



BSc in Psychology

Burnout, Physical Activity and Professional
Experience in Icelandic Elementary School
Teachers

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Foreword and Acknowledgement

Submitted in partial fulfillment 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- English

Burnout is a recognized occupational disorder most often defined as a physical and psychological consequence of prolonged exposure to stressors in an individual's work environment. Teaching is considered to be a stressful profession and incidence of burnout has been reported in the educational profession. The current research study aimed to examine burnout in Icelandic elementary school teachers and whether there was a connection between burnout, professional experience, and physical activity. Participants in the current research study were 43 elementary school teachers out of three schools in Iceland which completed a self-report questionnaire. The participants were born from 1950 to 1989, and of them, 37 were female (86%), and 6 were male (14%). The results revealed that in the current sample of an elementary school teacher the frequency of pronounced burnout and moderate/mild burnout was 41.9%. A significant negative connection was found between burnout and physical activity. Teachers that engaged in more physical activity per week (80%) were significantly more likely to have no burnout than teachers that engaged less frequently in physical activity (39.1%). No significant connection between professional experience and symptoms of burnout was found which requires further investigation. Future research should address that issue and focus on which types and intensity of physical activity are most suitable to prevent burnout. Also, more longitude studies are needed to research burnout in teachers.

Keywords: Teachers' Burnout, Work Related Stress, Professional Experience, Physical Activity

Abstract- Icelandic

Kulnun er viðurkennd streitutengd röskun sem oftast er skilgreind sem líffræðileg og sálfræðileg svörun við langvarandi streitu sem kemur í kjölfar upplifunar á streituvöldum í vinnuumhverfi fólks. Kennsla er talin vera streituvaldandi starfsgrein og greint hefur verið frá tíðni kulnunar í kennarastarfinu. Markmið með þessari rannsókn var að skoða kulnun íslenskra grunnskólakennara og hvort að líkamleg hreyfing og starfsaldur gætu haft tengsl við kulnun. Þátttakendur í þessari rannsókn voru 43 grunnskólakennarar úr þremum íslenskum grunnskólum sem svöruðu sjálfkvörðuðum spurningalista. Þátttakendur voru fæddir frá 1950 til 1989 og af þeim voru 37 konur (86%) og 6 karlmenn (14%). Niðurstöður rannsóknar sýndu að í úrtakinu af grunnskólakennurum í þessari rannsókn voru 41.9% með afgerandi eða væga/hóflega kulnun. Marktæk neikvæð tengsl voru fundin á milli kulnunar og líkamlegrar hreyfingar. Kennarar sem stunduðu reglulega líkamlega hreyfingu voru marktækt líklegri til þess að hafa engin einkenni kulnunar (80%) heldur en kennarar sem stunduðu sjaldan líkamlega hreyfingu (39.1%) á viku. Engin marktæk tengsl voru fundin á milli starfsaldurs og kulnunar sem krefst frekari rannsókna. Framtíðarrannsóknir ættu að leggja áherslu á þessi tengsl en einnig rannsaka hvaða mismunandi tegundir og styrkleiki líkamlegrar hreyfingar er besta forvörn gegn kulnun. Einnig vantar fleiri langtímarannsóknir sem skoða kulnun meðal kennara.

Lykilord: Kulnun Kennara, Vinnutengd Streita, Starfsaldur, Líkamleg Hreyfing

Most individuals spend much of their time at the workplace, and therefore a pleasant work environment is a crucial factor for their wellbeing. Stress is a negative experience which occurs concerning everyday things in an individual's life which are referred to as stressors (Robinson, 2018). The cause of stress at the workplace varies between people; however, most often heavy workload and lack of time are reported to be the primary causes of workplace stress (Williams, 2003). Moderate stress can lead to good performance at work projects while chronic and intensive stress might instead result in adverse health outcomes (e.g., sickness) (Maslach, Schaufeli & Leiter, 2001). Other factors that have been identified to cause workplace stress are uncertainties in an individual's work role and interpersonal factors such as communication difficulties with co-workers or management (Maslach, Schaufeli & Leiter, 2001).

When an individual's body is continuously exposed to stressors, it might lead to a weakening of the immune system and development of diseases (Tsigos & Chrousos, 2002). Empirical research has brought evidence for chronic stress to be a robust moderate risk factor for cardiovascular diseases, strokes, and diabetes type two (Kivimäki & Kawachi, 2015). Another consequence of prolonged workplace stress is burnout syndrome which was first introduced by psychologist Herbert Freudenberger during the 1970s. Burnout is a recognized occupational disorder most often defined as a physical and psychological consequence of prolonged exposure to stressors in an individual's work environment (Maslach, Schaufeli & Leiter, 2001).

According to Christina Maslach and Susan E. Jackson (1981) who took off the research of burnout from Freudenberger, the symptoms of burnout are reflected in three main dimensions. The first dimension is an emotional exhaustion which is an aspect of burnout associated directly with stress and refers to individuals being emotionally and physically drained. The second dimension of burnout is depersonalization or cynicism which is an

interpersonal aspect of burnout and refers to people coping with emotional exhaustion by showing a lack of enthusiasm about other people and treat others as impersonal objects of their work. The third dimension of burnout is declined personal accomplishment which is an aspect of burnout connected to lack of achievement and productivity resulting from emotional exhaustion and depersonalization.

With a great amount of research and awareness raising the job-burnout is considered a worldwide phenomenon. However, the understanding and diagnostic of burnout still vary between countries (Schaufeli, Leiter, & Maslach, 2009). One study compared the diagnostic criteria for burnout in 28 European Union countries. In only 39% of participating countries including Sweden, Denmark, Hungary, Netherlands, Latvia, Portugal, France, Slovakia, and Estonia burnout was accepted as occupational diseases; however, the definition and diagnostic approach for a burnout varied significantly between those countries (Lastovkova et al., 2018).

Teaching is considered to be a stressful profession. Several studies in Iceland have research stress in elementary school teachers. In Icelandic research study on a sample of 216 elementary school teachers, it was found that 76.1% of teachers that participated in the research experienced their profession as very or extremely stressful (Ósk Auðunsdóttir, 2017). Similar results were in another Icelandic research study on a sample of 155 Icelandic elementary school teachers. It was found that 65% of teachers experienced their profession very or extremely stressful (Guðný G. Einarsdóttir, 2018).

Because burnout is closely related to stress the prevalence of burnout has been reported in the educational profession. Marina García-Carmona, María D. Marín, and Raymundo Aguayo (2018) analyzed findings from 45 studies out of 15 countries. The combined sample of those studies illustrated that approximately 28.1% of secondary school teachers reported severe emotional exhaustion. Moreover, approximately 37.9% of teachers

had high levels of depersonalization, and approximately 40.3% had low levels of personal accomplishment. Numerous studies have identified common stressors in the teacher's work environment. In educational profession the most common reported stressors are extensive workload, student's misbehavior, student's cognitive and physical diversity, poor classroom management and lack of autonomy at work (Aldrup, Klusmann, Lüdtke, Göllner, & Trautwein, 2018; Klassen & Chiu, 2010; Skaalvik & Skaalvik, 2015; Skaalvik & Skaalvik, 2017).

Moreover, research studies have linked burnout to depression (Ahola et al., 2005), sleeping complains such as insomnia (Brand et al., 2010), impairments in cognitive functions (Diestel, Cosmar & Schmidt, 2013) and negative impact on job satisfaction and productivity (Kim, Ra, Park, & Kwon, 2017; Maslach, Schaufeli & Leiter, 2001). In addition to all the adverse health outcomes and job dissatisfaction that burnout and stress causes research studies also have brought evidence that teachers' stress and burnout can negatively influence student's educational achievement resulting in lower grades and test scores compared to student's educated by non-stressed and non-burned out teachers (Arens, & Morin, 2016; Klusmann, Richter, & Lüdtke, 2016).

Professional experience is one of the many variables that have been researched regarding burnout. Research studies suggest that younger and less experienced workers are more likely than their more experienced colleagues to experience burnout in their profession (Brewer & Shapard, 2004; Maslach, Schaufeli & Leiter, 2001). For instance, in research conducted by Molly Fisher (2011), she examined 400 secondary school teachers in the United States. The result from her study revealed that experienced teachers who had worked in educational profession for over five years and less experienced teachers who had worked less than five years showed no difference in perceived stress. This finding indicated that both groups experienced stress in the same manner. However, when participants were tested for

burnout, the less experienced teachers had significantly higher burnout symptoms than more experienced teachers.

Another variable that has been researched regarding burnout is physical activity. It has been viewed as an effective preventive factor for burnout. In a recent systematic review study, the association between burnout and physical activity was examined in 10 studies in various professional fields. Results revealed that physical activity was an effective way to reduce burnout in employees. This study found that engagement in physical activity at least once or twice a week for 4-18 weeks period had resulted in decline of burnout symptoms in inactive employees. However, it was unclear if the high intensity or moderate intensity physical activity was more effective (Naczenski, Vries, Hooff, & Kompier, 2017).

In one study the leisure time physical activity (e.g., jogging, walking, and cycling) was connected to positive mental and physical health in teachers (Bogaert, Martelaer, Deforche, Clarys, & Zinzen, 2014). In a research study conducted by Sharon Toker, and Michal Biron (2012) they found a dose-response in an association between burnout, depression and physical activity. Those findings indicated that the employees that did not engage in physical activity of any kind had the most robust job burnout and depression symptoms. The lowest symptoms of burnout and depression were found in employees who had the most frequent engagement in high-intensity physical activity.

Based on findings mentioned above it is important to research burnout in teachers. In Iceland, the research studies of burnout in elementary school teachers are lacking. Therefore, the current research study aimed to explore the frequency of burnout in Icelandic elementary school teachers. Also, to examine if engagement in regular physical activity and teachers' professional experience in the educational profession might influence their experience of burnout. It was hypothesized that physical activity would influence the symptoms of burnout in teachers so that teachers that engaged in more physical activity will be less likely to have

symptoms of burnout. The second hypothesis was that professional experience would influence the symptoms of burnout in elementary school teachers so that less experienced teachers would be more likely to experience burnout.

Method

Participants

The participants in the current research study were elementary school teachers from three schools in Iceland. The total number of participants was (N=43), of which 37 were female (86%), and 6 were male (14%). The participants were born from 1950 – 1989, and most of them were born in 1966 (9.3%) and 1971 (9.3%). The main condition for participation was that only teachers with a certified license for teaching could participate in the research study. Therefore, the participants for the current research study were recruited through convenience sampling and participating schools were requested to exclude no licensed teachers from participation. 137 teachers received the questionnaire in email, and of them, only 50 (36.5%) participants completed the questionnaire in the course of three weeks. Additionally, 7 (14%) participants did not finish the crucial questions to be identified with burnout or no burnout and were, therefore, excluded from the current research study. Teachers that received the questionnaire were not required to participate in the research study and were free to skip answering questions or end the participation at any time. No reward or compensation was given for participation.

In the current research study, most participants N= 17 (39.5%) had twenty years or more of professional experience and eleven to twenty years of professional experience N= 16 (37.2%). The least participants N= 2 (4.7%) had one year or less of professional experience. Participants with two to five years of professional experience were N= 4 (9.3%) and participants with six to ten years of professional experience were N= 4 (9.3%) as well. Regarding the engagement in physical activity among participants in the current research

study, most participants engaged in physical activity on average 1-2 times per week N= 17 (39.5%) and 3-4 times per week N= 13 (30.2%). The least participant engaged in physical activity on average 5-6 times per week N= 5 (11.6%) and daily N= 2 (4.7%). Six participants (14%) reported almost never engage in physical activity.

Materials

Burnout questionnaire. The Icelandic version of self-reported exhaustion disorder (S-ED) instrument (Sjálfskvörðuð streitutengd síþreyta/kulnun (s-UMS)) was used to measure self-reported burnout. The s-ED instrument is based on the Swedish clinical diagnostic criteria for exhaustion disorder (burnout) and was recently developed and translated to Icelandic by Swedish Institutet för Stressmedicin (ISM) (Glise, Hadzibajramovic, Jonsdottir & Ahlborg, 2010). The s-ED instrument includes four items of which first two reflect the exhaustion (emotional or physical), stress and strain concerning job where responses are graded with Yes or No. Individuals have to report Yes on both questions to be identified with exhaustion disorder (burnout). The third item has six sub-items which reflect the stress-related symptoms of burnout and individuals have to report at least four of six symptoms which are graded with Yes or No. The fourth item reflects how stress-related symptoms of burnout affect an individual's well-being and/or functional capacity including workability, family life, leisure activities or other important things. This item distinguishes between mild/moderate and pronounced exhaustion disorder and is graded by Yes, to a great extent, Yes, somewhat and No, not at all.

The self-reported exhaustion disorder (S-ED) instrument has not yet been exploited in the educational profession. However, the researches that have been conducted for the scale are showing a promising result for the validity of the scale. The construct and predictive validity of the s-ED instrument was examined in a sample of 2.683 human service workers. The instrument had a connection to other measurements of mental health; the depression,

anxiety, stress and other burnout scales which indicated adequate construct validity (Glise, Hadzibajramovic, Jonsdottir & Ahlborg, 2010). Similar findings were found in another research study where researchers reported a connection of s-ED instrument and other assessments for burnout and work engagement (Persson, Österberg, Viborg, Jönsson & Tenenbaum, 2017).

The predictive validity of the s-ED instrument was found to be as good as in another burnout scale that was used for comparison in a sample of health care and social insurance workers. Participants that were identified with pronounced self-reported exhaustion disorder at the baseline of the research study had reported sickness absence in follow up two years later. The researchers concluded that the s-ED instrument was suitable to identify workers with stress-related mental health problems early. Further research is needed in reliability, and other categories of the validity of the scale and psychometric properties of the Icelandic version of the s-ED instrument have not been thoroughly studied yet (Glise, Hadzibajramovic, Jonsdottir & Ahlborg, 2010).

Professional Experience. In order to assess teachers' years of professional experience in teaching, they were asked: How long they have worked as teachers on a five-point scale (answers graded from one to five). 1 = 1 year or under, 2 = 2 to 5 years, 3 = 6 to 10 years, 4 = 11 to 20 years, 5 = 21 years or above (see appendix A).

Physical Activity. In order to assess information about teachers' level of physical activity they were asked; How often on average during the week they engaged in physical activity for at least 30 minutes, so they became physically tired or were sweating on a five-point scale (answers graded from one to five), 1 = Never, 2 = 1 to 2 times per week, 3 = 2 to 3 times per week, 4 = 4 to 6 times per week, 5 = Everyday (see appendix A).

Procedure and Research Design

The current research study was a qualitative cross-section study executed with the use of a self-report questionnaire. The dependent variable was job burnout (exhaustion disorder), and independent variables were professional experience and physical activity. The data for the current research study was collected in the spring of 2019 by a questionnaire which was in the format of an online survey and sent to 137 teachers through email. The online survey was constructed and processed in Google Forms which is a program designed by Google. Before the data for the current research study was collected, the approval was obtained from the Icelandic National Bioethics Committee and the Icelandic Data Protection Authority. The several elementary schools in Iceland were invited to participate in the study of which three schools responded with interest in the participation. Two days before the questionnaire was sent to the participants the researchers send an email with an introduction paper and informed consent to the school board which they forwarded to the participants. This research study was executed this way to protect participants personal data. Thus, the names, identity, and answers could not be traced back to the participants.

In the introduction, the participants were presented with the short description of the burnout syndrome, and the importance of research of burnout in teachers. Through informed consent, the participants were presented with information about the purpose of the current research study, possible risks, and discomfort due to participation, anonymity, and confidentiality of their personal data and their rights regarding the participation. Participants were informed that answering the questionnaire was equivalent to signing the informed consent. Furthermore, to benefit the participants they were provided with the opportunity to meet counselor once without cost if they could have experienced emotional distress or discomfort during the participation.

The online link to the questionnaire was sent to the school board of three participating schools which was then forwarded by the school board to the teachers. The questionnaire consisted of self-reported exhaustion disorder item where participants were asked about the symptoms of stress and burnout, questions about average weekly engagement in physical activity and professional experience in the educational profession. The background questions about gender and birth year were also, collected (see appendix A). Participants were reminded that participation in the study was equivalent to signing the informed consent. When one week passed from when the online questionnaire was sent to the participants for the first time, the reminder was sent to the participants. Two weeks later, the response collection was switched off in Google Forms, and the data was transferred to Microsoft Excel.

Statistical Data Analysis

IBM SPSS software version 25 was used to examine data collected from the reports of participants. All figures and tables were made with Microsoft Excel version from 2019. At the beginning of the statistical analysis, the number of participants was (N = 50). However, 7 participants failed to report questions that were important to determine if they had self-reported burnout symptoms or not and, therefore, were excluded from the research. Participants were sorted in the three groups by their diagnostic results for self-reported burnout. Nine participants (20.9%) were sorted in Pronounced Burnout group. Other nine participants (20.9%) were sorted in Mild/Moderate Burnout group. 25 participants (58.1%) were put in No Burnout group. Variable for physical activity was computed into two groups. Participants which engaged in physical activity; almost never to approximately two times a week were named as Little Physical Activity group, and it included 23 participants (53.5%). 20 participants (46.5%) that engaged in physical activity approximately three times a week to everyday were put in Regular Physical Activity group.

Variable for the professional experience was computed into three groups. Participants with no to ten years of professional experience were placed in a Less Experienced group which included 10 participants (23.3%). The gap for the less experienced group was chosen to be so wide because very few participants had professional experience of less than one year to 5 years. Participants with eleven to twenty years of professional experience were placed in a More Experienced group, which included 16 participants (37.2%) and participants with twenty or more years of professional experience were put in a Most Experienced group which included 17 participants (39.5%).

Because of non-parametric proportions of the dependent variable, Person's Chi-square analysis was conducted to analyze a connection between dependent and independent variables. Because the assumption of the expected count was violated, it was both looked at Person's Chi-Square and Likelihood Ratio (Field, 2014). Moreover, Spearman's rho correlation analysis was used to investigate the association between dependent and independent variables further.

Exploratory factor analysis was used to examine how items in the Icelandic version of self-reported exhaustion disorder (S-ED) instrument would load. Two factors were extracted with an orthogonal varimax rotation. Scree plot and Keiser criteria revealed two factors with eigenvalues more than 1.0 (Field, 2014). One factor had five items and included; mental and physical exhaustion, long term stress exposure, physical weakness or being more easily fatigued, decreased well-being and/or functional capacity and physical symptoms. The second factor had four items and included; concentration or memory problems, markedly reduced capacity to tolerate demands or to work under time pressure, emotional instability or irritability and sleeping problems. Cronbach's alpha coefficient was used to measure the internal consistency of the Icelandic version of self-reported exhaustion disorder (S-ED).

Results

The results chapter is divided into two stages. First, descriptive statistics in the form of frequencies and percentage of participants in groups for burnout/exhaustion disorder symptoms, professional experience, and physical activity will be presented. Second, the results from reliability measurements, Person's Chi-square, Likelihood Ratio, and Spearman's correlation will be presented.

In the current sample of participants, the frequency of burnout (exhaustion disorder) was 18 participants (41.9%). Most participants 25 (58.1%) did not meet the conditions of Self-Reported Exhaustion Disorder (S-ED) item to be identified with burnout/exhaustion disorder. When distinguished between mild/moderate and pronounced burnout, the ratio was equal. Nine participants (20.9%) had mild/moderate burnout, and nine participants (20.9%) had pronounced burnout.

The self-reported burnout symptoms (exhaustion disorder) for the sample of current participants are presented in Table 1. 65.1% of participants reported that they were feeling or have felt physically and mentally exhausted for past two weeks. 58.1% of participants consider this exhaustion to be caused by long-term stress exposure for six months or longer. The choice between Yes and No regarding the symptoms of burnout (exhaustion disorder) was somewhat similar between participants except for physical symptoms where 41.9% of participants reported to experience physical symptoms. 58.1% of participants reported not to experience physical symptoms. 16.3% of participants reported that symptoms above markedly decreased their well-being and/or their functional capacity (e.g., workability, family life, leisure activities or other important things) to a great extent. 34.9% of participants reported that they affected them somewhat and most participants 48.8 % reported that they did not bother them at all.

Table 1

Number and Frequency of Participants Across Self-Reported Symptoms of Burnout (exhaustion disorder)

Self-reported exhaustion disorder items	Yes		No			
	N	%	N	%		
1. Mental and physical exhaustion	28	65.1	15	34.9		
2. Long term stress exposure	25	58.1	18	41.9		
3. a) Concentration or memory problems	24	55.8	19	44.2		
b) Markedly reduced capacity to tolerate demands or to work under time pressure	24	55.8	19	44.2		
c) Emotional instability or irritability	22	51.2	21	48.8		
d) Sleeping problems	22	51.2	21	48.8		
e) Physical weakness or being more easily fatigued	21	48.8	22	51.2		
f) Physical symptoms	18	41.9	25	58.1		
	Yes, to great extent		Yes, somewhat		No, not at all	
	N	%	N	%	N	%
4. Decreased well-being and/or functional capacity	7	16.3	15	34.9	21	48.8

Note. To be diagnosed with burnout (exhaustion disorder) participants had to report yes in questions 1-2 and at least yes in four of a-f symptoms. Item 4 distinguished between mild/moderate and pronounced burnout.

Number of participants and frequency in groups across independent variables physical activity and professional experience are presented in Table 2. Most participants 43.5% that engaged in little physical activity had 11-20 years of professional experience and least participants 17.4% had 1-10 years of professional experience. Most participants 40% which engaged in regular physical activity had 20 years or more of a professional experience.

Similarly, many participants that engaged in regular physical activity had 1-10 years and 11-20 years of professional experience.

Table 2

Number of Participants and Frequency in Groups Across Physical Activity and Professional Experience

Professional Experience	Little Physical Activity		Regular Physical Activity		Total	
	N	%	N	%	N	%
0-10 years	4	17.4%	6	30%	10	23.3%
11-20 years	10	43.5%	6	30%	16	37.2%
20 years or longer	9	39.1%	8	40%	17	39.5%
Total	23	53.5%	20	46.5%	43	100%

To evaluate the internal consistency of 9 items of the Icelandic version of self-reported exhaustion disorder (S-ED) instrument for measurements in the current research study the Cronbach's alpha coefficient (α) was used. Exploratory factor analysis of the nine scale items with orthogonal varimax rotation extracted two factors. Kaiser-Meyer-Olkin (KMO) test was (KMO = 0.79), and Bartlett's test of sphericity was significant $\chi^2(36) = 191.4$ $p < 0.001$., indicating that the sample and data were acceptable for factor analysis.

Cronbach's alpha was measured for the two factors ($\alpha = 0.74 - 0.86$) which can be considered somewhat good reliability (Field, 2014).

To test the hypothesis whether there was a connection between physical activity and burnout a Person's Chi-square test, Likelihood Ratio, and Spearman's rho correlation coefficient was used. Person's Chi-square test analysis showed that there was a significant connection between burnout and engagement in physical activity ($\chi^2(2, N= 43) = 7.34$; $p < 0.05$). Because the assumption of the expected count was violated, it was also looked at the Likelihood Ratio which was significant ($LR (2, N= 43) = 7.66$; $p < 0.05$). Spearman's rho

correlation analysis revealed a weak but significant negative correlation $r = -0.39$, $p < 0.001$, between physical activity and burnout. Those findings indicated that physical activity and burnout had connection, and as physical activity increased the burnout decreased; therefore, supporting the first hypothesis.

Figure 1 presents the connection between burnout symptoms and physical activity. For participants that met criteria for pronounced burnout diagnosis 30.4% engaged in less physical activity during the week while 10% engaged in regular physical activity. The same results were for participants that met criteria for mild/moderate burnout diagnosis, 30.4% engaged in less physical activity and 10% engaged in regular physical activity. Of participants that did not meet the criteria for burnout diagnosis, 39.1% engaged in less physical activity while 80% engaged in regular physical activity during the week. Those findings indicated that teachers that engaged in regular physical activity were significantly more likely to have little to no symptoms of burnout compared to teachers that engaged in little physical activity.

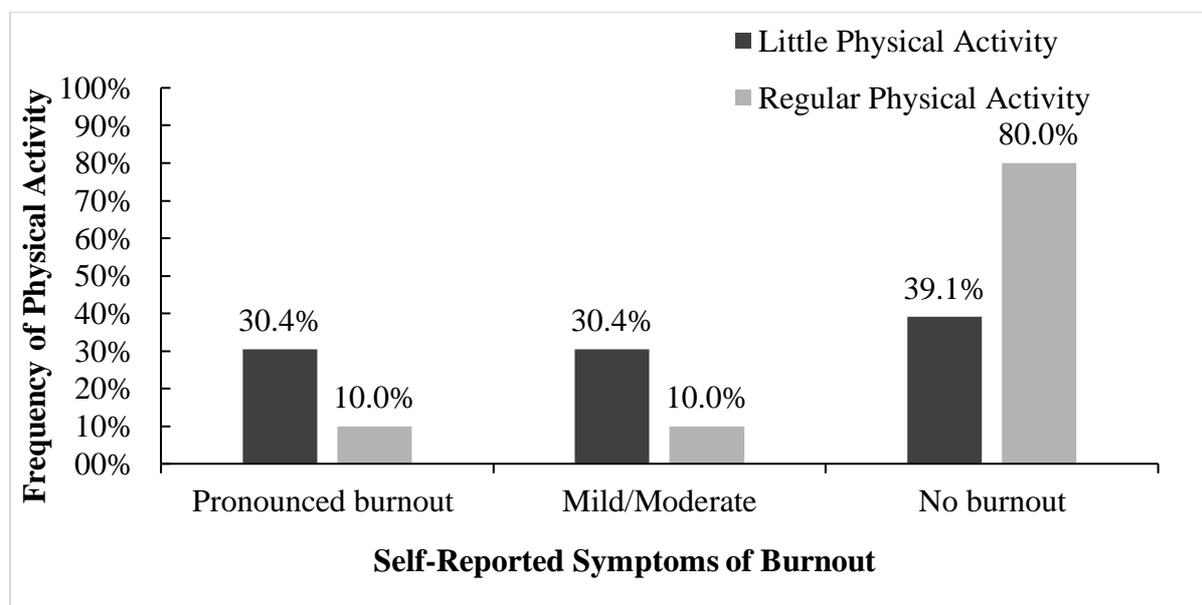


Figure 1. Frequency of Physical Activity in Teachers across Pronounced Burnout, Mild/Moderate Burnout, and No Burnout. A significant connection was found between burnout and physical activity.

To test the hypothesis whether a professional experience could influence burnout in teachers, Person's Chi-square test, Likelihood ratio, and Spearman's rho correlation analysis were used. Person's Chi-square analysis was nonsignificant, ($\chi^2(4, N= 43) = 4.57; p = 0.33$). Because the assumption of the expected count was violated, it was also looked at Likelihood Ratio which was not significant as well ($LR (4, N= 43) = 6.52; p = 0.16$). Spearman's rho correlation revealed a nonsignificant correlation $r = 0.06, p = 0.74$ between professional experience and self-reported burnout symptoms. This result indicated that there was no significant connection between professional experience and self-reported burnout symptoms in the current sample of participants and the second hypothesis was therefore not supported.

Frequency of participants across professional experience and symptoms of burnout are presented in Figure 2. For participants with pronounced burnout symptoms, 20% had less professional experience, 25% had more professional experience, and 17.6% had the most professional experience. Of participants that met diagnostic criteria for mild/moderate burnout no one had less professional experience, 31.3% had more professional experience, and 23.5% had most professional experience. Participants that did not meet the criteria for self-reported burnout symptoms 80% had less professional experience, 43.8% had more professional experience, and 58.8% had most professional experience.

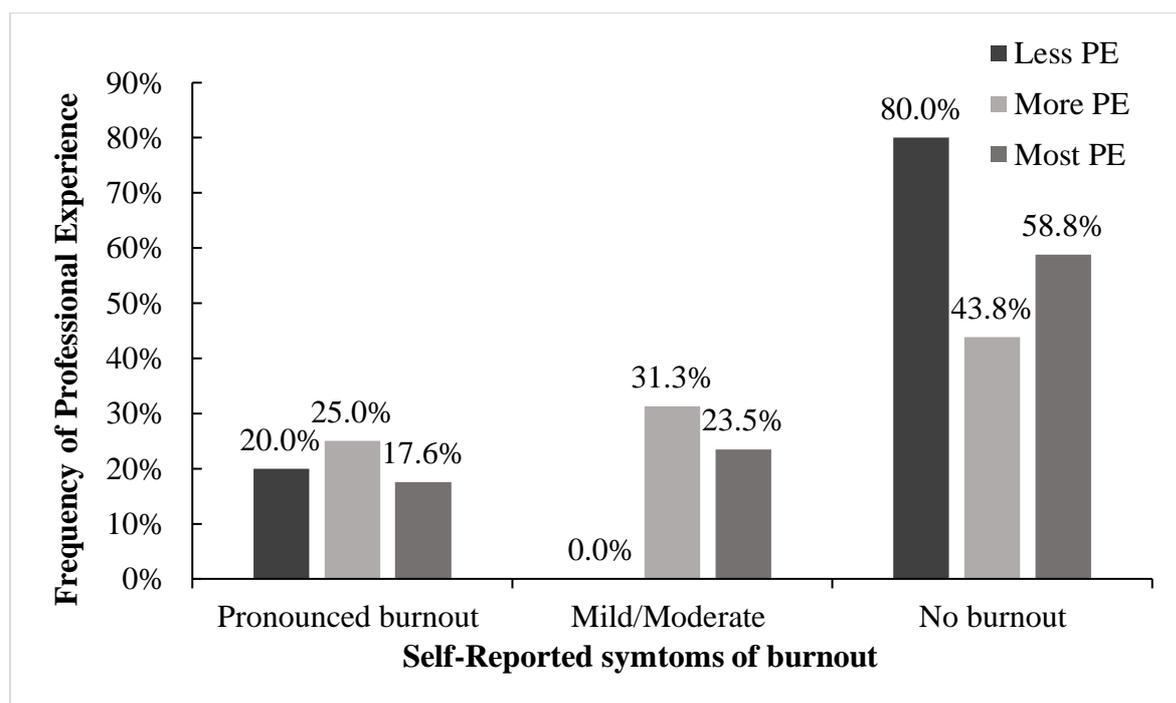


Figure 2. Frequency of Participants Across Professional Experience (PE) and Symptoms of Burnout. No significant connection was found between burnout and professional experience in the current sample of teachers.

Discussion

The current research study aimed to examine burnout in Icelandic elementary school teachers and whether physical activity and professional experience could influence burnout. The current research study offers a further understanding of burnout in Icelandic elementary school teacher. The first hypothesis was supported by data analysis while the second hypothesis was not supported by data analysis. It was hypothesized that physical activity would influence the symptoms of burnout in teachers so that teachers that engaged in more physical activity will be less likely to have symptoms of burnout. The second hypothesis was that professional experience would influence the symptoms of burnout in elementary school teachers so that less experienced teachers would be more likely to experience burnout.

Teachers that met diagnostic criteria for mild/moderate and pronounced burnout (exhaustion disorder) were 41.9%. Moreover, the findings in the current research study

revealed that there was a connection between physical activity and burnout. Further testing revealed that teachers that engaged in physical activity approximately three times per week or more for at least 30 minutes had significantly lower symptoms of burnout across mild/moderate and pronounced burnout conditions compared to teachers that almost never engaged in physical activity or approximately one or two times per week. Furthermore, the number of teachers that engaged in more physical activity was significantly higher in no-burnout condition than in teachers that engaged in less physical activity. These findings are consistent with previous research studies. Previous research studies regarding physical activity in teachers have shown that physical activity is an effective way to reduce symptoms of burnout (Bogaert et al., 2014; Naczenski, Vries, Hooff, & Kompier, 2017; Toker, & Biron 2012); and therefore, teachers should be encouraged to engage in physical activity for more positive mental and physical health.

Previous research studies regarding professional experience usually suggest that younger and less experienced workers (including teachers) are more likely than their more experienced colleagues to experience burnout in their profession (Brewer and Shapard, 2004; Maslach, Schaufeli & Leiter, 2001; Fisher, 2011). However, findings in current research study displayed inconsistency. In current research study the result revealed that there was no significant connection between burnout symptoms and professional experience. This inconsistency can possibly be attributed to a professional experience not being an essential factor in burnout in Icelandic elementary school teachers.

However, in a research study conducted by Guðný G. Einarsdóttir (2018) the teachers with one to five years of professional experience perceived more stress than their more experienced colleagues. However, she did not focus specifically on burnout which might be differently perceived in teachers than stress. Also, other factors might influence individual's experience of burnout. This inconsistency can also be attributed to the flaws in the execution

of the current research study for instance the teachers with little professional experience (one year or less to five years) were rather few and were put together in a group with participants that had six to ten years of professional experience making it a rather big years gap.

The advantages of the current research study were that it provides further knowledge of burnout in the educational profession. Studies researching burnout in Icelandic teachers are lacking, and therefore, the current research study is a valuable addition to research in this particular field. Previous research data has indicated that burnout in teachers can have a negative influence on health and wellbeing (Maslach, Schaufeli & Leiter, 2001); as well as affect student's educational achievement (Arens, & Morin, 2016; Klusmann, Richter, & Lüdtke, 2016). Therefore, it is important to research burnout in teachers. Even though there were some flaws in the execution of current research study, it still provides hints on that burnout is present in Icelandic elementary school teachers and needs to be further investigated. The internal stability of the Icelandic Self-reported exhaustion disorder (S-ED) instrument was suitable for measurements in the current research study indicating good reliability of the scale.

This study had its limitations which might have affected the results. The sample was rather small, and therefore, there were rather few participants in some groups which made the statistical tests less significant. Moreover, the small number of participants made the result less generalizable. Another limitation of the current research study was that it was a cross-section study based on a participant's self-reported data, partially the bias in the execution of current research study might, therefore, lay within those answers. Finally, the findings in the current research study were based on correlation and connection between dependent variable burnout and independent variables physical activity and professional experience. Those statistical analyses only provide the information that there was a connection or no connection between two examined phenomena but not direct causality.

As it was presented in research conducted by Lastovkova et al. (2018) the definition and diagnostic approach for a burnout vary significantly between countries and no general diagnostic criteria exist which makes it challenging to investigate burnout. Future research should address these differences to diffuse misunderstanding and misdiagnoses of burnout. It would also be interesting to investigate different types of physical activity similar to what Inge Bogaert et al., (2014) executed in their research. They found that occupational, physical activity (e.g., hours of standing and overhead writing) was more associated to negatively perceived mental and physical health in secondary school teachers while leisure time physical activity (e.g., jogging, walking, and cycling) was more associated with positive mental and physical health. Furthermore, the clearance of which intensity and duration of physical activity are the most effective to decrease burnout in teachers is needed, and further research should address that issue. The most research studies that are presented with a burnout in the educational profession are cross-section studies, and more longitude studies are needed for results to be more significant and generalizable.

In summary, 43 elementary school teachers in Iceland were tested for burnout (exhaustion disorder), and connection of burnout to physical activity and professional experience was investigated. The frequency of pronounced burnout and moderate/mild burnout was 41.9% in the current sample of elementary school teachers. The significant connection between physical activity and burnout was found. Teachers that engaged in more physical activity during the week (approximately three times to everyday for at least 30 minutes) were more likely not to have burnout than teachers that engaged in less physical activity (approximal almost never to 2 times per week for at least 30 minutes). This result was consistent with previous research. These findings indicated that physical activity is an important preventive factor for burnout and should be encouraged in teachers. No significant connection was found between burnout and professional experience displaying and

inconsistency with previous research studies which calls for further investigation. Future research should investigate this connection further, and which types and intensity of physical activity are the most effective ways to reduce burnout. Also, more longitude research studies on burnout in the educational profession are needed.

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Appendix A

Kyn

Hvert er kyn þitt?

- Karl
- Kona
- Annað

Fæðingarár

Hvert er fæðingarár þitt?

Starfsaldur

Hversu lengi hefur þú starfað sem kennari?

- 1 ár eða minna
- 2 til 5 ár
- 6 til 10 ár
- 11 til 20 ár
- 21 ár eða lengur

Líkamsrækt/hreyfing

Hversu oft að jafnaði á viku stundar þú líkamsrækt í að minnsta kosti 30 mínútur eða lengur þannig að þú mæðist verulega eða svitnir?

- Nær aldrei
- 1 til 2 sinnum
- 3 til 4 sinnum
- 5 til 6 sinnum
- Svo til á hverjum degi