universities (five were based in London and one was based in northern England) agreed to take part in the study between May and July 2015. Of the 174 returned questionnaires, 12 had to be excluded from the analysis as they were not appropriately completed. The final sample consisted of 162 participants (93.1% completion rate) between the ages of 18 and 41. 128 (79.0%) were aged 18-23, 29 (17.9%) were aged 24-29, 3 (1.9%) were aged 30-35

and 2 (1.2%) were aged 36-41. Eighty-one participants (50%) were male and 81 (50%) were female. The sample was comprised of 126 (77.8%) undergraduate and 32 (19.8%) postgraduate students. Four participants did not indicate their level of study. Of the final sample, 119 (73.5%) students indicated that they were UK national students with the remaining 43 (26.5%) students indicating that they were international students.

Measures

Demographic questionnaire

Participants completed a demographic questionnaire about their age, sex, programme of study, level of study and nationality.

Help-seeking scales

Karabenick's (2003) help-seeking scale was edited and adapted for the present study. The original scale is a 13 item measure with five subscales. Two of the subscales were deemed more appropriate for the present study; help-seeking threat (3 items) - whether students feel threatened by seeking help - and help-seeking avoidance (3 items) - whether students are more likely not to seek needed help. Cronbach's α coefficients were 0.81 and 0.77 respectively (Karabenick, 2003).

Two additional questions were added to the scale to measure help-seeking avoidance. These two questions were piloted as part of twelve questions that were generated and piloted with five university students and two recent graduates to assess the content and construct validity of the questions. Following the focus group feedback, four of the twelve additional questions ('Even if I had to ask the same question twice it is better than struggling to understand a topic on my own'; 'Asking for help is more likely to help

me understand a topic better’; ‘I am more likely to succeed if I seek help’, and ‘I would feel tense if I needed to ask for help’) were included in a further pre-test questionnaire along with the three help-seeking threat items and the three original help-seeking avoidance items. The amended help-seeking scale with ten items were pre-tested with four university students; two of the additional questions (‘Even if I had to ask the same question twice it is better than struggling to understand a topic on my own’ and ‘Asking for help is more likely to help me understand a topic better’) were subsequently dropped due to low reliability. The final help-seeking measure consists of eight items rated on a five-point Likert scale with the anchors ranging from ‘not at all true’ to ‘completely true’. The scale consists of two subscales; help-seeking threat (3 items) and help-seeking avoidance (5 items) which when taken together demonstrate help-seeking reluctance. Higher scores on the help-seeking threat subscale indicate higher levels of help-seeking threat and higher scores on the help-seeking avoidance subscale indicate higher levels of help-seeking avoidance (Karabenick, 2003). A composite total on the help-seeking scale was calculated with scores ranging from 8-40. Higher scores indicate lower levels of help-seeking behaviour. The overall Cronbach’s α coefficient for the scale in the present study was 0.70 which is in the acceptable range (Pallant, 2010).

Traditional gender script scale

The traditional gender script scale (Seager et al., 2014) is a 33 item measure with nine subscales. Fifteen items measure endorsement of traditional masculine scripts and incorporate four subscales: *fight & win* (6 items), *mastery & control* (5 items), *racing* (2 items) and *provide & protect* (2 items). Seager et al (2014) report a Cronbach’s α coefficient of 0.86 for the male script. The remaining 18 items measure endorsement of traditional female scripts and incorporate five subscales: *looks* (6 items), *fertility* (3 items),

family harmony (3 items), *parenting* (4 items) and *family pressure* (2 items). Seager et al. (2014) report a Cronbach's α of 0.79 for the female script. Participants indicate their level of endorsement of each script using a six point Likert scale with the anchors of 'strongly disagree' to 'strongly agree', with higher scores indicating greater endorsement of the script.

Procedure

Ethical approval was given by the [City, University of London](#) Psychology Department Research Ethics Committee. Participants were a convenience sample from UK university student populations who responded to poster advertisements at their universities and face to face invitations by the researcher at each site. Participants completed three paper based questionnaires; the demographic information questionnaire, the help seeking scale and the traditional gender script scale which were counterbalanced across participants. The questionnaires were completed individually within their university library or classroom, and took approximately ten minutes to complete.

Results

Seager et al. (2014) reported a Cronbach's α coefficient of 0.86 for the male script; in the present study the α was 0.81. Seager et al. (2014) reported a Cronbach's α of 0.79 for the female script; in the present study the α was 0.75.

The means and standard deviations for the help-seeking scale are shown in Table 1. Preliminary assumption testing was conducted to check normality, linearity, univariate and multivariate outliers and multicollinearity. No serious violations of the assumptions were observed.

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[Table 1 placed about here]

In comparison to females, males had marginally higher overall help-seeking reluctance scores than females.

Using Wilks's statistic there were no statistically significant differences between males and females on the combined dependant variables, $F(1, 158) = 1.36, p = .261$ partial $\eta^2 = 0.17$.

A 2*2*2 between group factorial analysis of variance (ANOVA) was conducted to explore the effect of age, sex and type of course studied on help-seeking reluctance scores. The mean scores for the age, sex and type of course studied can be seen in Table 2.

[Table 2 placed about here]

The participants were categorised by sex (male or female), age was classified as either younger (18 -23 years) or older (24-41 years) with the types of courses studied categorised as either STEM or non-STEM subjects. Table 3 shows that the three way interaction between age, sex and the type of course studied was not significant $F(1,147) = 0.17, p = .68, \text{partial } \eta^2 = .00$. There were no statistically significant main effects for age, sex or types of course studied.

[Table 3 placed about here]

The mean scores of men and women on the gender script scales are shown in Table 4. Men scored higher on both scales and all subscales except the Family Pressure subscale, where the scores were even.

[Table 4 placed about here]

Predicting help-seeking

To determine whether stronger endorsement of traditional gender scripts (specifically masculinity and femininity attitudes) were predictive of lower levels of help-seeking behaviour, a multiple linear regression using the enter method was performed. Preliminary analyses were conducted to ensure no violation of the assumption of normality, linearity, multicollinearity and heteroscedasticity. As sex (male/female), age (older/younger) and subjects studied (STEM/non-STEM) did not reveal any significant differences in a test of means they were excluded from the regression model.

Table 5 shows the results of the regressions with the total gender scripts as the predictors and help-seeking reluctance as the criterion. Zero-order correlations between help-seeking and the traditional gender scripts are shown too. There were small-moderate positive correlations between help-seeking behaviour and the masculine and feminine gender script ($r = .26$ and $r = .25$ respectively). There were also intercorrelations among the gender script variables. All correlations were statistically significant, indicating that

stronger endorsement of both the traditional gender scripts are related to greater academic help-seeking reluctance.

[Table 5 placed about here]

The model was statistically significant, $F(2,159) = 6.73, p < 0.05$ and accounted for 8% of the variance in help-seeking reluctance. The β values in Table 5 suggest that masculinity contributes slightly more to help-seeking reluctance than femininity.

The correlations of the subscales and total help-seeking reluctance are shown in Table 6.

[Table 6 placed about here]

The model was statistically significant $F(9,152) = 5.94, p < .001$ and accounted for approximately 26% of the variance of help-seeking reluctance (Adjusted $R^2 = .216$). Total help-seeking reluctance was primarily predicted by stronger endorsement of *mastery and control* (a person must have *mastery and control* - over their emotions), *fertility* (a person must produce children) and to a lesser extent *fight and win* (a person must be a fighter and a winner) as evidenced by significant β values. The standardised coefficients show that the masculine subscale *mastery and control* is the strongest predictor of all the gender subscales for help-seeking reluctance.

The same model was run again, this time separately for men and women. Table 7 shows that for male and female students, higher scores on *fight & win* predicted less help-

seeking. For women only, greater help-seeking was predicted by higher *family harmony* scores and lower interest in *fertility* subscale scores.

[Table 7 placed about here]

Similar to Table 6, Table 7 shows a negative relationship between fight & win and help seeking avoidance. This appears to be the result of *mastery & control* acting as a suppressor variable on fight & win. This is demonstrated in the relationships between these two variables and the criterion variable. For example, for all students combined, the binary correlation value r between fight & win and the criterion is positive ($r = .13$; $\beta = .13$), but when *mastery & control* is added to the model, the β value for the relationship between fight & win and the criterion becomes negative ($\beta = -.19$), and the relationship between *Mastery & Control* and the criterion increases from a binary value of $\beta = .44$ ($r = .44$) to $\beta = .55$. The same pattern is seen when data are analysed for each sex separately or with male and female student data combined.

The direction of correlation between *fertility* and the criterion was positive for male students (non-significant) and negative for female students (significant). This was true for both binary correlations and multiple correlations, thus no suppressor effects are evidenced.

These results show that although greater endorsement of male gender scripts on the whole does not predict help-seeking reluctance, greater endorsement of two of the male gender subscales significantly predict help-seeking reluctance above greater endorsement of the female gender scripts. The exception to this was the female subscale which indicated

that greater endorsement of the *fertility subscale* predicted help-seeking reluctance.

Discussion

This survey assessed the impact of traditional gender scripts on the academic help-seeking behaviour of male and female students at UK universities. The mean levels of help-seeking reluctance, and its subcomponents (help-seeking threat and avoidance), were all in the expected direction, with males indicating more help-seeking reluctance than the females although this was non-significant.

Contrary to our hypothesis, older male students showed more help-seeking reluctance than older female students. Table 2 shows an effect with a Cohen's *d* of almost 1.0 for the sex difference between the older STEM students, with the mean (SD) for male students 15.82 (5.84), and female students 12.50 (1.29). For both male and female students, higher scores on the male gender script subscale *mastery and control* predicted greater help-seeking reluctance. For male students, being 'a fighter and a winner' also predicted reduced help-seeking reluctance. For female students, greater interest in creating *family harmony* predicted greater help-seeking, but emphasis on producing children (*fertility*) predicted less help-seeking.

The finding that there were no significant differences in reported levels of help-seeking reluctant attitudes between male and female university students parallel the findings of Marrs et al (2012), who found no sex differences in the academic help-seeking behaviour of American students. However, Ryan, Gheen and Midgley (1998) found that sex was a predictor of help-seeking behaviour in younger students; the present study found little difference in the help-seeking of younger students (18-23 year olds), but a noticeable

(though non-significant) sex difference in the help seeking of older students (24-41 year olds).

The present study found no statistically significant differences in reported levels of help-seeking reluctance between students who were or were not taking STEM courses. It was expected, based on the findings by Fischer and Cohen (1972), that STEM students would be more reluctant to seek help than students on other courses as they may have been more conservative in their views relating to seeking help than students from other disciplines, or due to the association of STEM courses having scientific and mathematical components which have been associated with traditional masculine aptitudes (Stoet, 2015).

Taking male and female student's scores together, total scores on the traditional gender scripts were not significant predictors of help-seeking reluctance. Further analysis with male and female student scores combined found that subscales of the gender scripts accounted for 26% of the variance in help-seeking reluctance. Higher scores on the male gender script subscale *mastery and control* predicted greater help-seeking reluctance, suggesting that it is aspects of masculine attitudes rather than masculinity per se that operates as a barrier to help-seeking in a similar way to what has been observed in students studying within American higher educational settings (Marrs et al, 2012; Wimer and Levant, 2011).

Analysis by gender revealed the relevance of the gender scripts to help-seeking behaviour. For male students, *fight and win* predicted reduced help-seeking, for female students' interest in *family harmony* predicted greater help-seeking and emphasis on producing children (*fertility*) predicted less help-seeking. It is interesting that the male subscales tended to be more significant for men, and the female subscales tended to be more significant for women. (Note that when the *fertility* subscale was significant for men

and women combined (Table 6), this was carried by women mainly, as shown by the weaker correlation for men on this variable in Table 7). These findings are in keeping with Seager et al.'s (2014) concept of the evolutionary significance of the gender scripts. Thus, men have a sense that to get ahead in life it is important to be a fighter and winner, even if, ironically, this attitude holds them back in a modern academic setting. Although this archetypal thinking may be counterproductive in a modern educational context, it may be that men revert to more traditional, hard-wired strategies when under pressure. In the same way, it is consistent with our evolutionary heritage that someone who is interested in *family harmony* will seek help from others, as *family harmony* is likely to rely on reciprocal helping and sharing behaviour. It is understandable that agreement with *mastery and control items* (such as 'if you need help you are weak' and 'you should be able to cope with problems on your own') is a significant predictor of help-seeking reluctance, and echoes previous research (e.g. Wimer and Levant, 2011).

Students who strongly endorse *mastery and control* attitudes are more likely to experience gender role strain as they perceive that seeking help is a direct violation of their core identity within a traditional masculine role (Pleck, 1995). This measure was also found to be a significant predictor for female students. For some female students asking for help could be internalised as reinforcing traditional feminine ideology where women are seen as weak and dependant and as such help-seeking is viewed as perpetuating male hegemony where males are seen as strong and independent. Therefore, for students who embrace feminist beliefs they may tend to be reluctant to seek help in order to reduce their cognitive dissonance (Worell and Remer, 2003). However, the perpetuation of help-seeking reluctance for these students can ultimately lead to poorer academic outcomes.

Future studies may seek to extend this research by investigating how masculinity specifically, impacts upon the academic underachievement of students studying within UK

universities by directly correlating help-seeking reluctant attitudes with academic performance in a longitudinal study.

Students who strongly endorsed attitudes such as ‘its dog eat dog, so you have to be top dog’ and ‘in life it’s important to keep ahead of the competition’ (Seager et al, 2014) were less inclined to seek help. The concept of *fight and win* is also an important factor in understanding how help-seeking reluctance may be manifested in UK universities. Despite the traditional male gender script emphasising that competition is integral to masculine ideology, students who are more competitive are characterised as being impatient and unwilling or unable to express themselves (Mahalik, Good and Englar-Carlson, 2003). As such students may be less willing to seek help for fear that they will be perceived as incompetent (Karabenick and Knapp, 1988) or they may not seek help in order to uphold a sense of ‘cool masculinity’ (Jackson & Dempster, 2009). Furthermore, competitive students are also more likely to be motivated by performance goals as opposed to learning goals. Students motivated by performance goals are driven primarily by the desire to achieve good grades whereas students who are motivated by learning goals are more inclined to want to learn for the sake of mastery and knowledge (Newstead et al, 1996). Newstead et al (1996) found that students who were more performance goal oriented, especially male students, were more likely to report that they engaged in cheating behaviours. Thus, it is likely that for some students who embrace the attitudes that are associated with the concept of *fight and win* will be more likely to engage in maladaptive learning behaviours like cheating rather than adaptive behaviours such as seeking help as a way of maintaining a perception of adequacy whilst simultaneously achieving their educational goals.

Seager et al (2014) found that men scored significantly higher than women on the *fertility* and *parenting* subscales. Table 4 shows that in the present study male students scored significantly higher than female students on *fertility* and *family harmony*. It is

possible that over time attitudes that were once thought to be more aligned to traditional feminine norms and values such as ‘I feel that there is too much pressure on me to be attractive’ are now as likely to be endorsed by men as by women within Western cultures (Seager et al, 2014). Alternatively, it could be that these subscales might apply to men and women equally but in different ways. For example, the *fertility* subscale (‘an infertile person can’t reach their full potential as a human being’ and ‘it is a law of nature that people should produce at least one child’) has connotations of sexual potency which might be important to traditional masculinity. If this is the case then it makes sense that *fertility* is a significant predictor of help-seeking reluctance, as students who view *fertility* as a life goal and or as a measure of success maybe more competitive and will thus, tend to be more reluctant to seek help for the reasons outlined earlier. In support of this view, Snow, Winter and Harlow (2013) found that in a group of young men, higher fertility aspirations were associated with higher male dominance attitudes. Therefore, in an educational context, it could be possible that male students who have greater endorsement of the *fertility* subscale may view asking for help as relinquishing their internalised sense of power (Snow et al.2013; Wimer and Levant, 2011). This hypothesis could be investigated further.

Future research should consider how academic self-efficacy may influence student help-seeking behaviour. To date, findings have been mixed in relation to the effect of academic self-efficacy on help-seeking behaviour (Karabenick and Knapp, 1988, Ryan and Pintrich, 1997). However, no research at this present time has been undertaken that examines the interaction between masculinity, as measured by the gender scripts, and academic self-efficacy upon the academic help-seeking behaviours of students studying within UK higher educational settings.

An interesting methodological point is that the significance of *family harmony* only came to light when the data were analysed separately. For men the correlation is positive

(though ns, $\beta = .096$) and for women the correlation is negative ($\beta = -.272$), and when combined the effects cancelled each other out. This demonstrates the importance of analysing data separately when it is suspected that gender might have an impact on the outcome being measured.

Although the sample size of 162 was more than adequate for the regression model which combined all participants (where the required N was 122), it was underpowered for the two regressions conducted by gender, where the sample size was only 81. However, the fact that the two smaller regressions detected more significant relationships than the larger regression, highlights the importance of taking gender into account. Indeed in this case we can see that gender is more important to statistical power than sample size.

Although the cross-sectional and correlational design of this study means that causation cannot be inferred, the findings may provide some interesting insights into how help-seeking behaviour is manifested in higher educational settings. To date, there has been very little research that has investigated how sex and gender influence help-seeking behaviour, particularly help-seeking reluctance within a UK educational context. The findings of this study indicate that gender needs to be considered by educators especially in light of current academic performance trends. This study found that students who endorsed specific aspects of gendered attitudes were less likely to seek help when needed, thus educational interventions should be targeted towards this at-risk group. This may be achieved, for example, by educators emphasising to students that needing help or clarification should be expected in the course of learning and is an acceptable part of learning. In this way the barriers presented by gendered attitudes may be addressed, and help-seeking may be reframed to be perceived as something which is an inevitable part of learning and not a sign of weakness. Educators may further reinforce this notion through the

use of appropriate role models to whom these students can relate and who can also demonstrate the benefits of seeking help or using the support services on offer. Educators may also make changes to the ways in which help services are marketed, for instance, universities may promote the use of online forums where students can post questions anonymously. The earlier in school life these strategies are used, the more normalised they will become, perhaps preventing the development of help-seeking problems at universities.

There are some limitations of the study that need to be considered with regards to the interpretation of the findings and for future studies. Firstly, participants volunteered to take part in this study, and it is possible that the students who chose not to participate would have been less likely to seek help for academic issues than the students who participated. Indeed, overall, there was a lower than expected level of help-seeking reluctance.

Finally, it should be noted that although information was collected about nationality (study abroad student status) ethnicity information was not collected as part of this study. Future studies should consider investigating the interaction of ethnicity on help-seeking behaviour. In the present study there was not enough international students to find an effect on help-seeking behaviour in comparison to UK students however, it is possible that culture will have an effect on help-seeking attitudes and behaviour.

Conclusion

These findings suggest that masculine attitudes such as independence and competitiveness may hinder student help-seeking within UK universities. The implications of these findings are far reaching in terms of the interventions and strategies that educators may put in place. Educational reforms that cultivate an educational environment that promotes academic help-seeking, especially for those who are more constrained by their psychological gender, to seek help may have the additive benefit of moderating academic performance through

increasing understanding and improving mastery.

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Data availability statement. The authors are happy to post this online.

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Table 1. Means and standard deviations for help-seeking behaviour by sex

		Help-seeking		
		Help-seeking reluctance	avoidance (subscale)	Help-seeking threat
Overall (n = 162)	M	14.74	9.67	5.07
	SD	4.90	3.11	2.58
Sex				
Male (n = 81)	M	15.30	10.07	5.22
	SD	5.09	3.35	2.59
Female (n = 81)	M	14.19	9.27	4.91
	SD	4.66	2.82	2.57

Table 2. Means and standard deviations for help-seeking reluctance scores for older and younger students by sex of the student and the type of course studied

	Age	Sex	Mean	Standard Deviation	N
Students studying a STEM course	Younger students 18-23	Male	14.33	4.69	45
		Female	13.29	3.99	21
		Total	14.00	4.48	66
	Older students 24-41	Male	15.82	5.84	17
		Female	12.50	1.29	4
		Total	15.19	5.42	21
	Total	Male	14.74	5.03	62
		Female	13.16	3.68	25
		Total	14.29	4.71	87
Students studying a non-STEM Course	Younger students 18-23	Male	14.82	4.58	11
		Female	14.69	5.13	45
		Total	14.71	4.99	56
	Older students 24-41	Male	18.50	3.00	4

	Female	14.25	4.43	8
	Total	15.67	4.40	12
Total	Male	15.80	4.44	15
	Female	14.62	4.99	53
	Total	14.88	4.87	68

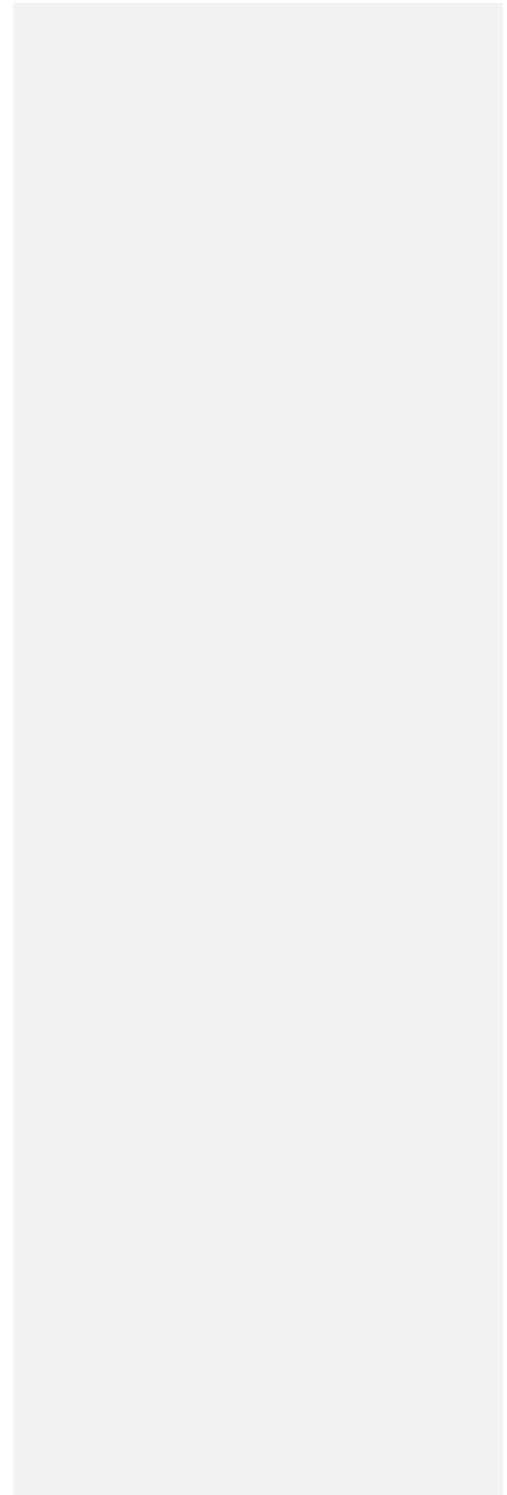


Table 3. ANOVA summary table of age, sex and type of course studied on help-seeking reluctance

Source of variance	Type II Sum of Squares	Degrees of freedom	Mean Square	F-ratio	Sig.	Partial η^2
Type of course studied	48.93	1.00	48.93	2.14	0.146 (ns)	0.01
Age	21.84	1.00	21.84	0.95	0.33 (ns)	0.01
Sex						
Type of course studied * Age	50.31	1.00	50.31	2.20	0.141(ns)	0.02
Type of course studied * Sex	7.73	1.00	7.73	0.34	0.56 (ns)	0.00
Age * Sex	1.94	1.00	1.94	0.09	0.77 (ns)	0.00
Type of course studied * Age * Sex	44.54	1.00	44.54	1.94	0.17 (ns)	0.01
Error	3.93	1.00	3.93	0.17	0.68	0.00

R Squared = .041 (Adjusted R Squared = -.004); ns = p > .05 non-significant

Table 4. Means and standard deviations scores of men (n =81) and women (n = 81) on the gender script scales and subscales. Differences are assessed with independent t-tests.

Scale or subscale	Sex	Mean	Std.
			Deviation
Mastery & control	Male	16.37	4.24**
	Female	14.36	4.15
Fight & win	Male	21.23	5.07***
	Female	18.32	5.97
Racing	Male	6.98	2.65**
	Female	5.91	2.24
Protect	Male	8.32	2.1*****
	Female	6.62	1.87
Family harmony	Male	12.53	3.12**
	Female	10.9	3.58
Parenting	Male	12.93	3.71
	Female	11.93	3.51
Looks	Male	19.23	4.54
	Female	19.06	5.53
Fertility	Male	7.69	3.51**
	Female	5.95	3.11
Family pressure	Male	5.02	2.38
	Female	5.1	2.22
Total Male gender script	Male	52.9	9.94*****
	Female	45.21	10.75

Total Female gender	Male	57.41	11.12*
script	Female	52.94	11.48

Notes. *p < .05. ** p < .01, *** p < .001, ***** p < .00001, ***** p < .000001 two tailed

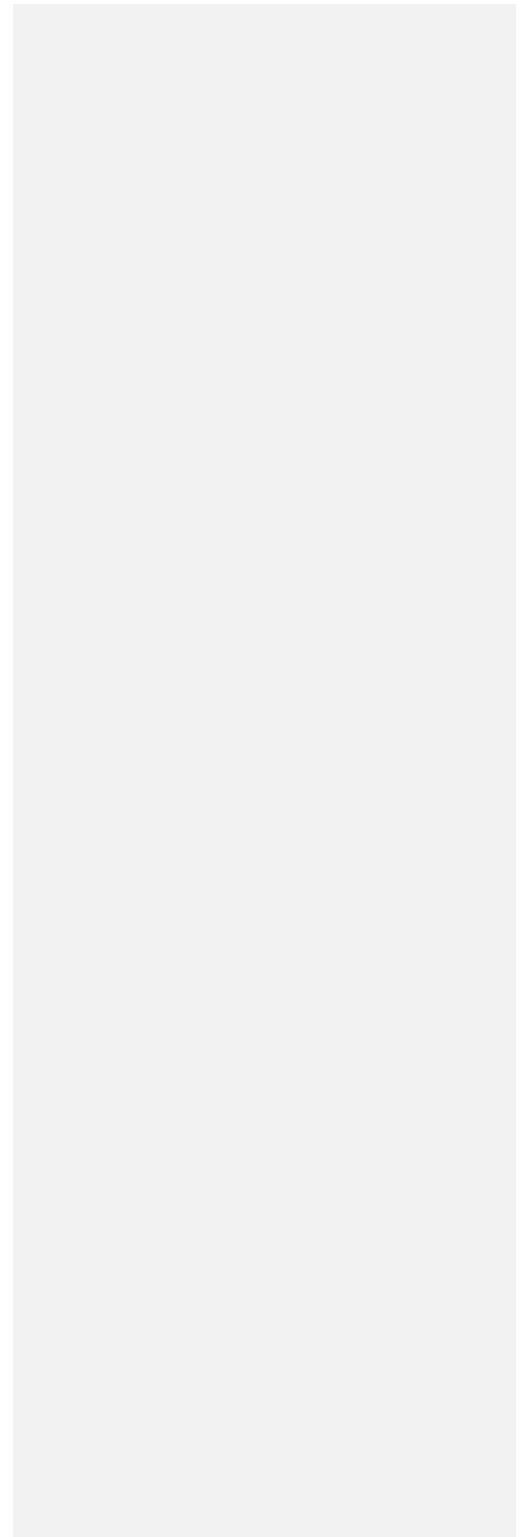


Table 5. Means, standard deviations, correlations and standard regression analyses for total gender scripts and reluctant help-seeking behaviour (n = 162)

Scale	Help-seeking reluctance	Masculinity (male script)	Femininity (female script)	B	SE B	β	Sig.
Male script	.26**	-		.073	.046	.164	.115
Female script	.25**	.68**	-	.060	.044	.141	.172
Mean	14.7	49.1	55.2	R Square = .078			
				Adjusted R Square = .066			
STD DEV	4.9	11.0	11.5	Std. error = 4.73			

* p < .05. ** p < .01 two tailed

Table 7. Predictors of academic help-seeking in male and female students

Subscale	Male students			Female students		
	B	SE B	β	B	SE B	β
Fight & win	-.323	.157	-.322*	-.163	.108	-.209
Mastery & control	.538	.175	.448**	.559	.143	.497***
Racing	-.013	.238	-.007	-.008	.229	-.004
Protect	-.301	.283	-.124	.093	.287	.037
Family harmony	.157	.208	.096	-.355	.154	-.272*
Parenting	.234	.175	.170	.130	.141	.098
Looks	-.031	.181	-.028	.042	.091	.050
Fertility	.196	.194	.135	.337	.166	.225*
Family pressure	-.226	.257	-.105	.300	.213	.143

* P<.05, ** P<.01, *** P<.001 (two tailed).