Parental versus non-parental on burnout:
Are parental students more likely to develop burnout
during undergraduate/
graduate studies compared to non-parental students

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Are parental students more likely to develop burnout during undergraduate/graduate studies than non-parental students?

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ARE PARENTAL STUDENTS MORE LIKELY TO DEVELOP BURNOUT?

Foreword

Submitted in partial fulfilment of the requirements of the BSc Psychology degree, Reykjavik University, this thesis is presented in the style of an article for submission to a peer-reviewed journal.
Abstract
The purpose of this research study was to examine if parental university students were more at risk for developing burnout during undergraduate or graduate studies compared to non-parental students at Reykjavik University. Moreover, the difference between gender was examined. Based on previous research students are at risk for developing burnout during studies. Participants were 128 students at Reykjavik University, aged 18-59 years old, studying undergraduate, graduate, doctorate, diploma and university preparation program. Descriptive statistics and independent t-test showed that non-parental students were more likely to develop burnout, as well as, anxiety and depression compared to parental students. Perceived stress had positive correlation on burnout and social support decreased the likelihood of burnout. Moreover, females, regardless of being parental or non-parental students showed to be more receptive to anxiety, depression and burnout than male students. More research is needed to identify risk and protective factors for students.

Keywords: Anxiety, depression, burnout, perceived stress, social support, parental students, non-parental students.

Útdráttur
Markmið rannsóknarinnar var að skoða hvort foreldrar í háskólanámi væra í meiri hættu á að þróa með sér kulnun en samnemendur sem eiga ekki börn. Einnig var skoðaður munurinn á milli kynja, byggt var á fyrri rannsóknun. Þá virðast háskólanemendur í hættu á að þróa með sér kulnun í námi. Þáttakendur voru 128 nemendur við Háskólan í Reykjavík, á aldrinum 18 til 59 ára, í grunnámi, framhaldsnámi, doktornámi, diplománámi og háskólagrunni. Lýsandi tölfraði og óháð t-próf sýndu fram á að likur á að þróa með sér kulnun í námi væru hærri meðal barnlausur nemenda en foreldra í námi. Skynjuð streita hafði jákvæða fylgni við kulnun og félagsstuðningur hafði hamlandi áhrif á kulnun. Konur, bæði mæður og barnlausar í námi sýndu meiri tilheigingu til að þróa með sér kvíða, þunglyndi og kulnun samanbórði við karlmenn í námi. Þörf er á frekari rannsóknun til að bera kennsl á áhættu og verndandi þætti fyrir nemendur í háskólanámi.

Lykillhugtök: Kvíði, þunglyndi, kulnun, skynjuð streita, félagsstuðningur, foreldrar í námi, nemendur sem eiga ekki börn.
Are parental students more likely to develop burnout during undergraduate/graduate studies than non-parental students?

Stress is a normal psychological response to stressors in the environment and it is a part of the necessary protection of an individual. It is an interaction between the central nervous system and the body, however, if stress becomes chronic and gargantuan, it can be hazardous for the individual (Landy & Conte, 2016). Everyone has their own coping mechanisms that they use when stressors are in their environment and those particular coping mechanisms get better with age. Therefore, if stress is prolonged and the individual adapts to the circumstances it can lead to burnout.

Burnout is a prolonged response to chronic emotional and interpersonal stressors and is considered to be common among individuals whose profession is where there is an emotional investment, in other words, working with other people, such as care-giving profession (Maslach, Schaufeli, & Leiter, 2001; Outar & Rose, 2001). Burnout is not just a simple result of long hours at work; however, an individual might be experiencing an increase in levels of despair and hopelessness. The concept of burnout was introduced by Freudenberger and Maslach in the 1970, after having studied similar symptoms among volunteers working with people. They determined that for an individual to be diagnosed with burnout there are three components that need to be present, emotional exhaustion, depersonalization and reduced personal efficacy (Maslach, Jackson & Leiter, 1996). Even though the phenomenon of burnout has been recognized since the 1970 it has mostly been associated to work stress.

**Burnout in workplaces.** Burnout is not uncommon to occur in workplaces. For instance, a research conducted by Hakanen and colleagues (2006) indicated that between 5% to 20% of teachers are suffering from burnout at any given time. When compared with other professions
they showed high levels of exhaustion and depersonalization, which has been found to be two of three core components of burnout (Hakanen, Bakker, & Schaufeli, 2006). Another study conducted by Fred and Scheid (2018) indicated that even though burnout signs remained the same among the general United States working population from 2011 to 2014 the burnout in physicians increased from 45.5% to 54.4% during their studies (Fred & Scheid, 2018). Further, there seem to be a difference between gender and perceived stress on burnout, whereas, women are more likely to score higher on perceived stress. Thus, higher indication of burnout (Antoniou, Polychroni, & Vlachakis, 2006). Based on research on the subject it seems that working in a profession where there is an emotional investment, individuals could be at risk for burnout at some point in their profession.

**Burnout in school.** However, burnout is not a consequence that can only be obtained in workplaces. It is a consequence of prolonged stress that has become hazardous. Several countries have concerns regarding the mental health of students during their studies. For instance, a research conducted by Boni and colleagues (2018) their concerns regarding the mental health of medical students, because the burden of demand and the responsibility of these students in a profession dedicated to the health care of people who have no tolerance for any mistake, puts them at risk for developing stress and anxiety which could lead them to burnout (Boni et al., 2018). Students more often than not find themselves having difficulty meeting the excessive demands regarding their school and education. When students find themselves in those situations, having to cope with being under excessive amount of stress and pressure, they can develop burnout symptoms (Aypay, 2017).

**Burnout, depression and anxiety.** When feeling overwhelmed for a long period of time an individual might experience symptoms of depression and anxiety. It has been speculated that
burnout, depression and anxiety are associated. A study conducted by Yilmaz (2018) indicated that there is a close correlation between doctor’s work satisfaction and burnout. Moreover, the results also indicated a positive correlation between emotional burnout, anxiety and depression (Yilmaz, 2018). A similar study conducted by Zhou and colleagues (2016) on the same topic where their aim was the relationship between anxiety and burnout among Chinese physicians. The relationship between burnout levels and anxiety symptoms depended on which type of coping strategies, positive or negative, the participant used (Zhou et al., 2016). Several research done on the subject has indicated that there is an association between burnout, depression and anxiety symptoms (Yilmaz, 2018; Zhou et al., 2016).

It is individualized how we interpret stress or stressful circumstances, and that specific interpretation has a lot to say about how we deal with it (Bonanno, 2005). Indications are that individuals whom are in a care-giving profession are more receptive to develop burnout since they have more emotional investment compared to other professions (Outar & Rose, 2017). Moreover, even students face certain threats when it comes to academic expectations, demands, and outcome and their emotional regulation and coping styles play a potent part. The findings of the studies mentioned before indicates that there are different factors that play a critical role for being at risk for developing burnout (Seibert, Bauer, May, & Fincham, 2017). In today’s society there is a demand for perfection when it comes to having a balance between family and a great profession, but the question is where the line is for great balance and when it has become hazardous. As research on the subject indicated, it is imperial that job demand and job resources are equally aligned (Hakanen et al., 2006). The same can be said for academic outcome.

It is important to remember that a parent’s mental well-being, attitude and interaction with their child has a lot to say about how the child will cope with stressors in their own
environment. If parents themselves are trying to meet the high standards of today’s society by achieving a higher education while raising children, whether being a single parent or not, does that indicate that they might be putting their children at risk for being more receptive for developing anxiety and depression. Thus, since they might themselves be at risk for developing burnout while trying to keep that perfect balance. These are all valid questions that need to be further studied.

Research in many countries are limited regarding longitudinal studies on burnout, as well as, there were no research to be found on parental students during their undergraduate or graduate studies in Iceland and whether or not they were more at risk for developing burnout than non-parental students. Moreover, if parental students have higher indication of anxiety and depression than non-parental students.

The main goal of this study was to examine if parental students were more at risk for developing burnout during their undergraduate or graduate studies at Reykjavík University than non-parental students. In addition, if there would be any gender differences. The were three hypotheses put forward: firstly, that parental student would score higher on anxiety and depression resulting in higher indication of burnout compared to non-parental students. Secondly, higher score of perceived stress would indicate more anxiety, depression and burnout. Thirdly, female students, both parental and non-parental would have higher indication of burnout compared to male students.
Method

Participants

The participants in this research were 128 students attending Reykjavík University who completed an online questionnaire that was sent via email to all students. One participant chose not to continue participation half through the questionnaire. A convenience sample was used in this research, with 83 female students (64.8%), 45 male students (35.2%), of those being 72 non-parental students (56.3%) and 56 parental students (43.8%). Participation was voluntary for all.

Measures

The questionnaire which participants answered was in Icelandic and was compiled specifically for this research (Appendix A). The questionnaire itself was constructed with a supervisor and comprised of several subscales measuring several different constructs as well as gathering further information about the participant.

**Depression.** An Icelandic version of Patient health questionnaire (PHQ-9) which is a screening tool for indication of depression was used (Appendix B). It has been found to have excellent internal reliability with over 0.8 in Cronbach’s alpha (Kroenke, Spitzer, & Williams, 2001). The scale included questions such as “Little interest or joy by doing things” and “Had difficulty falling asleep or sleeping through the night”. It uses a four-point Likert scale ranging from 0 = not at all to 3 = nearly every day; higher scores indicating more depression. Participants answered the questions depending on how well it applied to them. The scale has a total score ranging from 0-27 with four cut points representing to which degree of indication in depression an individual has. With a total score of less than 5 indicating no or little signs of depression; a total score of 5-10 indicating mild depression; 10-15 as moderate depression; 15-20 as
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moderately severe depression and with a total of over 20 indicating severe depression. In this research the reliability was Cronbach’s α 0.86.

**Stress.** An Icelandic version of Perceived Stress Scale (PSS-10) was used (Appendix C), which has been found to have good reliability with over 0.7 in Cronbach’s alpha (Lee, 2012). PSS-10 is a 10-item scale developed to measure the level of stress individuals perceive. The scale included questions such as “How often in the last month have you felt that you have not been able to handle everything that needed to be done” and “How often in the last month have you felt that you had power over things”. It uses a five-point Likert scale ranging from 0 = never to 4 = very often; higher scores indicating higher levels of perceived stress. Questions 4, 5, 7, and 8 had their scored reversed. In this research the reliability was Cronbach’s α 0.83.

**Burnout.** An Icelandic version of Copenhagen burnout inventory (CBI) was used, which has two-sub dimensions, work-related burnout and personal burnout (Appendix D). It has been found to have excellent internal reliability with over 0.8 in Cronbach’s alpha (Kristensen, Borritz, Villadsen, & Christensen, 2005). This study used an Icelandic version. The questions included such as “How often do feel exhausted” and “Is your work emotionally difficult”. It uses a five-point Likert scale ranging from 0 = never/almost; 25 = seldom; 50 = sometimes; 75 = often and 100 = always. The scale has a total score ranging from 0-100 with a cutoff point of 50 and higher indicating burnout (Borritz & Kristensen, 2004). In this research the reliability was Cronbach’s α 0.91.

**Social support from family and friends.** An Icelandic version of Multi-dimensional scale of perceived social support (MSPSS) was used (Appendix E), which has been found to have excellent internal reliability of the different subscales which ranges from 0.90-0.95 in Cronbach’s alpha (Dahlem, Zimet, & Walker, 1991). MSPSS is a scale developed to measure the
level of support individuals perceive while each of the three subscales addresses a different source of support. The subscales are: family subscale, friend subscale and significant other subscale. It uses a seven-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree; higher scores indicating greater levels of perceived social support. In this research the reliability was Cronbach’s $\alpha$ 0.96.

**Anxiety.** An Icelandic version of General anxiety disorder (GAD-7) was used, which is a scale used as a screening tool for indication of general anxiety (Appendix F). GAD-7 is a 7-item questionnaire that has been found to have excellent reliability with over 0.9 in Cronbach’s alpha (Spitzer, Kroenke, Williams, & Löwe, 2006). The questions included such as “Had difficulty relaxing” and “Been scared that something horrible could happen”. It uses a five-point Likert scale ranging from 0 = never to 3 = almost daily; higher scores indicating more anxiety. The scale has a total score ranging from 0 – 21 with cut points representing to which degree of indication in anxiety an individual has. The total scores might be interpreted as 5 or less indicating normal anxiety; a total score of 5-10 indicating mild anxiety; 10-15 as moderate anxiety and a total score over 15 indicating severe anxiety. In this research the reliability was Cronbach’s $\alpha$ 0.9.

**Procedure**

The questionnaire was sent via e-mail to all students at Reykjavík University at the end of April 2019. Included in the email, as well as, in the introduction text in the questionnaire the purpose of the study was explained, and confidentiality was stated. Moreover, it also stated that participants could choose to discontinue at any given time while answering the questions. Participants were asked to answer honestly. By clicking on the link in the email it was
considered as having given consent. The link in the email directed participant to a Google Forms website where the information was gathered.

**Data Analysis**

All data was gathered from Google Forms and uploaded on Microsoft Excel and typed from there onto IMB’s SPSS statistical software version 25.0. After all data had been typed into SPSS, it was used for all data analysis. The research design was cross-sectional. In this research there was one dependent variables, that of burnout (CBI), and six independent variables, that of parental and non-parental students, gender, depression (PHQ-9), anxiety (GAD-7), perceived stress (PSS-10), and social support (MSPSS).

Descriptive and inferential statistics were used, as well as, independent t-test to analyze the difference between parental versus non-parental students and female students versus male students in burnout (CBI), depression (PHQ-9), anxiety (GAD-7), perceived stress (PSS-10), and social support (MPSS). For the independent t-test, levene’s test for homogeneity of variance is an assumption stating that all groups have the same variance. Levene’s test was not significant, $p > .05$ for anxiety (GAD-7), perceived stress (PSS-10) and social support (MPSS) for students. Further, anxiety (GAD-7), depression (PHQ-9) and perceived stress (PSS-10) was not significant, $p > .05$ for gender. Which means the variances were not significantly different and the assumption, therefore, not broken. However, depression (PHQ-9) was significant, $p < .05$ for students and social support (MSPSS) was significant, $p < .05$ for gender, which means the variances were significantly different and the assumption, therefore, broken. Provided that the assumption being broken, equal variances not assumed was interpreted instead. Pearson correlation was used to analyze if anxiety and depression influenced burnout, and whether perceived stress and social support from family and friends affected burnout.
Results

Descriptive Results.

The participants in this research were divided into two groups, those who were parental students \((N = 56)\) and those who were non-parental students \((N = 72)\), as well as, those who were female students \((N = 83)\) and those who were male students \((N = 45)\). The age range was from 18 to 59 with 24-29 years old \((35.2\%)\) being the most common. Regarding participants marital status the most common answer being single \(37 \ (28.9\%)\) and cohabiting \(37 \ (28.9\%)\). In addition, participants view of importance of school there was \(105 \ (82\%)\) which found it to be very important and \(22 \ (17.2\%)\) who found it to be rather important. Most participants were \(65 \ (50.8\%)\) undergraduate students and \(53 \ (41.4\%)\) graduate students.

Independent t-test was used to analyze the difference between parental and non-parental students, and how they scored on the GAD-7, PHQ-9, PSS-10 and MSPSS scales (see table 1).

Table 1

<table>
<thead>
<tr>
<th>Students</th>
<th>M</th>
<th>SE</th>
<th>t</th>
<th>df</th>
<th>MD</th>
<th>95% CI</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>GAD-7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental</td>
<td>7</td>
<td>.71</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-parental</td>
<td>8.2</td>
<td>.63</td>
<td>1.70</td>
<td>120</td>
<td>1.71</td>
<td>[-0.27, 3.42]</td>
<td>.092</td>
</tr>
<tr>
<td>PHQ-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental</td>
<td>7.41</td>
<td>.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-parental</td>
<td>12.87</td>
<td>2.54</td>
<td>2.06</td>
<td>81.56</td>
<td>5.46</td>
<td>[0.20, 10.72]</td>
<td>.042</td>
</tr>
<tr>
<td>PSS-10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental</td>
<td>16.17</td>
<td>.84</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-parental</td>
<td>16.73</td>
<td>.92</td>
<td>.44</td>
<td>122</td>
<td>.567</td>
<td>[-1.97, 3.09]</td>
<td>.661</td>
</tr>
</tbody>
</table>
On average, non-parental students showed more indication of anxiety compared to parental students, but the difference was not significant ($p > .05$) according to the two-tailed probability. However, due to a small sample size, a one-tailed probability was used by dividing the two-tailed probability by 2. With this method, a significant difference was found between non-parental students and parental students in anxiety ($p = .046$). Further, non-parental students showed more indication of depression compared to parental students, however, with the assumption of homogeneity of variance being broken, equal variances not assumed was interpreted instead. With this method, a significant difference was found between non-parental and parental students in depression ($p = .042$). On the other hand, non-parental students showed more indication of perceived stress, as well as, perceived social support compared to parental students. However, the difference between groups was not significant ($p > .05$).

Independent t-test was used to analyze the difference between female students and male students, and how they scored on the GAD-7, PHQ-9, PSS-10 and MPSS scales (see table 2).

Table 2

*Independent t-test result for gender*

<table>
<thead>
<tr>
<th>Gender</th>
<th>M</th>
<th>SE</th>
<th>t</th>
<th>df</th>
<th>MD</th>
<th>95% CI</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>GAD-7</td>
<td>Female</td>
<td>8.3</td>
<td>.60</td>
<td></td>
<td>2.93</td>
<td>[-3.15, 9.0]</td>
<td>.342</td>
</tr>
<tr>
<td>MPSS</td>
<td>Parental</td>
<td>65.28</td>
<td>2.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-parental</td>
<td>68.21</td>
<td>1.83</td>
<td>.96</td>
<td>120</td>
<td>2.93 [3.65, 8.23]</td>
<td>.342</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>SE</td>
<td>t</td>
<td>df</td>
<td>MD</td>
<td>95% CI</td>
<td>p</td>
</tr>
<tr>
<td>----------</td>
<td>------</td>
<td>-----</td>
<td>--------</td>
<td>-----</td>
<td>--------</td>
<td>--------------</td>
<td>---------</td>
</tr>
<tr>
<td>PHQ-9</td>
<td>5.9</td>
<td>.68</td>
<td>-2.43</td>
<td>120</td>
<td>-2.33</td>
<td>[-4.23, -.43]</td>
<td>.02</td>
</tr>
<tr>
<td>Female</td>
<td>10.37</td>
<td>1.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>10.69</td>
<td>2.93</td>
<td>.10</td>
<td>126</td>
<td>.32</td>
<td>[-5.85, 6.48]</td>
<td>.92</td>
</tr>
<tr>
<td>PSS-10</td>
<td>17.70</td>
<td>.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>14.19</td>
<td>.92</td>
<td>-2.72</td>
<td>122</td>
<td>-3.52</td>
<td>[-6.08, .96]</td>
<td>.01</td>
</tr>
<tr>
<td>Male</td>
<td>14.19</td>
<td>.92</td>
<td>-2.72</td>
<td>126</td>
<td>-3.52</td>
<td>[-6.08, .96]</td>
<td>.01</td>
</tr>
<tr>
<td>MPSS</td>
<td>67.87</td>
<td>2.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>65.20</td>
<td>1.87</td>
<td>-.94</td>
<td>116.9</td>
<td>-2.67</td>
<td>[-8.30, 2.97]</td>
<td>.35</td>
</tr>
</tbody>
</table>

Note. M = Mean, SE = standard deviation error mean, t = the value of independent t-test, df = degrees of freedom, MD = mean difference, 95% CI = confidence interval of the difference, p = 2-tailed p value. GAD-7 = General Anxiety Disorder, PHQ-9 = Patient’s health questionnaire, PSS-10 = Perceived stress scale, MPSS = Multi-dimensional scale of perceived social support.

On average, female students showed more indication of anxiety and perceived stress compared to male students. The difference between gender was significant in both scales (p < .05). Female students showed less indication of depression compared to male students, however, the difference between gender was not significant (p > .05). Further, female students showed more indication of perceived social support, however, with the assumption of homogeneity of variance being broken, equal variances not assumed was interpreted instead. Despite this, a significant difference between gender was not found (p > .05).

The answers on Copenhagen Burnout Inventory (CBI) range from 0-100. In this research the highest and lowest values were 98.08 and 7.69. The mean score was 45.22 (SD = 20.04). CBI does not have a typical scale regarding indication of burnout; however, it uses a recommended cutoff point. The recommended cutoff point is 50, and those who score above 50 have indication of burnout. Figure 1 shows how the participants scored on the CBI scale and the number of cases that particular CBI score had.
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Figure 1. CBI = burnout, range 0-100, cutoff point for burnout is 50 and above. The x-axis represents the CBI scale and the y-axis represents the number of CBI cases.

Of those 128 who answered 70 (54.7%) scored under the recommended cutoff point, suggesting no indication of burnout. However, 58 (45.3%) scored over the recommended cutoff point, suggesting indication of burnout. Moreover, 20 male students were non-parental ($M = 45.6, SD = 19.05$) and 23 male students were parental ($M = 34.11, SD = 17.56$). Further, 47 female students were non-parental ($M = 45.86, SD = 20.13$) and 30 female students were parental ($M = 52.50, SD = 19.51$). This suggest that female students, regardless of being parental or non-parental seem to be more receptible to develop burnout.

Correlational relationship

Pearson correlation was used to analyze the relationship between anxiety, depression, burnout, perceived stress and social support from friends and family. Table 4 shows the correlation coefficient between the five variables.
Table 4.

The association between anxiety, depression, burnout, perceived stress and social support from friends and family.

<table>
<thead>
<tr>
<th>Correlation Coefficients</th>
<th>Burnout</th>
<th>Depression</th>
<th>Anxiety</th>
<th>Perceived stress</th>
<th>Social support from friends and family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burnout</td>
<td>-</td>
<td>.728**</td>
<td>.499**</td>
<td>.671**</td>
<td>-.269**</td>
</tr>
<tr>
<td>Depression</td>
<td>.728**</td>
<td>-</td>
<td>.613**</td>
<td>.749**</td>
<td>-.281**</td>
</tr>
<tr>
<td>Anxiety</td>
<td>.499**</td>
<td>.613**</td>
<td>-</td>
<td>.623**</td>
<td>-.155</td>
</tr>
<tr>
<td>Perceived stress</td>
<td>.671**</td>
<td>.749**</td>
<td>.623**</td>
<td>-</td>
<td>-.202*</td>
</tr>
<tr>
<td>Social support from</td>
<td>-.269**</td>
<td>-.281**</td>
<td>-.155</td>
<td>-.202*</td>
<td>-</td>
</tr>
<tr>
<td>friends and family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. * Correlation is significant at the 0.05 level (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed).

As shown in table 4, higher levels of depression were related to higher levels of burnout ($r = .728, n = 120, p < .05$). Higher levels of anxiety were related to higher levels of burnout ($r = .499, n = 120, p = .001$). Additionally, perceived stress were related to higher levels of burnout ($r = .671, n = 120, p < .05$), depression ($r = .749, n = 124, p < .05$) and anxiety ($r = .623, n = 120, p < .05$). Moreover, Social support from family and friends were associated with lower levels of burnout ($r = -.268, n = 116, p < .05$), depression ($r = -.281, n = 118, p < .05$) and perceived stress...
(r = -.202, n = 118, p = .028). However, social support from family and friends was not associated with anxiety (r = -.155, n = 122, p > .05).

**Discussion**

The primary aim of this research was to examine if parental students were more at risk for developing burnout during their undergraduate or graduate studies compared to non-parental students, as well as to assess if parental students showed more indication of anxiety and depression compared to non-parental students. Further, if higher perceived stress would be related to higher indication of anxiety, depression and burnout. And additionally, to examine, if female students, both parental and non-parental would have higher indication of burnout than male students.

The main results did not support the primary hypothesis, that parental students would be more at risk for developing burnout. On the contrary, non-parental students showed higher indication of burnout. Even though, no research was to be found on burnout in parental versus non-parental students during undergraduate or graduate studies. These findings are quite the opposite of what would be expected. Moreover, the results showed that a higher score of perceived stress indicated more anxiety, depression and burnout. The correlation between anxiety, depression and burnout was consistent with previous research (Yilmaz, 2018; Zhou et al., 2016). In the light of higher perceived stress indicating higher anxiety, depression and burnout is where an individual’s coping strategies come in, even though, coping strategies was not examined in this research, it clearly plays a potent part, as previous research has indicated (Zhou et al., 2016). Further, female students showed more indication of anxiety and depression compared to male students. Which suggests that females, regardless of being parental or non-parental were more receptive to it compared to male students. Additionally, the results showed
that female students, both parental and non-parental showed higher indication of burnout compared to male students which was supported by previous research (Antoniou et al., 2006). Interestingly, male students, both parental and non-parental scored lower on the CBI scale compared to female students. This is quite an intriguing finding, that male students that were parental scored significantly lower on the CBI scale compared to female students who were parental.

Even though, the results did not support parental students being more receptive to the development of burnout, there is a difference between genders. Further, not only a gender difference in indication of anxiety and depression, whereas, female students being more receptive. Female students, both parental and non-parental seem to be more receptive to the development of burnout. This is not only interesting but at the same time worrisome. It is apparent that there are many factors that play a potent part and need to be studied further.

Women often tend to take on a motherly role regardless of situation, whether that being in workplaces or at home. When it comes to females being parents, they often tend to juggle several things at once. Not to mention, when their children gets sick, more often than not, they are the one caring of their sick child while juggling the demands of school or work. As the results indicated there is a significant difference in perceived stress between males and females, where females overall perceive more stress compared to males. However, it is not known if perceived stress for former students had become gargantuan to the point where they had dropped out of university as a result of that. However, it is known that by being a parent it is unpredictable when their children become sick and therefore, not in control of the circumstances where that happens. For example, in relation to a deadline at work or delivering an essay on time in school.
Therefore, it is imperative that universities adapt to the same principle as workplaces try to do, regarding job demand and job resources to be equally aligned.

As mentioned before, it is individualized how stress is interpreted and that interpretation not only has a lot to say about how we will deal with that specific situation, but also which type of coping strategies are used when doing so.

There were noteworthy limitations in this research. This research was cross-sectional, which means that all results have to be cautiously interpreted and would, therefore, not meet the standards to generalize the results over the population. Possible participant bias is unpreventable when self-report questionnaire are used, as it was in this research. This research could have benefited from having a further look at risk, protective factors and coping strategies between parent and non-parental students, as well as, the difference between genders. The difference between gender ratios may have an effect on the actual numbers in parental and non-parental student at Reykjavík University.

There were a few strengths to this research. It is the first research to our knowledge conducted in Iceland on parental versus non-parental student, as well as, the difference between female and male students on burnout. Furthermore, non to be found regarding perceived stress, social support on burnout in parental and non-parental students. Even though, self-report questionnaires have unpreventable possible participant bias, it has been found to be valid and reliable. Thus, only oneself can accurately assess themselves and feelings.

For future studies, there is a need to look at a bigger picture by adding to this research input from a larger group. It would be interesting to repeat this research with a bigger university sample from different universities in Iceland. Also, to explore how coping strategies differ between
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parental and non-parental students, as well as the difference in general between genders. Also, to look at the geography as potential influencer. Moreover, to expand this research to all the universities in Iceland
Reference


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Appendix A

Participant Information Questionnaire

1. Kyn?
☐ Karl  ☐ Kona  ☐ Annað

2. Aldur?
☐ 18-23 ára ☐ 24-29 ára ☐ 30-35 ára ☐ 35-41 ára ☐ 42-47 ára ☐ 48-53 ára ☐ 54-59 ára ☐ 60+

3. Hver er hjúskaparstaða þín?
☐ Einhleyp/ur ☐ Í föstu sambandi en ekki í sambúð ☐ Í sambúð ☐ Gifð/ur ☐ Ekkja/ekkill

4. Átt þú börn?
☐ Nei  ☐ Já, eitt  ☐ Já, tvö  ☐ Já, þrjú eða fleiri

5. Ég er nemandi í?
☐ Grunnnám (BSc, BA) ☐ Framhaldsnám (MSc, MBA, MPM) ☐ Doktorsnám ☐ Diplómanám
☐ Háskólagrunni ☐ Annað
Appendix B

Þunglyndi (Patient Health Questionnaire (PHQ-9)).

Hversu oft hafa eftirfarandi vandamál truflað þig síðastliðnar 2 vikur?

1. Litill áhugi eða gleði við að gera hluti?
   - Alls ekki
   - Nokkra daga
   - Meira en helming tímans
   - Nánast alla daga

2. Verið niðurdregin/n, döpur/dapur eða vonlaus?
   - Alls ekki
   - Nokkra daga
   - Meira en helming tímans
   - Nánast alla daga

3. Átt erfitt með að sofna eða sofa alla nótina?
   - Alls ekki
   - Nokkra daga
   - Meira en helming tímans
   - Nánast alla daga

4. Dryta og orkuleysi?
   - Alls ekki
   - Nokkra daga
   - Meira en helming tímans
   - Nánast alla daga

5. Lystarleysi eða ofát?
   - Alls ekki
   - Nokkra daga
   - Meira en helming tímans
   - Nánast alla daga

6. Liðið illa með sjálfan þig eða fundist að þú hafir mistekist eða ekki staðið þig í stykkinu gagnvart sjálfa þér eða fjölskyldu þinni?
   - Alls ekki
   - Nokkra daga
   - Meira en helming tímans
   - Nánast alla daga

7. Erfiðoleikar með einbeitingu við t.d. að lesa blöðin eða horfa á sjónvarp?
   - Alls ekki
   - Nokkra daga
   - Meira en helming tímans
   - Nánast alla daga

8. Hreyft þig eða talað svo hægt að aðrir hafi tekið eftir því? Eða híð gagnstæða – verið svo eðdarlaus eða örøleg/ur að þú hreyfdir þig mikið meira en venjulega?
   - Alls ekki
   - Nokkra daga
   - Meira en helming tímans
   - Nánast alla daga

9. Hugsað um að það væri betra að þú væri dúin/n eða hugsað um að skaða þig á einhvern hátt?
   - Alls ekki
   - Nokkra daga
   - Meira en helming tímans
   - Nánastalla daga
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Appendix C

Streitukvarði (Perceived Stress Scale (PSS))

Spurningarnar á þessum kvarða eru um tilfinningar og hugganir þinar síðastliðinn mánuð. Vinsamlegast merktu í viðeigandi reit eftir því hversu oft þú huggaðir eða leið á ákveðinn hátt.

1. Hversu oft síðastliðinn mánuð hefur þú farið úr jafnvægi vegna einhvers sem kom óvænt upp á?
   ☐ Aldrei ☐ Næstum aldrei ☐ Stundum ☐ Nokkuð oft ☐ Mjög oft

2. Hversu oft síðastliðinn mánuð hefur þér fundist sem þú varir ekki fær um að hafa stjórn á mikilvægum þáttum í lífi þínu?
   ☐ Aldrei ☐ Næstum aldrei ☐ Stundum ☐ Nokkuð oft ☐ Mjög oft

3. Hversu oft síðastliðinn mánuð hefur þér vera taugaðstyrkur og stressuð/aður?
   ☐ Aldrei ☐ Næstum aldrei ☐ Stundum ☐ Nokkuð oft ☐ Mjög oft

4. Hversu oft síðastliðinn mánuð hefur þú verið örugg/ur um getu þína til að fást við eigin vandamál?
   ☐ Aldrei ☐ Næstum aldrei ☐ Stundum ☐ Nokkuð oft ☐ Mjög oft

5. Hversu oft síðastliðinn mánuð hefur þér fundist hlutirnir ganga þér í hag?
   ☐ Aldrei ☐ Næstum aldrei ☐ Stundum ☐ Nokkuð oft ☐ Mjög oft

6. Hversu oft síðastliðinn mánuð hefur þér fundist að þú gætur ekki ráðið við allt það sem þú þurfir að gera?
   ☐ Aldrei ☐ Næstum aldrei ☐ Stundum ☐ Nokkuð oft ☐ Mjög oft

7. Hversu oft síðastliðinn mánuð hefur þú getað haft stjórn á hlutum í lífi þínu sem hafa skapraunað þér?
   ☐ Aldrei ☐ Næstum aldrei ☐ Stundum ☐ Nokkuð oft ☐ Mjög oft

8. Hversu oft síðastliðinn mánuð hefur þér fundist þú hafa vald á hlutunum?
   ☐ Aldrei ☐ Næstum aldrei ☐ Stundum ☐ Nokkuð oft ☐ Mjög oft

9. Hversu oft síðastliðinn mánuð hefur þú orðið reið/ur vegna einhvers sem þú gast ekki haft áhrif á?
   ☐ Aldrei ☐ Næstum aldrei ☐ Stundum ☐ Nokkuð oft ☐ Mjög oft

10. Hversu oft síðastliðinn mánuð hefur þér fundist vandamálin hrannast upp þannig að þú gætur ekki sigrað á þeim?
    ☐ Aldrei ☐ Næstum aldrei ☐ Stundum ☐ Nokkuð oft ☐ Mjög oft
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Appendix D

Kulnun (Copenhagen Burnout Inventory (CBI))

1. Hversu oft finnur þú fyrir þreytu?
☐ Alltaf ☐ Oft ☐ Stundum ☐ Sjaldan ☐ Næstum aldrei / aldrei

2. Finnur þú fyrir þreytu í lok vinnudags?
☐ Alltaf ☐ Oft ☐ Stundum ☐ Sjaldan ☐ Næstum aldrei / aldrei

3. Hversu oft finnst þér þú vera líkamlega uppgefin?
☐ Alltaf ☐ Oft ☐ Stundum ☐ Sjaldan ☐ Næstum aldrei / aldrei

4. Verður þú þreytt/ur við tilhugsunina um annan dag í vinnunni?
☐ Alltaf ☐ Oft ☐ Stundum ☐ Sjaldan ☐ Næstum aldrei / aldrei

5. Skapraunar vinnan þín þér?
☐ Mjög mikið ☐ Mikið ☐ Hvorki né ☐ Lítið ☐ Mjög litið

6. Finnst þér þú vera útbrunnin vegna vinnu þínnar?
☐ Mjög mikið ☐ Mikið ☐ Hvorki né ☐ Lítið ☐ Mjög litið

7. Er vinnan þín tilfinningalega erfið?
☐ Mjög mikið ☐ Mikið ☐ Hvorki né ☐ Lítið ☐ Mjög litið

8. Hversu oft finnst þér þú vera tilfinningalega uppgefin?
☐ Alltaf ☐ Oft ☐ Stundum ☐ Sjaldan ☐ Næstum aldrei/Aldrei

9. Hefur þú næga orku til að hitta fjölskyldu og vini fyrir utan vinnutíma?
☐ Alltaf ☐ Oft ☐ Stundum ☐ Sjaldan ☐ Næstum aldrei/Aldrei

10. Hversu oft hugsar þú „ég get þetta ekki lengur”?
☐ Alltaf ☐ Oft ☐ Stundum ☐ Sjaldan ☐ Næstum aldrei/Aldrei

11. Finnst þér hver einasta stund í vinnunni þreyta þig?
☐ Alltaf ☐ Oft ☐ Stundum ☐ Sjaldan ☐ Næstum aldrei/Aldrei

12. Hversu oft finnst þér þú vera úrvinda?
☐ Alltaf ☐ Oft ☐ Stundum ☐ Sjaldan ☐ Næstum aldrei/Aldrei

13. Hversu oft finnur þú fyrir slappleika?
☐ Alltaf ☐ Oft ☐ Stundum ☐ Sjaldan ☐ Næstum aldrei/Aldrei
Appendix E

Félagslegur stuðningur fjölskyldu, vina og maka (MSPSS)

Stigagjöf.

1 = algjörlega ósammála; 2 = mjög ósammála; 3 = frekar ósammála; 4 = hlutlaus; 5 = frekar sammála; 6 = mjög sammála; 7 = algjörlega sammála

1. Það er viss einstaklingur til staðar fyrir mig þegar ég þarfnast.
☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

2. Það er viss einstaklingur sem ég get deilt með gleði minni og sorg.
☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

3. Fjölskyldan mín reynir virkilega að hjálpa mér.
☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

4. Frá fjölskyldu minni fæ ég þá tilfinningalegu aðstoð og þann stuðning sem ég þarfnast
☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

5. Ég get leitað huggunar hjá vissum einstaklingi þegar þörf er á.
☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

6. Vinir míni reyna virkilega að hjálpa mér.
☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

7. Ég get treyst á vini mína þegar illa gengur.
☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

8. Ég get talað um vandamál mín við fjölskyldu mína.
☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

9. Ég á vini sem ég get deilt með gleði minni og sorg.
☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

10. Það er viss einstaklingur í lífi mínu sem er umhugað um tilfinningar mínar.
☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

11. Fjölskylda mín er tilbúin til að aðstoða mig við ákvarðanatöku.
☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

12. Ég get talað um vandamál mín við vini mína.
☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7
Appendix F

Kviði (General Anxiety Disorder (GAD-7)).

1. Verið spennt/-ur á taugum, kviðin/-n eða hengd/-ur upp á þráð?
☐ Aldrei ☐ Nokkra daga ☐ Oftar en helming daganna ☐ Næstum daglega

2. Ekki tekist að bægja frá þér áhyggjum eða hafa stjórn á þeim?
☐ Aldrei ☐ Nokkra daga ☐ Oftar en helming daganna ☐ Næstum daglega

3. Haft of miklar áhyggjur af ýmsum hlutum?
☐ Aldrei ☐ Nokkra daga ☐ Oftar en helming daganna ☐ Næstum daglega

4. Átt erfitt með að slaka á?
☐ Aldrei ☐ Nokkra daga ☐ Oftar en helming daganna ☐ Næstum daglega

5. Verið svo eirðarlaus að þú áttir erfitt með að sitja kyrr?
☐ Aldrei ☐ Nokkra daga ☐ Oftar en helming daganna ☐ Næstum daglega

6. Orðið gröm/gramur eða pirruð/pirraður af minnsta tilefni?
☐ Aldrei ☐ Nokkra daga ☐ Oftar en helming daganna ☐ Næstum daglega

7. Verið hrædd/-ur eins og eithvað hræðilegt gæti gerst?
☐ Aldrei ☐ Nokkra daga ☐ Oftar en helming daganna ☐ Næstum daglega