



BSc Psychology
Department of Psychology

Translating the Occupational Depression Inventory (ODI) to
Icelandic: A Preliminary Investigation of Factor Structure and
Reliability of the Scale

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Foreword

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

This study analyzes the psychometric properties of the Icelandic translation of the Occupational Depression Inventory (ODI), focusing on its factor structure and reliability. The ODI, designed to assess job-related depression, was translated into Icelandic and issued to eighty-one participants from various occupational backgrounds. The process included independent translations, expert reviews, and back-translation to ensure accuracy. Exploratory factor analysis suggested a single-factor structure, differing from the original two-factor model, possibly due to cultural differences in perceiving occupational stress and depression in Iceland. The ODI showed high internal consistency (McDonald's Omega = 0.896), indicating reliable measurement. Item analysis revealed variations in mean scores and item-rest correlations, highlighting areas for refinement. Independent samples t-tests found no significant differences in occupational depression scores across gender, age, and educational background, suggesting similar impacts across these groups in Iceland. The findings indicate that the ODI is a reliable tool for assessing occupational depression in Iceland. The results imply that the Icelandic version has the same psychometric value as the original scale. This increases the safety of its use and promises that the Icelandic version will be an essential tool for diagnosing and treating work-related depressive symptoms in Iceland.

Keywords: Depression, Occupational Depression Inventory (ODI), Icelandic translation, Psychometric properties, Workplace mental health, Occupational health

Útdráttur

Þessi rannsókn skoðar próffræðilega eiginleika íslensku þýðingarinnar á vinnuþunglyndisskalanum, ODI, með áherslu á þáttbyggingu og áreiðanleika. ODI, sem ætlað er að meta starfstengt þunglyndi, var þýddur á íslensku og sendur á áttatíu og einn þátttakanda með mismunandi starfsbakgrunn. Þýðingarferlið fól í sér sjálfstæða þýðingu, umsagnir sérfræðinga og bakþýðingu til að tryggja nákvæmni. Þáttgreining og áreiðanleikapróf voru framkvæmd til að meta þáttbyggingu og innra réttmæti skalans. Íslenska útgáfan sýndi góðan áreiðanleika ($\omega = .896$) og studdist við einþátta þáttbyggingu, sem er ólíkt upprunalegu tveggja þátta uppbyggingu ODI. Mögulega vegna menningarlegs munar á skynjun á streitu og þunglyndi í starfi á Íslandi. Atriðagreining leiddi í ljós breytileika á meðaltali og fylgni milli starfsþunglyndi og spurninga á ODI. Óháð úrtak t-prófa sýndu ekki marktækan mun á vinnuþunglyndi eftir kyni, aldri og menntunarbakgrunni, sem bendir til svipaðra áhrifa milli þessara hópa á Íslandi. Niðurstöðurnar gefa vísbendingu um að íslenska útgáfan hafi jafn góða próffræðilega eiginleika og upprunalegi skalinn. Slíkt eykur allt öryggi við nýtingu hans og gefur fyrirheit um að hin íslenska útgáfa verði mikilvægt tól til greiningar og meðhöndlunar atvinnutengdra þunglyndiseinkenna á Íslandi.

Lykilord: Þunglyndi, vinnuþunglyndisskali, íslensk þýðing, prófræðilegt gildismat, vinnustaðageðheilsa, vinnutengd heilsa

Translating the Occupational Depression Inventory (ODI) to Icelandic: A Preliminary Investigation of Factor Structure and Reliability of the Scale

In the 1970s, burnout was first acknowledged as a social problem (Schaufeli et al., 1993). The term "burnout" was initially introduced by psychologists Herbert Freudenberger (1974) and Christina Maslach (1976) during the mid-1970s. While they each developed their definitions, they collectively described it as a syndrome characterized by emotional exhaustion and a reduced sense of personal accomplishment (Schaufeli et al., 1993). The World Health Organization (WHO) defines burnout as a phenomenon primarily linked to occupational stress rather classification of a medical condition (World Health Organization, 2019). The organization's latest definition of burnout is a condition arising from prolonged workplace stress that needs to be effectively managed. It appears as exhaustion, a growing disinterest in one's job, cynicism about one's career, and decreased work performance. This syndrome is specific to the work environment and does not concern other life aspects (World Health Organization, 2019).

Mental problems are the primary reason for sick leaves and job impairment in most developed countries (Harvey et al., 2009). However, workplace health programs have neglected mental health (Maulik, 2017). This neglect is particularly concerning regarding the impact of depression in the workplace. Depression is a common mental health problem and is defined as a prolonged state of sadness and a significant decrease in enjoyment or enthusiasm for activities, which can last for long periods (World Health Organization, 2019a). Within a professional context, depression can both arise from and contribute to difficulties, impacting performance, engagement, and overall job satisfaction (Ford et al., 2011). Occupational health specialists are progressively researching the symptoms of depression linked to job stress and the growing number of mental health-related sick leaves (Bianchi & Schonfeld,

2020). In Switzerland, the rate of mental health-related sick leaves has significantly increased from 50% to 70% in less than ten years (Steck, 2020).

Burnout and depression are closely related and overlap many symptoms (see Table 1), raising questions regarding whether they should be treated as different and distinct disorders (Schonfeld & Bianchi, 2015).

Table 1

Comparison of WHO symptoms for Burnout (ICD-11) and Depression (ICD-10)

Symptom type	Burnout	Depression
Energy and exhaustion	Feelings of energy depletion or exhaustion	Feeling very tired or low in energy
Mental and emotional impact	Increased mental distance from one's job, or feelings of negativism or cynicism related to one's job	Feelings of excessive guilt or low self-worth; hopelessness about the future
Professional impact	Reduced professional efficacy	Poor concentration
Thoughts of death or suicide	Not applicable	Thoughts about dying or suicide
Sleep disturbances	Not specified	Disrupted sleep
Appetite and weight changes	Not specified	Changes in appetite or weight

There is a debate in the literature regarding the distinction between burnout and depression (Koutsimani et al., 2019). Some studies suggest that burnout and depression are indistinguishable, arguing that the symptoms overlap significantly, especially in terms of emotional exhaustion and depersonalization (Ahola et al., 2014; Bianchi & Brisson, 2017; Golonka et al., 2019). On the other hand, other research emphasizes that while they share similarities, burnout and depression are distinct conditions (Brenninkmeyer et al., 2001; Parker & Tavella, 2021; Tavella & Parker, 2020). Burnout is primarily work-related, often resulting from chronic workplace stress, whereas depression can be more pervasive, affecting various aspects of life beyond the workplace. As seen in Table 1, the World Health

Organization (2019b) and World Health Organization (2023) both identify exhaustion and reduced performance as common symptoms in the definitions of depression and burnout. However, the list of burnout symptoms does not include sleep disturbances and weight changes. Bianchi et al. (2014) found that emotional exhaustion and depersonalization, which are the primary aspects or dimensions of burnout, might be better understood as reactions to challenging work environments that can lead to depression rather than being separate conditions by themselves. On the contrary, some research does not support the notion that burnout precedes the onset of depression (Bianchi et al., 2015). Therefore, adding assessments of burnout symptoms alongside the typical signs of depression might not continuously improve our ability to predict future cases of depression.

Given the overlap between burnout and depression, it might be more effective to focus on depression rather than just burnout. Prioritizing depression can help with a broader range of mental health problems and give a better understanding of this disease. Moreover, considering that burnout has been linked to depression (Bianchi et al., 2014), effectively managing depression may indirectly alleviate symptoms of burnout as well. Therefore, prioritizing depression in the workplace can lead to more comprehensive mental health support and better outcomes for employees by addressing a broader range of symptoms and underlying issues.

Bianchi and Schonfeld (2020) developed the Occupational Depression Inventory (ODI) for a cross-national study on job-related depression involving 2,254 U.S., France, and New Zealand employees. The ODI was designed to quantify the intensity of depressive symptoms caused by work and to establish provisional diagnoses of job-related depression. Its primary focus on the work environment sets it apart from general assessments of depression that do not explicitly consider the occupational context. The ODI consists of nine symptom items based on the PHQ-9 and an additional question that evaluates turnover

intention (Doi et al., 2018). Both the ODI and PHQ-9 focus on the nine core symptoms of major depression. Unlike the PHQ-9's general approach, the ODI specifically links these symptoms to the workplace, underscoring its unique application in occupational health. The PHQ-9 is generally considered a one-factor measure of depression severity. At the same time, the original ODI is designed as a two-factor instrument, reflecting both the presence of symptoms and their impact on occupational functioning (Doi et al., 2018). The reliability of the ODI was demonstrated to be excellent, with Cronbach's α values of 0.916 in Sample 1, 0.915 in Sample 2, and 0.931 in Sample 3, confirming its effectiveness for work-related depression (Bianchi & Schonfeld, 2020). The findings indicated a significant association between occupational depression and variables such as job satisfaction and intentions to quit the job. Approximately 7.6% of the participants were identified as potentially having depression due to their profession (Bianchi & Schonfeld, 2020). Another study explored the ODI's ability to predict cognitive performance and task appreciation among educational staff (Bianchi & Schonfeld, 2021). Revealing that occupational performance is linked to lower cognitive abilities and negative views of tasks, suggesting a loop in which workplace depression impacts job performance and perception.

The ODI has been examined in English, French, Spanish, and Italian (Bianchi & Schonfeld, 2020; Bianchi et al., 2022; Bianchi, Fiorilli, et al., 2022). Moreno Forte et al. (2020) highlight those cultural differences, demonstrated in their study comparing Cabo Verde and China employees, significantly influence how occupational stress and mental health are perceived and reported. To our knowledge, ODI has yet to be applied in research conducted in Iceland, which makes it vital to conduct new studies using ODI in Iceland. This study is the first to translate the tool into Icelandic.

Given its usage in other languages, the Occupational Depression Inventory (ODI) could also be valuable for assessing depression symptoms in Icelandic workplaces. However,

to apply the ODI in an Icelandic context, it is essential to ensure that the translation preserves the psychometric qualities intended and appropriately reflects the subtleties of occupational depression that people in Iceland face. Understanding how occupational factors contribute to depression among employees is crucial for developing effective interventions. By identifying work-related risk and protective factors, we can better address mental health issues in the workplace. Thus, this study aimed to evaluate the ODI's factor structure and psychometric qualities in its Icelandic translation. To achieve this goal, this study aimed to respond to the following research question:

Does the Icelandic translation of the Occupational Depression Inventory (ODI) have a clear factor structure and a reliable scale?

Method

Participants

The study involved 81 participants. Among these, 23 completed solely the background questions and were not included in the analysis. A further 58 engaged with a subset of the Occupational Depression Inventory (ODI) questions. Meanwhile, only 48 completed the entire set of background and ODI questions, resulting in an overall completion rate of 82%.

The largest age group among the respondents is 18-30 years old, making up 55.7% of those who completed the survey. This is followed by the 51-60-year-old group (16.46%), 31-40-year-old group (13.92%), 41-50-year-old group (10.13%), and finally, the 61+-year-old group (3.8%). Most respondents identified as female, representing 73.08% of the responses. Male respondents were 25.64%, and a negligible percentage did not identify with these categories (1.28%). Most respondents' highest level of education is a university degree at 44.87%, followed by upper secondary education at 32.05%. The next group is those with further education without a university degree at 12.82%, and the lowest represented group is

those with only primary education at 10.26%. Participants were not compensated in any form for their involvement in the experiment. The requirement for taking part was being employed in a workplace.

Measures

Background information. Participants provided detailed information regarding their gender, age, and educational background. This data was carefully collected through a questionnaire to capture these demographic details. The questionnaire aimed to ensure accurate and complete responses, contributing to the overall quality and reliability of the gathered information.

The Occupational Depression Inventory. The Icelandic translation of the occupational depression inventory was used to measure the severity of depressive symptoms attributed to work and to facilitate preliminary diagnoses of depression related to one's job. The ODI is a nine-question self-report, which is all diagnostic criteria for major depression of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (American Psychiatric Association, 2013). The tool is on a 4-point Likert scale, which is measured from 0 (never or rarely) to 3 (nearly every day), whereas a higher score indicates how often your job caused feelings of anxiety. When Bianchi and Schonfeld (2020) developed the measure, the ODI Cronbach's α was high in three independent samples ranging from 0, - 0,931 and McDonald's ω ranged from 0, - 0,938.

Procedure

Two individuals pursuing a Bachelor of Science in Psychology translated the ODI separately. Two separate translations were reviewed and joined together by the authors and the instructor. Differences found in the translations were discussed and revised to ensure consistency and accuracy in the final version of the translated ODI – an Icelandic translation of PHQ-9 was referenced in that process, collaboratively adjusted both the phrasing and the

structure of the questionnaire. This cooperative effort aims to refine and enhance the overall quality and clarity of the questionnaire. An independent clinical psychologist with expertise in Social and Occupational Psychology reviewed the final translation and back-translated it – the meaning and the content of each item were consistent between translations.

The study was conducted online in March 2024, using QuestionPro as the survey platform. To recruit participants, an email containing a link to the study was sent to all employees in four companies that were selected through convenience sampling. These companies were chosen based on accessibility and willingness to participate in the research.

Upon receiving the email, participants were given an information sheet detailing the study's purpose, procedures, and objectives. This information sheet was designed to ensure that participants were fully informed about what the study entailed. They were explicitly informed that submitting their responses would give them their informed consent to participate in the study. Additionally, it was made clear that participation in the study was entirely voluntary, and participants were assured that they could withdraw from the research at any time without any consequences.

Furthermore, participants were notified that no compensation or financial incentive would be provided for their participation in the study. This was to emphasize the voluntary nature of their involvement and ensure that their participation was based on a genuine interest in contributing to the research. The study's design and ethical considerations were aimed at providing a transparent and respectful approach to participant involvement, maintaining the integrity and validity of the research process.

Data analysis

Psychometric properties of the Icelandic version of the Occupational Depression Inventory (ODI) were estimated using the statistical software Jamovi. The process included both item and exploratory factor analyses, focusing on the weight and variance of each item

to understand their contributions to the scale's overall performance. Parallel analysis was used to determine the number of factors, providing insights into the dataset's structure. We examined skewness and kurtosis to assess the distribution of responses. An independent sample t-test also compared group differences based on gender, age, and educational background. This approach ensured a thorough understanding of the scale's validity and reliability in the Icelandic context. These findings aim to help confirm that the ODI is a valuable tool for measuring occupational depression across different demographic groups in Iceland.

Results

Item analyses

An item analysis was conducted for the nine-item scale. Because the last item, 9) "Hugsað að það væri betra að vera dái(n) heldur en að halda áfram í þessu starf," had no variance, it will not be included in the factor analysis or the reliability analysis of the scale. Table 2 presents each item's mean and standard deviation, along with the item-rest correlation and changes in McDonald's Omega if the item was dropped. The mean scores for the items ranged from 1.20 to 2.02, with the item 8) "Vegna streitu í vinnunni fann ég fyrir eirðarleysi" being the lowest mean ($M = 1.20$), where a lower mean score was more complicated question to answer and 2) "Ég fann fyrir þunglyndi vegna vinnu minnar" being the highest ($M = 2.02$), where a higher mean score was a more straightforward question to answer. An item-rest correlation was calculated to evaluate item discrimination, ranging from 0.451 to 0.793, which quantifies how well each item correlates with the total of the other items, with the higher value being a stronger relationship. Question 7) "Vinnan olli mér svo mikilli streitu" had the highest item-rest correlation ($r = 0.793$). Removal of individual items from the scale resulted in Omega values ranging from $\omega = .872$ to $\omega = .901$.

Table 2*Item analyses for the 8-item scale.*

	Missing	<i>M</i>	<i>SD</i>	Item-rest correlation	ω if item dropped
1) Vinnan var svo mikill streituvaldur að ég gat ekki lengur notið þess sem ég hef venjulega gaman af.	23	1.36	0.631	0.724	0.879
2) Ég fann fyrir þunglyndi vegna vinnu minnar.	23	1.22	0.582	0.784	0.872
3) Streitan í vinnunni olli svefnvanda (ég átti erfitt með að sofna eða sofa alla nóttina, eða ég svaf mun meira en venjulega).	26	1.46	0.613	0.567	0.892
4) Ég var oft uppgefin vegna vinnunnar	26	2.02	0.769	0.723	0.878
5) Streita í vinnunni hafði áhrif hafði áhrif á matarlystina hjá mér (ég missti matarlystina, eða, ég borðaði of mikið.	26	1.46	0.838	0.699	0.880
6) Mér finnst ég vera misheppnuð/misheppnaður þegar ég var í vinnunni.	30	1.34	0.717	0.451	0.901
7) Vinnan olli mér svo mikilli streitu að ég átti í erfiðleikum með að einbeita mér að því sem ég er að gera (t.d lesa dagblaðið) eða hugsa skýrt (t.d að taka ákvarðanir).	30	1.38	0.602	0.793	0.870
8) Vegna streitu í vinnunni fann ég fyrir eirðarleysi eða, hreyft mig eða talað svo hægt að aðrir hafa tekið eftir því	31	1.20	0.535	0.615	0.889
9) Hugsað að það væri betra að vera dáin(n) heldur en að halda áfram í þessu starfi.	31	0	0	0	-

Factor analysis

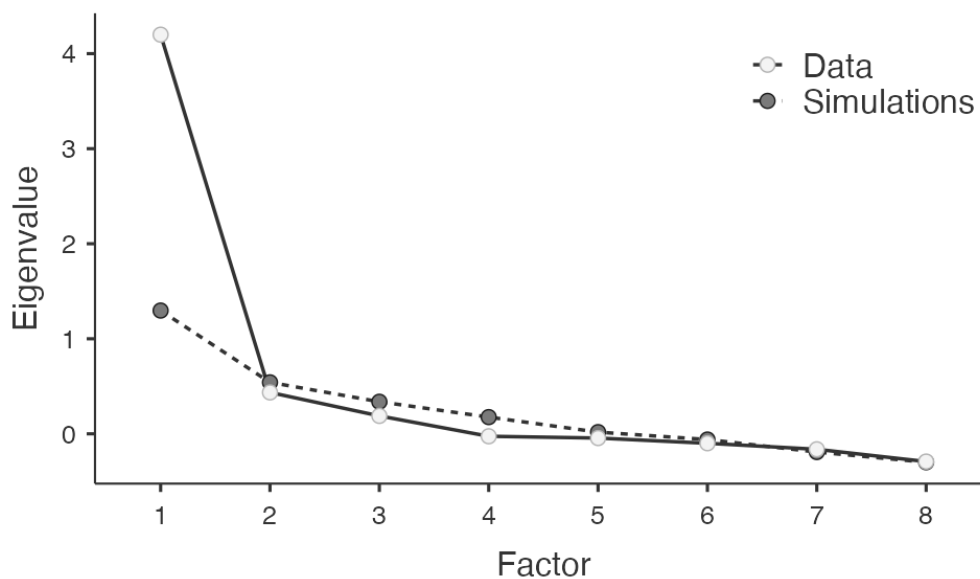
A principal axis factor analysis was performed, and McDonald's Omega was used to estimate the reliability of ODI $\omega = .896$. Bartlett's test was significant $\chi^2(28) = 213, p < .001$, and the KMO value was .86, indicating that the data set was well suited for factor analysis.

Results from the scree plot and parallel analysis (see Figure 1) suggested that the instrument

was a single factor. The scree plot reveals a significant drop between the first and second factors, with the initial factor displaying a notably high eigenvalue that significantly overshadows the subsequent ones. This steep decline after the first factor indicates a natural cutoff point for factor retention. Analyzing the scree plot yields two primary implications. The steep drop and the parallel analysis comparison support the one-factor solution. The eigenvalue of the first factor is 4.2, whereas the second factor's eigenvalue is only 0.4. Overall, the one-factor solution explains 52.5% of the variance in the eight items.

Figure 1

Scree plot for one factor.



The results of the factor analysis can be seen in Table 3. As can be seen in the table, items 1) "Vinnan olli mér svo mikilli streitu" and 2) "Ég fann fyrir þunglyndi" had the highest factor loading, meaning they had the strongest correlation with the construct being measured. In contrast, item 8) "Mér finnst ég vera misheppnuð/misheppnaður" had the lowest factor loading, showing the weakest correlation with the construct, occupational depression. Thus, it is the least effective indicator of this construct.

Table 3*Factor loadings from a one-factor solution for ODI.*

	Factor-loadings	Uniqueness
1) Vinnan olli mér svo mikilli streitu að ég átti í erfiðleikum með að einbeita mér að því sem ég er að gera (t.d lesa dagblaðið) eða hugsa skýrt (t.d að taka ákvarðanir).	0.862	0.257
2) Ég fann fyrir þunglyndi vegna vinnu minnar.	0.835	0.302
3) Ég var oft uppgefin vegna vinnunar	0.773	0.402
4) Vinnan var svo mikill streituvaldur að ég gat ekki lengur notið þess sem ég hef venjulega gaman af.	0.761	0.421
5) Streita í vinnunni hafði áhrif á matarlystina hjá mér (ég missti matarlystina, eða, ég borðaði of mikið.	0.753	0.433
6) Vegna streitu í vinnunni fann ég fyrir eirðarleysi eða, hreyft mig eða talað svo hægt að aðrir hafa tekið eftir því	0.645	0.584
7) Streitan í vinnunni olli svefnvanda (ég átti erfitt með að sofna eða sofa alla nóttina, eða ég svaf mun meira en venjulega).	0.611	0.627
8) Mér finnst ég vera misheppnuð/misheppnaður þegar ég var í vinnunni.	0.475	0.774

In order to compare a two-factor solution with the two factors presented by the instrument's authors (Bianchi & Schonfeld, 2020), another factor analysis was performed with a two-factor solution, as detailed in Table 4. Items 3) "Streitan í vinnunni olli svefnvanda", 5) "Streita í vinnunni hafði áhrif á matarlystina" and 7) "Vinnan olli mér svo mikilli streitu" loaded clearly on factor 1. In contrast, item 6) "Mér finnst ég vera misheppnuð/misheppnaður" loaded clearly on factor 2. However, other items exhibited cross-loading, making it difficult to separate them into two factors distinctly. Therefore, this study did not adopt a two-factor solution as it was not suitable. This observation suggests the difficulty of distinctly categorizing symptoms within the framework of occupational stress.

Table 4*Factor loading from a two-factor solution for ODI.*

	Factor		Uniqueness
	1	2	
1) Vinnan var svo mikill streituvaldur að ég gat ekki lengur notið þess sem ég hef venjulega gaman af.	0.533	0.547	0.417
2) Ég fann fyrir þunglyndi vegna vinnu minnar.	0.577	0.610	0.294
3) Streitan í vinnunni olli svefnvanda (ég átti erfitt með að sofna eða sofa alla nóttina, eða ég svaf mun meira en venjulega).	0.665		0.535
4) Ég var oft uppgefin vegna vinnunar.	0.601	0.471	0.416
5) Streita í vinnunni hafði áhrif á matarlystina hjá mér (ég missti matarlystina, eða, ég borðaði of mikið).	0.655	0.373	0.432
6) Mér finnst ég vera misheppnuð/misheppnaður þegar ég var í vinnunni.		0.734	0.455
7) Vinnan olli mér svo mikilli streitu að ég átti í erfiðleikum með að einbeita mér að því sem ég er að gera (t.d. lesa dagblaðið) eða hugsa skýrt (t.d. að taka ákvarðanir).	0.972		0.007
8) Vegna streitu í vinnunni fann ég fyrir eirðarleysi eða, hreyft	0.370	0.584	0.522

Total score

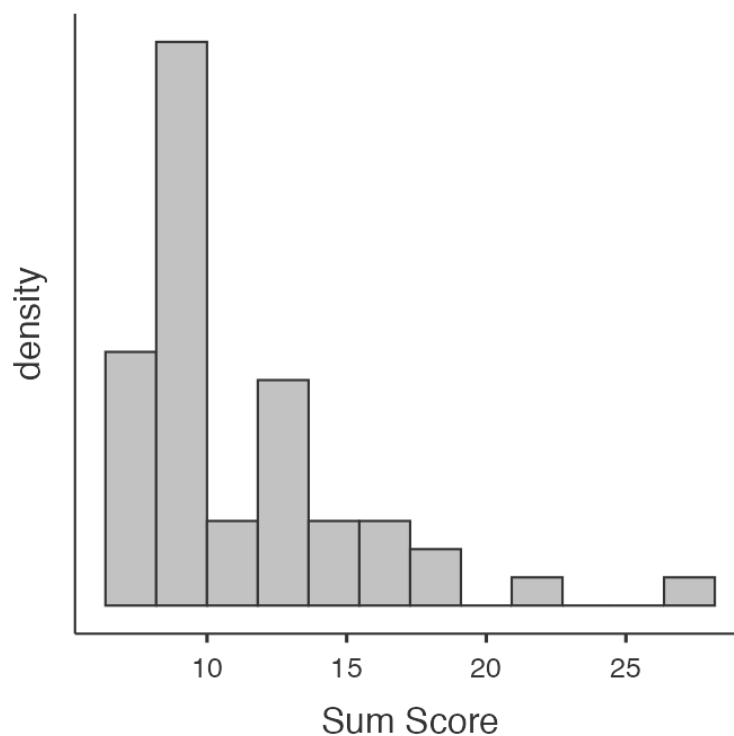
An Independent Samples T-Test was conducted to compare the means among different groups categorized into three sets, each with two levels on the variable ODI. The analysis aimed to determine whether these groups had statistically significant differences. The average score on the ODI scale by gender. In this sample, women had, on average, a higher score ($n = 34$, $M = 1.46$, $SD = 0.394$) than men ($n = 14$, $M = 1.23$, $SD = 0.519$) but an independent sample t-test did not show a significant difference between men and women in occupational depression $t(46) = -1.63$, $p = .110$. The mean scores on the eight items in the ODI by age were analyzed. An independent sample t-test showed no significant difference in occupational depression between 18-29 ($n = 28$, $M = 1.38$, $SD = 0.488$) and 30+ ($n = 21$, M

=1.39, $SD = 0.377$) ($t(47) = -0.0581, p = .954$). Finally, the mean scores on the eight items on the ODI by level of education were compared. An independent sample t-test showed no significant difference in occupational depression between people with a university education ($n = 21, M = 1.46, SD = 0.458$) and people without a university education ($n = 27, M = 1.33, SD = 0.426$) ($t(46) = -1.02, p = .849$).

When examining the shape of the distribution of the scale's total scores (see Figure 2), it reveals a skewness coefficient of 2.06 ($SE = 0.337$). This confirms a positively skewed (right-skewed) distribution. The skewness of the data suggests a more significant number of lower scores, with fewer higher scores stretching out to the right. The kurtosis value is similarly revealing, standing at 5.34 ($SE = 0.662$). This high kurtosis indicates a long tail, suggesting that there are outliers or extreme values on the higher end of the distribution. As seen in Figure 2, clearly illustrates the extended tail.

Figure 2

Distribution for the total score ODI scale



Discussion

The present study aimed to examine the psychometric properties through the Icelandic version of the Occupational Depression Inventory (ODI). The ODI is a newly developed measure for occupational depression (Bianchi & Schonfeld, 2020). The results of this pilot study of translation of the Icelandic ODI demonstrated that ODI could be used as a unidimensional scale. The scale's internal consistency is high, which signifies acceptable scale reliability. Interestingly, unlike the original instrument, which is characterized by a two-factor structure (Bianchi & Schonfeld, 2020), the exploratory factor analysis of the Icelandic version suggested a single-factor structure. This finding is particularly noteworthy given that the ODI is based on the PHQ-9, which is traditionally understood to be a one-factor measure (Doi et al., 2018). The PHQ-9 has consistently been validated as a unidimensional tool for assessing depression, and the expectation was that the ODI might exhibit a similar structure due to its foundation on the same principles. Thus, the results of this study, which indicate a single-factor structure for the Icelandic version of the ODI, align more closely with the unidimensional nature of the PHQ-9. This alignment highlights the consistency between the PHQ-9 and the ODI, reinforcing the reliability and validity of the Icelandic ODI as a single-factor scale.

The study's differences might reflect underlying cultural differences (Fortes et al., 2020) in how occupational stress and depression are perceived and reported within the Icelandic context. These cultural differences suggest that the Icelandic population views these experiences as interconnected aspects of a single phenomenon rather than as separate issues. This perspective could influence how individuals in Iceland report their symptoms and experiences related to occupational stress and depression, potentially leading to a more unified factor structure in the ODI compared to other cultural contexts where these issues might be seen as more distinct.

The item analysis of the Icelandic version of the Occupational Depression Inventory (ODI) revealed critical details about its psychometric properties. The lowest mean score was for the item on restlessness or slowed behavior due to work stress, while the highest was for feeling depressed due to work. These variations can help refine the ODI to capture aspects of occupational depression better. Item-rest correlations ranged from moderate to high, indicating most items are good discriminators of occupational depression severity. The item on difficulty concentrating due to work stress had the highest item-rest correlation, effectively distinguishing different levels of occupational depression. Analyzing changes in McDonald's Omega showed that removing certain items might increase the scale's internal consistency. However, high Omega values suggest that each item contributes meaningfully to the construct measurement. This high internal consistency and item analysis variations suggest ODI refining opportunities. Future scale replications could reword or adjust lower-performing items to enhance clarity and impact in measuring occupational depression.

An independent samples t-test assessed whether demographic variables such as gender, age, and education influence occupational depression scores among Icelandic workers using the Occupational Depression Inventory (ODI). The results showed no statistically significant differences in occupational depression scores between men and women, suggesting gender does not substantially influence occupational depression. Similarly, no significant differences were found between younger (18-29 years) and older (30+ years) groups, indicating age is not a critical factor. Additionally, educational background did not differentiate occupational depression scores, suggesting a uniform approach to addressing occupational depression may be effective. These findings indicate that occupational depression, as measured by the ODI in Iceland, is consistent across gender, age, and educational lines. Future research should explore other potential influences, such as job type, industry, or managerial roles.

The skewness coefficient suggests a positively skewed or right-skewed distribution. Such a distribution can often be seen where the population has many typical or average cases and fewer extreme or atypical cases in one direction. This skewness might imply that most individuals assessed with the ODI scale do not experience severe symptoms. The kurtosis value indicates a distribution with a sharper peak and heavier tails than a normal distribution, which means that this phenomenon is rare in Icelandic workplaces.

The findings of this study enhance the existing research on occupational health assessments. Traditionally, instruments like the ODI are developed within specific cultural limits that may only sometimes translate across different settings (Bianchi & Schonfeld, 2020). The original two-factor structure of the ODI was intended to capture distinct facets of occupational depression. However, the single-factor structure in the Icelandic adaptation suggests that these facets may be perceived as similar by Icelandic workers. This aligns with research by Schonfeld and Bianchi (2015), who suggest that cultural factors significantly influence the development and recognition of mental health issues such as burnout and depression. Furthermore, comparing these results with global trends highlights the necessity of adapting psychological instruments to fit cultural contexts, as what is appropriate in one cultural setting may be interpreted differently in another. This is consistent with studies such as Bianchi et al. (2014), which discuss how symptoms of burnout and depression exhibit different patterns and implications in various cultural settings.

These conclusions tie into a more extensive discussion about whether burnout and depression are the same thing or different. Some experts, such as Schonfeld and Bianchi (2015), believe that burnout and depression share significant similarities and, therefore, might not make sense to treat them as different disorders. Studies by Ahola et al. (2014) and Golonka et al. (2019) support this view, showing that it is hard to tell burnout and depression apart. However, other researchers like Brenninkmeyer et al. (2001) and Parker and Tavella

(2021) see burnout as something different, highlighting that it happens for different reasons and occurs in different ways. Brenninkmeyer et al. and Parker and Tavella talk about while burnout and depression share some similarities, like feeling exhausted and less effective at work, the reasons behind them and what they mean can vary, which means they might need different types of treatment in the workplace. Our findings highlight that the ODI measures one factor in Iceland, which means it is good at identifying how work-related issues lead to depression. This supports the idea that even though burnout and depression might overlap, the specific causes and effects at work make it helpful to have a unique tool like the ODI for the workplace. This tool is vital in coming up with specific ways to help prevent work-related depression from getting worse. Moreover, the Icelandic ODI got high scores for reliability, indicating its competency in spotting when work is causing depression. Having workplace mental health checks is vital because while burnout and depression might look similar, knowing how to identify and handle them separately but also together can help a lot.

In conclusion, the translation and adaptation of the Occupational Depression Inventory into Icelandic represent a significant step toward understanding and addressing occupational depression in Iceland. The instrument has demonstrated good psychometric properties, suggesting its potential as a valuable tool for researchers and practitioners in occupational health. Despite the unexpected single-factor structure, this adaptation provides crucial insights into the cultural dimensions of occupational health psychology. It underscores the need for culturally sensitive adaptations of psychological instruments and sets a precedent for future research in occupational health within Iceland. By continuing to refine and validate the Icelandic ODI, researchers can better identify, understand, and reduce the impacts of occupational stress and depression, leading to healthier workplace environments and improved employee well-being.

One of this study's strengths is its methodological strictness. The translation process involved multiple stages, including independent translations and expert reviews, which enhanced the Icelandic ODI's linguistic accuracy and cultural relevance. Furthermore, the use of a diverse sample from various occupational backgrounds significantly enhanced the generalizability of our findings within the Icelandic context. By incorporating participants from different sectors and professions, the study ensured that the results apply to a wide range of occupational settings, thereby strengthening the validity and applicability of the Icelandic ODI in measuring occupational depression across diverse work environments.

Nevertheless, this study has its limitations. The sample size is relatively small, which may impact the stability of the factor analysis results. A larger sample would provide better analysis and accurately confirm the single-factor structure. Furthermore, the self-report of the data collection, typical in psychological research, can introduce biases such as social desirability or self-assessment inaccuracies. Future replication of this research should consider employing mixed methods approaches, including qualitative interviews, to enrich the quantitative data and provide deeper insights into how occupational stress and depression are experienced and interpreted by Icelandic workers.

Moreover, the Icelandic version deviates from the original ODI's two-factor structure to a single-factor one, requiring further investigation. This could involve cognitive interviewing techniques to understand how participants interpret each item and whether specific cultural differences might influence their responses. Additionally, testing the Icelandic ODI across different sectors and broader demographics could help determine if the single-factor structure holds across various employment contexts or if modifications are necessary to capture occupational stressors and depressive symptoms.

The current study lays the groundwork for several future research opportunities. First, expanding the sample size and demographic diversity would be crucial to enhancing the

strength and external validity of the findings. It would also be beneficial to conduct longitudinal studies to observe how the psychometric properties of the Icelandic ODI perform over time and in response to changes in occupational environments and broader economic factors. Another interesting direction for research would be to explore the relationship between occupational depression as measured by the Icelandic ODI and other psychological constructs such as job satisfaction, employee engagement, and overall mental health. Such studies could provide valuable insights into the broader implications of occupational health and help develop targeted interventions.

Further research is recommended to explore the cultural and contextual factors that might influence the interpretation and response to specific items, particularly those with lower discrimination indices (Fortes et al., 2020). Additionally, longitudinal studies could assess the stability of these items over time in capturing the dynamics of occupational depression. This study has validated using the Occupational Depression Inventory (ODI) in the Icelandic workplace, identifying areas for potential improvement through detailed item analyses. By ensuring the tool's accuracy in detecting occupational depression, it enhances its effectiveness in assessing workplace mental health. This progress lays the groundwork for future research to explore the impacts of occupational depression in Iceland.

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