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An Azerbaijani Adaptation of the School Burnout Inventory: Relations among School Burnout, Academic Self-Efficacy, School Satisfaction, Distress, and Life Satisfaction

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Abstract: The role of school burnout is of utmost importance in contemporary educational environments. The primary objective of this research was to adapt the School Burnout Inventory to suit the context of Azerbaijani adolescents and investigate the correlations between school burnout, school

satisfaction, academic self-efficacy, psychological distress, and life satisfaction. The study collected data through quantitative survey research using a sample of 1852 adolescents (1067 females and 785 males) from Azerbaijan using a simple random sampling method. A structured questionnaire was used in Google Forms to survey and assess the adolescents' perceptions of how psychological distress, academic self-efficacy and school/life satisfaction influence school burnout. The adaptation procedure encompassed the utilisation of confirmatory factor analysis, criterion-related validity evaluations, and reliability assessments. Furthermore, mediational analysis was employed using PROCESS macro to examine the associations between school burnout, psychological distress, and school/life satisfaction. The findings from the confirmatory factor analysis within AMOS Graphics 24 indicated that the questionnaire consisted of 9 questions, representing three school-related dimensions. Furthermore, the study demonstrated that the questionnaire showed a satisfactory fit. The scale exhibited acceptable levels of reliability coefficients for an overall score in STATA 15. Moreover, the results revealed significant positive relationships between school burnout and psychological distress while demonstrating negative connections with academic self-efficacy, school satisfaction and life satisfaction. Finally, the study's findings indicated that psychological distress mediated the relationship between school burnout and school/life satisfaction. These collective findings highlight the psychometric qualities of the Azerbaijani version of the School Burnout Inventory, indicating its noteworthy nature.

Keywords: school burnout; school satisfaction; academic self-efficacy; psychological distress; life satisfaction; scale adaptation.

Introduction

In recent years, research has focused on examining burnout syndrome among students and its prevalence, particularly concerning the heavy course load experienced by adolescents in upper grades (Wang, 2015). The challenging education system often leads to low performance, motivation issues, and the development of burnout syndrome in students. However, implementing programs that foster emotional intelligence in educational settings has shown promising results in improving students' overall well-being (Martín-Cano et al., 2021). Consequently, it is crucial to investigate the concepts of burnout syndrome and school satisfaction to gain a comprehensive understanding of students' experiences.

Notably, a study conducted in the Netherlands highlighted that one out of every six individuals experiences burnout syndrome, characterised by symptoms such as fatigue, irritability, and sleep problems (Vinkers & Schaafsma, 2021). However, it is essential to recognise that experiencing these symptoms does not necessarily indicate burnout. The lack of a solid scientific basis for burnout is attributed to evolving definitions, unreliable diagnostic criteria, and the similarities between burnout and depression, making it challenging to establish precise criteria for this concept (Vinkers & Schaafsma, 2021). As a result, burnout remains a complex phenomenon that requires differentiation from other related constructs like depression, alexithymia, and prolonged exhaustion. Additionally, burnout is often accompanied by other disorders, such as sleep disorders (Kaschka et al., 2011).

In contrast to burnout syndrome, school satisfaction positively impacts student's academic performance and well-being. The factors contributing to students' satisfaction levels vary, with girls focusing on school improvement and boys prioritising relationships with teachers and classmates (Wahlström et al., 2021). School satisfaction has also been linked to overall life satisfaction, particularly among male students and older adults. Furthermore, regular physical education and healthy habits have enhanced school and life satisfaction (Urchaga et al., 2020).

Considering the school environment as a work setting where students attend classes, complete assignments, and undertake various tasks, addressing burnout syndrome in students becomes crucial (Schaufeli et al., 2002). Schools play a vital role in the development of adolescents (Eccles, 2013), and the presence of burnout syndrome among students may be closely related to their school environment. While burnout is commonly associated with the workplace, recent studies have explored its association with the academic population (Salmela-Aro et al., 2008a, 2009; Parker and Salmela-Aro, 2011). Inadequacy, a feeling of not being competent enough to succeed, is a key factor in initiating school burnout syndrome, negatively impacting students' adaptation to their lessons (Salmela-Aro & Upadaya, 2012). Furthermore, school burnout syndrome is prevalent across countries, even those with advanced education systems and a focus on school quality (Salmela-Aro et al., 2008b). Students experiencing heavy course loads may develop school-related cynicism, characterised by an indifferent and distant attitude towards schoolwork, leading to reduced academic performance and a sense of inadequacy (Schaufeli et al., 2002). It is noteworthy that school burnout shares similarities with concepts such as stress, depression, anxiety, insomnia, fatigue, inadequacy, and cynicism (Ahola & Hakanen, 2007), underscoring the importance of addressing school burnout to promote academic success and overall well-being among students.

Research Problem

Recent research has also shed light on the prevalence of school-related stress and burnout among students, highlighting the overlapping nature of these two constructs. Students may experience anxiety when they feel overwhelmed by schoolwork and the pressure to succeed, while burnout occurs when they experience feelings of inadequacy and disinterest in their lessons (Pascoe et al., 2019; Salmela-Aro et al., 2008b, 2009). School-related stress and burnout negatively impact students' academic development (Klößner et al., 2009). Additionally, gender and school diversity have been identified as factors influencing school burnout, with girls and students in higher-track schools experiencing more fatigue and stress, while boys and students in lower-track schools often display a lack of motivation (Ge et al., 1994; Herrmann et al., 2019; Kiuru et al., 2008; Salmela-Aro et al., 2008b, 2009). However, it is essential to acknowledge that these findings may vary in different countries.

It is essential to consider the varying conceptualisations of burnout among researchers and fields. Some propose a two-factor model with depersonalisation attitudes, while others argue for a one-dimensional model with only exhaustion as a factor. Thus, understanding the specific conceptualisation used in research is crucial for correctly interpreting and comparing findings.

Furthermore, adapting and validating a survey in a new context requires careful consideration to ensure its relevance and appropriateness for the target population. This process examines the survey's language, cultural aspects, and the specific school context being studied. Although the School Burnout Inventory (SBI) has been validated in various contexts, its adaptation to Azerbaijan, where psychology and related disciplines are still emerging, is essential. This adaptation not only fills the knowledge gap but also increases interest in psychoeducation among the public.

Research Focus

Given the limited availability of tests to measure students' burnout and stress in Azerbaijani schools, this study has the potential to provide comprehensive psycho-social support to students and enhance our understanding of their psychological well-being.

Research Aim and Research Questions

Research in recent years has emphasised the prevalence of burnout syndrome among students, mainly due to the demanding educational systems they face. Exploring burnout syndrome and school satisfaction is crucial to support students' well-being and academic success. Differentiating burnout from other related constructs and understanding its impact on students' adaptation and educational performance is necessary. Furthermore, addressing school-related stress and burnout, considering gender and school diversity factors, and ensuring clear conceptualisations and appropriate measurement instruments are essential for comprehensive research and support in educational settings.

RQ1. Is the School Burnout Inventory (SBI) adapted for use with Azerbaijani adolescents a valid measurement tool for evaluating school burnout?

RQ2. Does the adapted School Burnout Inventory (SBI) demonstrate sufficient reliability?

RQ3. What is the relationship between school burnout and psychological distress, academic self-efficacy and school/life satisfaction?

RQ4. Does psychological distress mediate the relationship between burnout, academic self-efficacy and school/life satisfaction?

Materials and Methods

Sample and Participants

In the present study, a quantitative survey research design was used to collect data from a sample of 1852 adolescents, selected through a simple random sampling method, aged 7 to 18 years, with a mean age of 12.64 years and a standard deviation of 2.01. These included 1067 females (57.6%) and 785 males (42.4%). 67.2% of participants (n = 1245) were satisfied with their educational environment. However, 26.3% of participants stated moderate satisfaction (n = 488), while 6.4% expressed dissatisfaction (n = 119). A total of 718 participants had a highly positive perception of their teacher-student relationship. A total of 769 individuals reported positive evaluations. Out of the remaining individuals, a total of 325 reported their condition as fair, while 40 described their condition as poor.

The data collection method was implemented by utilising an online survey platform facilitated by experts in school psychology. The procedure for determining the schools included in the study was carried out by convenience sampling. This method was selected based on its pragmatic nature and suitability for the particular research being undertaken. The research was conducted among adolescents by school psychologists within their respective educational institutions, who subsequently disseminated the provided online survey URLs. The significance of voluntary participation and the option to withdraw at any point were emphasised. A structured questionnaire was used in Google form, and the online survey was commenced by furnishing a thorough project summary and formally gaining informed consent. Subsequently, a section was undertaken to collect individual data, presenting the assessment instruments employed in this study. The present study did not encounter any instances of missing data, as the online survey employed strategies to ensure that participants furnished comprehensive responses.

Instrument and Procedure

The School Burnout Inventory (SBI) was developed by Salmela-Aro and Näätänen (2005) and consists of 9 items, such as "The pressure of my schoolwork causes me problems in my close

relationships with others." The SBI employs a 6-point Likert scale (1=completely disagree to agree 6=completely) to assess school burnout, where higher scores indicate higher levels of burnout. The internal consistency coefficient of the scale, measured by Cronbach's Alpha, is .89.

The Satisfaction with Life Scale (SWLS) was designed by Diener et al. (1985) and comprises five items, including "In most ways, my life is close to my ideal." The SWLS measures life satisfaction using a 7-point Likert scale (1=strongly disagree to agree 7=strongly), with higher scores indicating greater satisfaction. The reliability analysis of the SWLS yielded an internal consistency coefficient of 0.74, as measured by Cronbach's alpha.

The Children and Adolescents Psychological Distress Scale (CAPDS-10) was developed by De Stefano et al. (2022) and consists of 10 items, such as "I haven't managed to overcome my stress or deal with it." The CAPDS-10 assesses distress using a 4-point Likert scale (0 = absolutely not to 3 = almost every day). The internal consistency coefficient of the scale, determined through Cronbach's Alpha, is .86.

The Academic Self-Efficacy Scale, created by Jerusalem and Schwarzer (1981), was designed to measure adolescents' sense of academic self-efficacy. The scale includes seven items: "I can't think of any exam that I would fail." Participants rate items on a 5-point Likert-type scale (from 1="True for me" to 5="False for me"). The reliability analysis of this scale yielded an internal consistency coefficient of 0.82, as measured by Cronbach's alpha.

The High School Satisfaction Scale, developed by Lodi (2019), comprises 20 items, including "I am satisfied with taking this school." The scale assesses school satisfaction using a 5-point Likert scale (1=not at all to 5=extremely). Its internal consistency ranges from 0.818 to 0.926.

Data Analysis

The present study aimed to assess the psychometric features of the Azerbaijani School Burnout Inventory, encompassing its structural validity, reliability, criterion-related validity, and predictive validity. Confirmatory factor analysis (CFA) employing the maximum likelihood estimation technique was conducted using AMOS Graphics 24 to evaluate the structural validity. Various goodness-of-fit indicators were assessed, including the chi-square (χ^2) to degrees of freedom ratio, comparative fit index (CFI), normed fit index (NFI), Relative Fit Index (RFI), incremental fit index (IFI), goodness-of-fit index (GFI), standardised root mean square residual (SRMR), and root mean square error of approximation (RMSEA). The instrument's internal consistency was assessed by calculating Cronbach's α , McDonald omega, and Gutmann lambda coefficients. The criterion-related validity of the Azerbaijani School Burnout Inventory was examined by investigating its connections with high school satisfaction, academic self-efficacy, psychological distress, and life satisfaction. This study employed the PROCESS macro (Hayes, 2018) to investigate a mediation model, specifically examining the potential mediating role of psychological distress in the relationship between school burnout and school/life satisfaction.

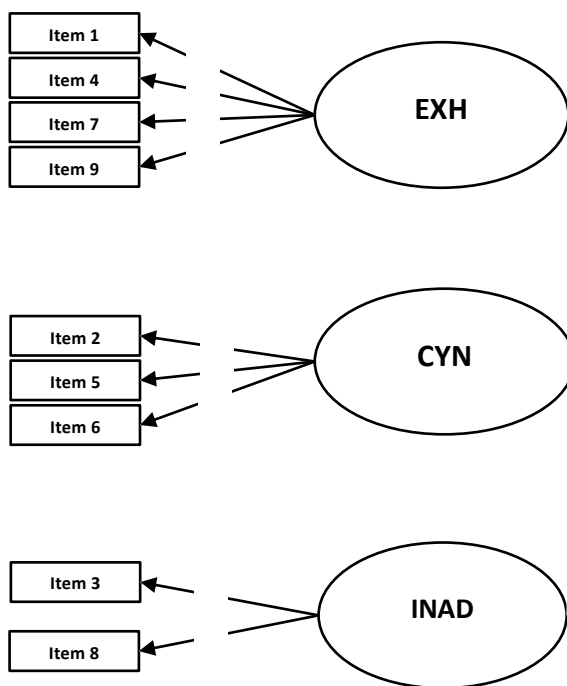
Results

Azerbaijani School Burnout Inventory structural validity was carefully tested, finding three dimensions: (a) exhaustion at school, (b) cynicism toward the meaning of school, and (c) a sense of inadequacy at school. All Azerbaijani School Burnout Inventory dimensions have considerable factor loadings, supporting this structural arrangement (see Figure 1). The goodness of fit indexes reinforced the model's robustness. The statistical significance of the model was validated by $\chi^2(24, N = 1852) = 257.22, p < .001$. The Comparative Fit Index (CFI) = 0.961, Relative Fit Index (RFI) = 0.936, Normed Fit Index (NFI) = 0.957, Incremental Fit Index (IFI) = 0.961, Goodness of Fit Index (GFI) = 0.970, Tucker-

Lewis Index (TLI) = 0.942, Standardized Root Mean Square Residual (SRMR) = 0.031, and Root Mean Square Error of Approximation (RMSEA) = 0.072 all showed excellent fit for the model. The model's four components' interrelationships showed the Azerbaijani School Burnout Inventory's structural integrity.

Figure 1

Confirmatory Factor Analysis of Azerbaijani School Burnout Inventory



Note. EXH = exhaustion at schoolwork; CYN = cynicism toward the meaning of school; INAD = sense of inadequacy at school.

The scale's internal consistency reliability was examined using Cronbach's alpha, McDonald's omega, and Guttman's lambda. The Cronbach's alpha coefficient of 0.856 shows strong reliability. McDonald's omega coefficient (0.861) indicates reliability. The scale's Guttman lambda coefficient, 0.854, supports that its constituents measure the same concept. This study confirms the dependability of the Azerbaijani School Burnout Inventory.

The High School Satisfaction Scale, Academic Self-Efficacy Scale, the Child and Adolescent Psychological Distress Scale, and the Satisfaction with Life Scale were used to assess the criterion-related validity of the Azerbaijani School Burnout Inventory's overall and three dimensions, as shown in Table 2. Note that all correlation analyses yielded significant findings ($p < .001$). As expected, school burnout variables positively correlated with psychological distress, with correlation values ranging from $r = .475$ to $.562$. In contrast, school burnout is negatively associated with high school satisfaction ($r = -.382$ to $-.548$), academic self-efficacy ($r = -.254$ to $-.424$), and life satisfaction ($r = -.372$ to $-.447$). These data demonstrate the Azerbaijani School Burnout Inventory's criterion-related validity in Azerbaijan.

Table 2

Criterion-Related Validity of the Azerbaijani School Burnout Inventory

Variable	School Burnout	EXA	CYN	INAD
High school satisfaction	-.548**	-.382**	-.597**	-.459**

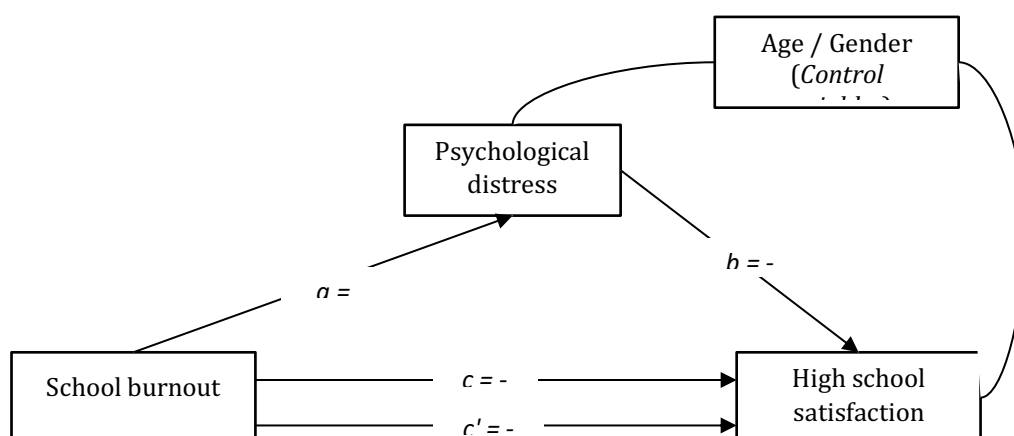
Academic self-efficacy	-.404**	-.254**	-.424**	-.404**
Psychological distress	.562**	.465**	.534**	.475**
Life satisfaction	-.447**	-.372**	-.423**	-.376**

Note. ** $p < .001$, EXH = exhaustion at schoolwork; CYN = cynicism toward the meaning of school; INAD = sense of inadequacy at school.

As shown in Figure 2, the research examined whether psychological distress mediated the association between school burnout and high school satisfaction. According to bootstrap analyses, psychological distress significantly mediated the association between school burnout and high school satisfaction. The bootstrap coefficient was $-.172$, with a 95% confidence interval of $.216$ to $.129$. Research confirms a substantial predictive role between school burnout and psychological distress ($\beta = 0.511$, $p < 0.001$). The study found a significant direct role from school burnout to high school satisfaction ($\beta = -.485$, $p < 0.001$).

Figure 2

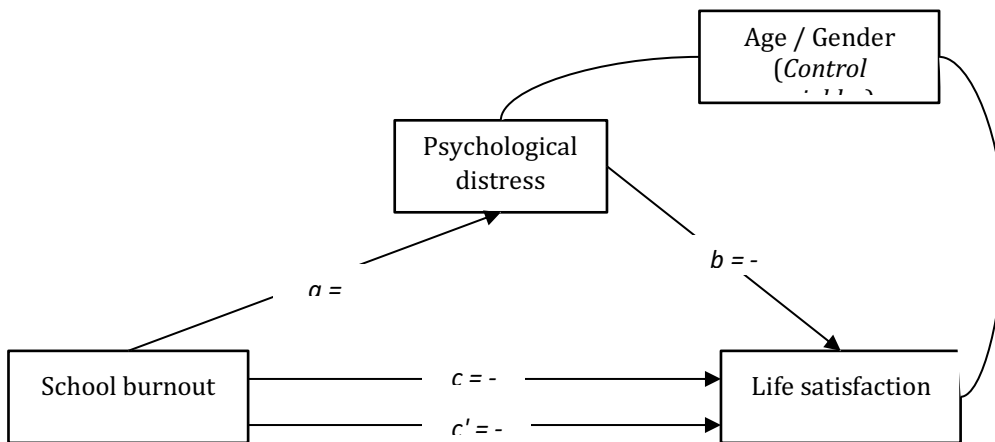
Predictive Validity of School Burnout



Lastly, the study investigated the potential mediating role of psychological distress in the relationship between school burnout and life satisfaction, as depicted in Figure 3. The results of bootstrap analyses revealed a substantial mediation effect of psychological distress on the relationship between school burnout and life satisfaction. The coefficient obtained from the bootstrap analysis was $-.151$, and the corresponding 95% confidence interval ranged from $-.172$ to $-.131$. The research findings indicate a statistically significant negative relationship between school burnout and life satisfaction ($\beta = -.406$, $p < 0.001$).

Figure 3

Predictive Validity of School Burnout



Discussion

Researching school burnout is essential to examining the factors that affect academic achievement, alleviating the disturbing consequences for students, and improving their psychological health. Therefore, the School Burnout Inventory is needed to investigate this factor that affects students' school and academic life. The School Burnout Inventory is one of the most widely used burnout measurement tools in many countries. This scale has been translated and adapted in several European and American contexts (Boada-Grau et al., 2015; Carmona-Halty et al., 2022).

The primary purpose of this research was to adapt the School Burnout Inventory to the Azerbaijani language, to investigate the validity and reliability of the scale, and to determine the relationship between school burnout and school satisfaction, self-efficacy, distress, and life satisfaction. The obtained psychometric results from the confirmatory factor analysis (CFA) of the scale in the version adapted to the Azerbaijani language address the first research question of the study and support the original version of SBI. Findings are also similar to other adaptation versions of the School Burnout Inventory (Boada-Grau et al., 2015; Carmona-Halty M et al., 2022). The scale is divided into three sub-dimensions: exhaustion at school, cynicism at school, and inadequacy at school (Salmela-Aro et al., 2008a). The results obtained indicate satisfactory psychometric properties regarding internal consistency and reliability.

School Burnout Inventory (9 items) was psychometrically resolved using various methods and samples. To reveal the internal consistency of SBI, different analyses were conducted to investigate whether adapted SBI demonstrate sufficient reliability, and the examination of the study made it come to light that the estimated reliability level of the scale was above 0.70. According to Nunnally and Bernstein (1994), Cronbach's alpha above 0.70 is sufficient. Besides Cronbach's alpha, McDonald's omega and Gutmann's Lambda analyses were also acceptable regarding the internal reliability of items. In the original version of the study, overall Cronbach's alpha was 0.88, although reliability ratios for the three subscales fluctuated between 0.67-0.88. In this study, Cronbach's alpha was determined as 0.856., McDonald's omega 0.861, and Gutmann's lambda 0.854.

The criterion-related validity of the scale was investigated by the Satisfaction with Life Scale (SWLS), Children and Adolescents Distress Scale (CAPDS-10), High-School Satisfaction Scale, and The Academic Self-Efficiency Scale. Using Pearson's correlation coefficient, correlations between the

mentioned scales and the three dimensions of the School Burnout Inventory Scale were obtained. It was found that adolescents with high levels of exhaustion, cynicism, and inadequacy are more likely to experience higher negative emotions, such as anxiety, anger and they experience fewer positive emotions, such as excitement, relaxation, and so on (Burr & Beck Dallaghan, 2019; Raiziene et al., 2013; Salmela-Aro & Upadhyay, 2012). Moreover, the more cynicism towards the meaning of school and the sense of inadequacy experienced, the lower the students' school engagement and achievement (Salmela-Aro et al., 2008a). Regarding criterion validity, the analysis addresses the third research question and shows that burnout is related to school satisfaction, life satisfaction, self-efficacy (Skaalvik, 2007), and distress (Maslach, 2011).

The present study analyses the differences in the experienced level of burnout as well as depending on demographic indicators such as gender, age, school achievements, and relations. Conducted research findings respond to the last research question of the study and present that burnout is linked to depression and psychological stress. In addition, students who experience burnout and its symptoms are likelier to have lower self-efficacy at school. As mentioned before, observed negative emotions due to burnout lead students to experience lower life and school satisfaction. Lower school engagement and academic achievement are likely to decrease students' satisfaction and attitudes toward school (Kiuru et al., 2008; Salmela-Aro et al., 2008b).

Limitations

Despite our efforts to ensure a comprehensive study, several limitations still exist. Firstly, as the research focused on test adaptation, it did not introduce any novel concepts to the scientific community. Additionally, most participants fell within the 11-14 age range, which calls for a more balanced representation of students from different age groups in future studies. Another limitation stems from the digital and online nature of the research. Participants answered the questionnaire in their environments, introducing uncertainties regarding the accuracy and honesty of their responses. There may also be concerns about the participants' understanding of the questions. To address these concerns, it would be beneficial for half of the participants to answer the questionnaire in a controlled research setting under researchers' observation. This would help minimise potential biases and enhance the reliability of the data.

Conclusion

This study focused on adapting the School Burnout Inventory for use in Azerbaijan. Our research employed various experimental methods, consistently demonstrating this scale's successful adaptation. It can be concluded that the School Burnout Inventory is a suitable, reliable, and valid measure for assessing burnout in the Azerbaijani context.

Suggestions for Future Research

Moving forward, there is a clear need for further exploration of the concept of School Burnout and a deeper understanding of its relationship with the variables examined in this study. Future research should aim to delve more extensively into these areas to expand our knowledge and provide a more comprehensive understanding of the factors influencing school burnout in Azerbaijan.

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Conflict of Interest

None.

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