

School Principals' Emotion Inventory: Validity and Reliability in the Turkish Context

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Abstract

The purpose of this study is to adapt the Principal Emotion Inventory (PEI) developed by Junjun Chen, which measures the emotions experienced by school administrators in various situations, to Turkish culture and to assess the scale's psychometric qualities. There were 305 school principals in the research group, representing various school levels (preschool, primary school, secondary school and high school). Various analyses were conducted to provide evidence for the validity and reliability of the measurement tool. In line with the findings of the construct validity confirmatory factor analysis, it was determined that eight of the goodness-of-fit indices showed acceptable fit and three of them revealed excellent fit. It was confirmed that the Turkish form validated the five-dimensional structure of the original 25-item PEI. Factor loadings ranged from 0.32 to 0.72 in the Enjoyment sub-dimension; 0.42 to 0.69 in the Pride sub-dimension; 0.59 to 0.79 in the Frustration sub-dimension; 0.55 to 0.69 in the Anxiety sub-dimension; and 0.49 to 0.77 in the Hopelessness sub-dimension. In order to provide evidence of reliability, McDonald Omega was calculated utilizing factor loadings and specific variances in addition to Cronbach Alpha coefficient. The Omega coefficients calculated for the five sub-dimensions were 0.45 (Enjoyment), 0.72 (Pride), 0.82 (Frustration), 0.77 (Anxiety) and 0.83 (Hopelessness), respectively. The Cronbach Alpha coefficients calculated for the five sub-dimensions were 0.54, 0.71, 0.82, 0.77 and 0.83, respectively. The scale is a valid and reliable measuring tool that may be used to ascertain school principals' feelings regarding the situations they encounter, as demonstrated by all of these analysis findings.

Keywords: school administrators, school principals' emotions, scale adaptation, confirmatory factor analysis

Okul Yöneticisi Duygu Envanterinin Türkçeye Uyarlanması: Bir Güvenirlik ve Geçerlilik Çalışması

Öz

Bu çalışmanın amacı; okul yöneticilerinin çeşitli durumlarda deneyimledikleri duyguları ölçen, Junjun Chen tarafından geliştirilen "Principal Emotion Inventory (Okul Yöneticileri Duygu Envanteri (OYDE))"nin Türkiye kültürüne uyarlanması ve ölçme aracının psikometrik özelliklerinin incelenmesidir. Araştırmanın katılımcı grubunu farklı okul kademelerinde (okulöncesi, ilkokul, ortaokul ve lise) çalışan 305 okul yöneticisi oluşturmaktadır. Ölçme aracının geçerlik ve güvenilirliğine kanıt oluşturmak için çeşitli analizler yapılmıştır. Yapı geçerliğine ilişkin yapılan Doğrulayıcı Faktör Analizi sonuçlarına göre; uyum iyiliği indekslerinden sekizinin kabul edilebilir, üçünün ise mükemmel uyum gösterdiği tespit edilmiştir. Türkçe formun, 25 maddelik OYDE'nin orijinalindeki beş boyutlu yapıyı doğruladığı görülmüştür. Faktör yük değerleri ise; Keyif Alma alt boyutunda 0,32 ile 0,72; Gurur Duyma alt boyutunda 0,42 ile 0,69; Hayal Kırıklığı alt boyutunda 0,59 ile 0,79; Kaygı alt boyutundan 0,55 ile 0,69 ve Umutsuzluk alt boyutunda ise 0,49 ile 0,77 arasında değiştiği gözlenmiştir. Güvenilirliğe ilişkin kanıt sunmak amacıyla, Cronbach Alpha katsayısının yanı sıra faktör yük değerleri ve özgül varyanslar kullanılarak elde edilen McDonald Omega hesaplanmıştır. Beş alt boyut için elde edilen Omega katsayısı sırasıyla 0,45 (Keyif alma), 0,72 (Gurur duyma), 0,82 (Hayal kırıklığı), 0,77 (Kaygı) ve 0,83 (Umutsuzluk) olarak belirlenmiştir. Beş alt boyut için hesaplanan Cronbach Alpha katsayıları ise sırasıyla 0,54, 0,71, 0,82, 0,77 ve 0,83'tür. Tüm bu analiz sonuçları; ölçeğin okul yöneticilerin deneyimledikleri durumlara yönelik duygularını belirlemede kullanılabilir, geçerli ve güvenilir bir ölçme aracı olduğunu göstermektedir.

Anahtar Sözcükler: okul yöneticileri, yönetici duyguları, ölçek uyarlama, doğrulayıcı faktör analizi

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INTRODUCTION

The act of management, which is seen as the action of planning organizational structures and processes and influencing people, was dealt with independently of emotions with a mechanistic approach at the beginning of the scientificization process of management. Later, with the theories emphasizing human relations, group dynamics and psycho-social structure in organizations, the view that management cannot be free from emotions has been strengthened. School administrators, as educational leaders who both influence and are influenced by the processes in their organizations, cannot be expected not to be affected by the intense and complex emotions they experience in schools, which are social structures, while taking responsibility for the organizations in acting together with the group and moving forward for common goals. Indeed, leadership is a normative, collective and relational social practice (Blackmore, 1999). The process of developing within a social context, influencing followers and being influenced by followers creates a complex ground for leadership that includes emotions. The tendency of classical management approaches to treat the individual objectively and to see him/her as a part of business activities has fostered an attitude that has pushed the understanding of the emotions of employees and organizational leaders into the background. Therefore, for a long time, the act of managing was considered by scholars as a technical and rational dimension and the emotional aspect of the leadership role was mostly ignored (Crawford, 2011).

The stress of making quick and effective decisions, the expectations of pressure groups, the uncertainty in achieving goals, and the unpredictability arising from the fact that the human factor is the basic input and output of the system provide valid reasons for the idea that leaders should be examined from an emotional perspective. Today, there are many deep emotional and social problems that affect the managerial activities of leaders. Dizzying changes and transformations such as access to information, increasing competition, demands for the purchase of goods and services, social and organizational changes, the acceleration of worker qualifications and socio-cultural interactions beyond predictions form the basis of many social and emotional problems such as future anxiety, uncertainty, unhealthy competition, ambition, insecurity, emotional dissatisfaction, social loneliness, alienation, etc. (Töremen & Çaykaya, 2008). Considering that school administrators are organizational leaders, these emotional and social problems create similar problems and contradictions for educational organizations. This is because school administrators are increasingly held responsible for the implementation of changes adopted by policy makers at higher levels of the education system (Hallinger, 2018). In this respect, Hargreaves (1997) warns that ignoring the emotional dimensions of educational change in educational reforms may negatively affect the change process. In this context, it can be said that the emotional states of school administrators, who are leaders, are vital for organizational existence and school development.

The Organic Link Between Management and Experienced Emotions

Organizations, where social structure is a necessity, have micro-culture and micro-society characteristics within themselves. Leaders are responsible for the management of these communities and their organizational journey. Since leadership is considered to be a people-oriented art (Marzano et al., 2021), a social practice that depends on satisfying relationships and effective communication skills (Blackmore, 1996, 1999), leaders also carry a heavy emotional burden. This situation requires leaders to be aware of both their own and their staff's emotions. Schools, which are educational organizations, are social structures with leaders and followers. Administrators, who are an important component of schools, are considered as leaders who are the architects of school climate and culture. Since educational leadership is seen as an emotional practice that involves intense personal interactions displayed in front of everyone (Berkovich & Eyal, 2015; Yamamoto et al., 2014), there is a need to explore the

emotions of school administrators and the implications and consequences of these emotions within the organization. Thus, school leaders take emotional responsibility for a social structure that affects teachers and students. Moreover, school administrators not only carry the intellectual and physical burden of leadership, but also experience heavy emotions such as fear of failure, pain, exhaustion and stress (Thomson, 2009). This situation reveals the importance of emotional labor that school leaders spend in managerial activities and the fact that school administrators, as human beings, will not be independent from emotions and can be affected by emotions.

Leadership can be characterized as an intense process of follower-leader interaction with mutual emotional exchange. However, although leaders are responsible for achieving the goals of a team or an organization, most of the existing leadership research is limited to discussing the impact of individual leaders on their subordinates (Cole et al., 2013; Ellemers et al., 2004; Kozlowski & Bell, 2013). This suggests that the emotions experienced by leaders have not been sufficiently explored and that the fact that emotions and the resulting actions are present wherever there are human beings has not been emphasized in terms of leader effectiveness. Therefore, deep examination of individuals' emotions can be seen as important resources for empowering individuals as well as leading them to better understanding (Grosland & Roberts, 2020). In addition, changes in the emotional states of educational leaders can directly or indirectly affect organizational behaviors, school development and student performance. These behaviors need to be made positive and managed correctly (Demir, 2021). Therefore, it is important for school leaders to be aware of their own emotions and to have the necessary experience and self-control in managing emotions for effective management.

Since the word emotion has a wide range of meanings, it can be said that there is no consensus on an absolute or limited definition in the literature. For example, Lopes et al. (2012) describe a hierarchy of emotional control that includes the stage of learning to express and understand emotions. However, the general consensus recently is that emotion has a multicomponent structure (Chen, 2021). Emotions are emotional experiences, such as fear or joy, that occur when a person perceives events or situations as having personal significance because they harm or promote him or her or their goals (Lazarus, 1991). Most scientists define emotion as a temporary and variable phenomenon (Hargreaves, 2005). Emotions are important for the individual as they can positively or negatively affect the perspective on life, morale and performance, and if they can be managed well, they can increase the morale and performance of the individual (Akin, 2004; Kervancı, 2008). This complicated structure of emotions is a valuable area to be researched in terms of management and leadership.

Interpersonal communication is significantly influenced by emotions (Demetriou et al., 2009). Research has examined how emotions affect learning, how to maintain discipline throughout learning, and how emotional development and cognitive learning are related (Lopes et al., 2012). In addition, research on management and emotions is relatively new. Previous studies have found that emotions are an important psychological aspect in determining perceptions, motivations and behaviors in the workplace (Ashforth & Humphrey, 1995; Fineman, 2000; George, 2000). Likewise, there has been a lot of research done recently on the function of emotions in education (Ashkanasy and Daus, 2002; Demetriou et al, 2009; Oplatka, 2004; Grosland and Roberts, 2020; Chiang et al, 2021). While Crawford (2018) emphasizes that the emotional aspect of leadership is a topic that needs to be further researched, Demir (2021) states that human beings exist with emotions and that emotions should be understood and evaluated instead of being an obstacle for management and development in the individual-organization context. However, since research on leaders' emotions is relatively new, this leads to a limited understanding of the emotional aspect of leadership (Berkovich & Eyal, 2017). It is thought that leaders develop

a more holistic approach to problems by integrating their cognitive and emotional aspects and end the leadership process with better decision making (Rajah, Song, & Arvey, 2011). Based on the inferences obtained from the researches, it is emphasized that administrators should understand their emotional states in depth, be aware of the emotional states they experience and manage these emotions for organizational development.

Educational leaders who seek to influence the motivation, knowledge and practices of educational dynamics to facilitate the teaching and learning process (Spillane & Diamond, 2007) experience positive and negative emotions in their administrative activities. Crawford (2009) focused on how an administrator's personal identity is shaped by the emotional reality of the school, and how this affects how they interact with those around them. It is necessary to know and be aware of emotions both to develop the right ways of communication and to strengthen social relationships. Crawford (2007) emphasized that in times of accountability, standardization and competition, administrators regulate their emotions. According to Hargreaves (2005), the administration's style and the school atmosphere have an impact on teachers' emotions and are mutually reinforcing. When emotions are suppressed or ignored, physiological and psychological difficulties may be inevitable among organizational workers and social and organizational cohesion may become a reality that can be sacrificed.

Administrators indicate that they are dealing with a difficult and complicated situation and that there are too many demands asked from them (Leithwood & Beatty, 2009). School administrators' understanding of leadership is influenced by the emotions they experience, and the basic dynamics of the school and the emotions they experience interact with each other. The essence of a school lies in relationships; emotions are the language of these relationships. Important indices of the effectiveness of school management include teachers' feelings and the atmosphere in the classroom (Day, 2011; Hargreaves, 2005). This directly affects the quality of schools, classrooms, teachers' practices and students' learning. The literature on efficient school administration highlighted the need of building strong interpersonal connections and the necessity of monitoring the evolving requirements of personnel in order to steer the institution towards prosperity (Blackmore, 2004; Day, 2004; Gronn, 2003; Oplatka, 2011). Therefore, examining and addressing emotions in administrator-teacher relationships holds a vital role in this field of study (Day, 2004; Gallant & Riley, 2013).

In terms of educational administration, emotions have been examined by focusing on emotional relationships between administrators and teachers (Blackmore, 2004; Cliffe, 2011; Day, 2011; Hargreaves, 2005; Oplatka, 2011). Emotions have been considered valuable in the context of leadership (Gallant & Riley, 2013), and it has been argued that they have an impact on the organization's interpersonal relationships and logical decision-making process (Lopes et al., 2012). Studies have revealed different forms and dimensions of the emotional states reflected by school leaders during their administrative decisions and actions, and these have been categorized in various ways. In some studies, the emotions that leaders predominantly experience are; fear of failure (Gronn, 2003), emotional injury (Hargreaves, 2005), disempowerment, threat perception, frustration (Betty, 2000; Shirley, 2016), while in some studies, it has been stated that they tend to experience emotional states dimensioned as compassion, empathy, excitement, anger, doubt, relief, joy, trust, adrenaline, anxiety, fear, pain, frustration, hopelessness, distress, demoralization (Oplatka, 2011; Beatty, 2000; Blackmore, 2004; Cliff, 2011; James & Vince, 2001; Yamamoto et al. 2014; Zembylas, 2016). Chen's (2021) dimensioning of leaders' moods, which is referenced in this study, is enjoyment, pride, frustration, anxiety, and hopelessness.

Every stage of the process of educational organizations, including their inputs, outputs, employees and the people they address, is focused on human beings and human labor. This situation requires school administrators

to constantly meet and interact with multiple stakeholders at different levels of development. Gronn (2003) claims that the requirement to live up to the expectations of numerous stakeholders and the frequency of educational innovations have put pressure on school administrators lately. For administrators, the demands and expectations are stressful and necessitate greater emotional effort. According to Oplatka (2011), school administrators are the only leaders who can inspire teachers to work toward objectives by modeling leadership behavior and conducting themselves consistently every day, including expressing a range of emotions. Blackmore (2004), however, asserted that emotional emergence and expression in organizational interactions is necessary for efficient management of schools. In this sense, the interactions that a school administrator has with teachers, parents, and school staff are laced with interpersonal relationships and interpersonal emotional expressions, which together form the fundamental components of educational organizations as social systems. It is crucial for school administrators to be conscious of this circumstance while carrying out their responsibilities and to take these emotional expressions into consideration when they wish to influence those around them. For these reasons, administrators are at the center of a mechanism where professional emotions are intensified and controlled (Crawford, 2009). School administrators, who undertake the responsibility of management with a dominant character of influence and interaction, are under a heavy emotional burden, especially due to the emotion-intensive nature of educational organizations. Therefore, examining the emotional states of school leaders who fulfill this task is considered to be important in this respect.

METHOD

This study aims to culturally adapt the Principal Emotion Inventory developed by Chen (2021) into Turkish. The inventory is structured for school administrators.

Research Design

School administrators lead within a social context and take responsibility for achieving organizational goals. Since achieving educational goals and developing balanced relationships among the stakeholders of the school require psychological and physical activity, the emotions experienced by administrators during these activities and the emotional labor they expend have an important place in understanding administrators. In the literature review, it is seen that there are studies on emotions, but the emotional aspect of leadership is not sufficiently focused on and studies on administrator emotions in school administration are limited. In addition, it is thought that going beyond a classical understanding that focuses more on the technical and rational aspects of leadership and addressing leadership, which is a human-oriented art, in the context of emotions will help to understand the individual who is a complex being. The Principal Emotion Inventory, which was adapted into Turkish, aims to reveal the emotions that school administrators experience in the face of certain situations and under which conditions and at what level they experience these emotions. Thus, this inventory adaptation will serve to take a picture of the emotions of educational administrators.

This adaptation study is designed with the survey model, which is frequently used in quantitative research. The survey model provides a description of an existing situation, in other words, taking a picture of it, and reveals what the ideas, thoughts and attitudes of a group or participants are about any subject (Büyüköztürk, Çakmak, Akgün, Karadeniz, & Demirel, 2017).

Study Group

The data of the study were collected in the 2022-2023 academic year. The data were collected from a total of 305 school administrators working at pre-school, primary, secondary and high school levels in different

provinces of Türkiye after obtaining permission to adapt the inventory from the researcher who developed. Since there was no missing or missing data in the data collected online through Google forms, all of the participants' answers were included in the study. There are various criteria in the literature on sample size, which may vary according to the purpose and type of the study. In factor analysis studies, despite Bryman and Cramer's (2002) view that a sample size of 5-10 times the number of items should be reached, Comrey and Lee (1992) put forward more precise/absolute sample size values (200-suitable, 300-good, 500-very good, 1000-excellent). When these are taken into consideration, it can be said that adequate sample size was reached in this study.

Simple random method was used to select the participants. In addition, in order for the measurement tool to represent a more comprehensive sample group, data were collected from school administrators working at different school levels and with different titles and years of experience by paying attention to the high level of diversity of the participants. Information about the participants is presented in Table 1.

Table 1. Participants' Information

Variable	Group	%	f
Title	Principal	46,2	141
	Deputy Principal	53,8	164
	Preschool	12,5	38
School Level	Primary school	34,4	105
	Secondary school	30,1	92
	High school	23	70
	Total	%100	305

When the table is analyzed, it is understood that 46.2% of the participants are principals and 53.8% are deputy principals. 12.5% of the administrators were from preschool, 34.4% from primary school, 30.1% from secondary school and 23% from high school.

Data Collection Tool

The Principal Emotion Inventory is a measurement tool developed by Chen (2021) to measure the various emotions that school administrators experience in situations they encounter while conducting administrative processes. The original form of the scale consists of a 5-factor structure with 25 items, and the items are scored on a 6-point Likert-type scale (6=Strongly Agree, 1=Strongly Disagree). In the original form of the scale, a score of 1 represents the minimum level of agreement and a score of 6 represents the maximum level of agreement. The researcher (Chen, 2021) applied Exploratory Factor Analysis (EFA) to reveal the original structure of the scale. According to the results of this analysis, it was determined that the original structure of the scale consisted of five sub-dimensions and the scale scores were determined by averaging the items in each dimension. These sub-dimensions are "Enjoyment", "Pride", "Frustration", "Anxiety" and "Hopelessness" respectively.

Enjoyment. This sub-dimension consists of 5 items. Two of the items of the sub-dimension are as follows: "I enjoy my work as an administrator.", "I am happy to see teachers using data to make improvements in the classroom." In this subdimension, school administrators are asked to evaluate the situations they enjoy at school. The original Cronbach's alpha value of the subdimension is .91.

Pride. This subdimension consists of 5 items. Sample items of the sub-dimension are as follows: "I feel proud that I am capable of doing my job", "I feel proud when my school performs better than other schools". In this sub-dimension, school administrators evaluate the sense of pride they feel in situations such as the quality of their own work, teachers' cooperation, and school success. The original Cronbach's alpha value of the sub-dimension is .81.

Frustration. This sub-dimension consists of 5 items. Sample items of the sub-dimension are as follows: "I feel frustrated when I doubt my managerial competence", "I feel frustrated when my teachers are not motivated or cooperative". In this sub-dimension, administrators are expected to evaluate the level of frustration they experience when situations such as the effectiveness of management activities, teachers' resistance to change, and recognition by the employees result in negative outcomes. The original Cronbach's alpha value of the subdimension is .83.

Anxiety. This sub-dimension consists of 5 items. Sample items of the sub-dimension are as follows: "I worry when my performance at school is not good", "I worry about not achieving sustainable school success". In this sub-dimension, school administrators assess their feelings about frequent situations that cause anxiety at school such as school success and managerial performance. The original Cronbach's alpha value of the subdimension is .87.

Hopelessness. This sub-dimension consists of 5 items. Sample items of the sub-dimension are as follows: "Having to be constantly accountable to my superiors makes me feel helpless", "I feel hopeless when I am forced to do unreasonable work in my school". In this sub-dimension, school administrators evaluate their feelings towards the situations in which they experience feelings of hopelessness against situations that they cannot resist, such as being inspected, being under constant pressure for accountability, and unreasonable expectations of superiors. The original Cronbach's alpha value of the sub-dimension is .78.

Adaptation Process Steps

In the process of cultural adaptation of the School Administrators' Emotion Inventory into Turkish, various stages were employed. The stages are presented in Figure 1:

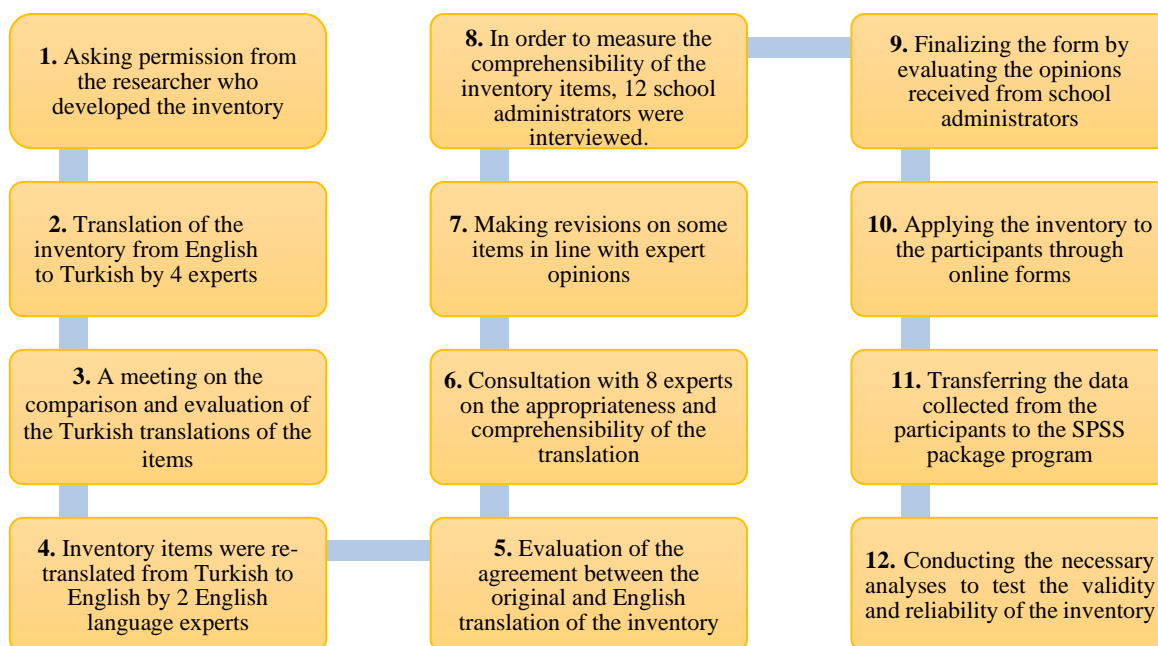


Figure 1. *Adaptation Process of the Scale*

As seen in Figure 1, in order to carry out the cultural adaptation of the School Administrators' Emotion Inventory into Turkish and Turkish culture, firstly, the researcher who developed the scale was contacted via e-mail, and permissions were obtained on the condition that the necessary ethical rules were adhered to and references were taken into consideration. The original scale was translated by four field experts with advanced English proficiency, and the items translated by the experts were compared and evaluated. After deciding which items would be most appropriate for the Turkish culture, two English Language Teaching experts translated the

items from Turkish to English again and evaluated the agreement between the original and the English translation. Afterwards, expert opinions were obtained from 8 faculty members who are fluent in Turkish and advanced level English and who have studies on school leadership and educational administration in American, British and Turkish cultures. Since this measurement tool will be completed by school administrators, 12 school administrators were asked for their opinions on the comprehensibility of the items by the administrators. The school administrators were asked to fill in the final form of the scale and write down their understanding of each item separately. The opinions of the administrators were also evaluated and the inventory was finalized. The inventory was transferred to the online platform and applied to school administrators working at different school levels. The data obtained from the participants were organized electronically and transferred to the SPSS package program and Confirmatory Factor Analysis (CFA) was applied to the scale items using the Lisrel 8.80 program. In calculating the reliability coefficient, Cronbach Alpha coefficient as well as McDonald Omega (ω) were calculated.

Research Ethics

Scientific principles and ethical rules were adhered to during the adaptation process of the “School Principals’ Emotion Inventory: Validity and Reliability in the Turkish Context”. The researchers conducted the research process by obtaining the necessary ethical permission from the institution they are affiliated with. The procedures related to the research were carried out by the researchers within the permission of Siirt University Ethics Committee dated 13.05.2022 and numbered 2692.

FINDINGS

To assess the validity of the inventory adapted for the study, the Pearson product-moment correlation coefficient was used to analyze the relationship between the item score and the overall score obtained from the scale's sub-dimension. The findings are shown in Table 2.

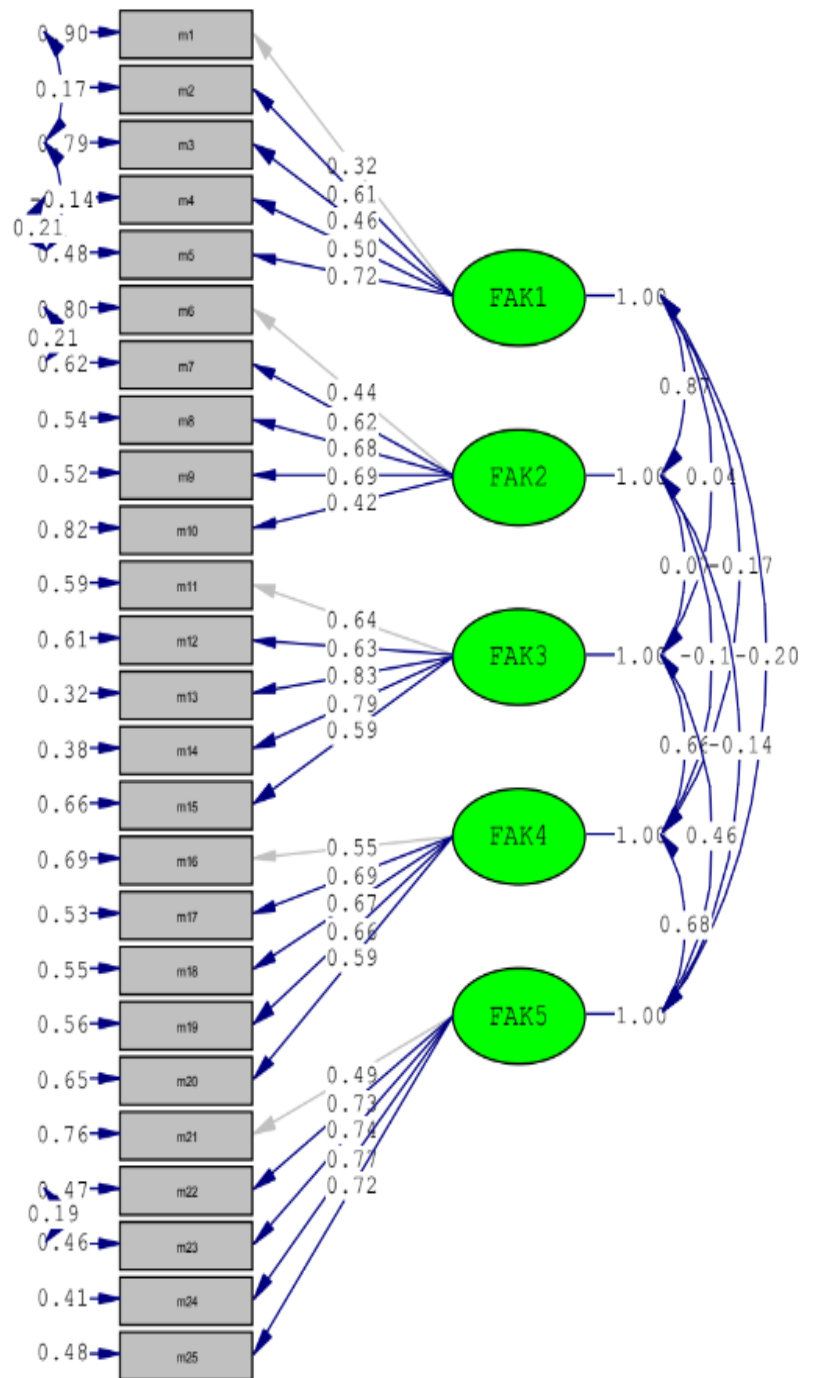
Table 2. Item Total Score Correlation

Dimension	Item	Correlation Value
Enjoyment	1	,31
	2	,42
	3	,41
	4	,30
	5	,40
Pride	6	,48
	7	,62
	8	,47
	9	,46
	10	,39
Frustration	11	,58
	12	,58
	13	,71
	14	,66
	15	,54
Anxiety	16	,45
	17	,58
	18	,59
	19	,56
	20	,50
Hopelessness	21	,40
	22	,70
	23	,70
	24	,70
	25	,61

When Table 2 is examined, it is understood that the correlation coefficients vary between 0.30 and 0.42 for the "Enjoyment" sub-dimension; between 0.39 and 0.62 for the "Pride" sub-dimension; between 0.71 and 0.54 for the "Frustration" sub-dimension; between 0.45 and 0.59 for the "Anxiety" sub-dimension; and between 0.40 and 0.70 for the "Hopelessness" sub-dimension. As a result of the examination of the practical significance of the obtained coefficients, it is seen that there are 3 items below 0.40. It is seen that all the remaining items are above 0.40, in other words, they are very good discriminators (Crocker & Algina, 1986).

For the purpose of verifying the Principal Emotion Inventory's construct validity, Confirmatory Factor Analysis (CFA), one of the factor analysis methods based on the correlation matrix, was used to explain the latent variable underlying the participants' responses to the items (Crocker & Algina, 1986). CFA is a primary and important tool used to obtain evidence of construct validity in social sciences (Brown, 2015). Considering the structure in the original scale developed by Chen (2021), it was aimed to confirm the five-dimensional structure. Lisrel 8.8 package program was used to conduct the CFA. Before starting the CFA, normality, linearity (multivariate normality) and extreme value assumptions (Büyüköztürk, 2002) required for factor analysis were tested. According to the KMO value (.845) and Bartlett's sphericity test results ($X^2=2768,252$, $sd=300$, $p<0.05$), it can be said that the number of data available is sufficient, CFA can be applied to the observed variables and the necessary normality assumption is met. In addition, the minimum sample size of 200 recommended in the literature for factor analysis (Kline, 2011) was also met.

The factor loadings and goodness of fit indices obtained as a result of the analysis for CFA were analyzed. Factor loadings show the relationship of each item with the relevant factor and factor loadings are expected to be 0.32 and above (Tabachnich & Fidell, 2012). As a result of the analysis, the factor loading values obtained from the Enjoyment sub-dimension ranged between 0.32 and 0.72; the factor loading values obtained from the Pride sub-dimension ranged between 0.42 and 0.69; the factor loading values obtained from the Frustration sub-dimension ranged between 0.59 and 0.79; the factor loading values obtained from the Anxiety sub-dimension ranged between 0.55 and 0.69; and the factor loading values obtained from the Hopelessness sub-dimension ranged between 0.49 and 0.77. The factor loading values for all items are acceptable and the Path Diagram is presented in Figure 2.



Chi-Square=489.18, df=260, P-value=0.00000, RMSEA=0.054

Figure 2. Path Diagram

Acceptable and perfect fit values for the goodness of fit indices and the values obtained as a result of the analysis are presented in Table 3.

Table 3. Goodness of Fit Indices

Fit Index	Perfect Fit	Acceptable Fit	Result
X^2/sd	$0 \leq X^2/sd \leq 2$	$2 \leq X^2/sd \leq 3$	1,90
RMSEA	$0 \leq RMSEA \leq 0,05$	$0,05 \leq RMSEA \leq 0,10$	0,05
SRMR	$.00 \leq SRMR \leq .05$	$.05 \leq SRMR \leq .10$	0,06
CFI	$0,95 \leq CFI \leq 1,00$	$0,90 \leq CFI \leq 0,95$	0,96
IFI	$0,95 \leq IFI \leq 1,00$	$0,90 \leq IFI \leq 0,95$	0,96
RFI	$0,95 \leq RFI \leq 1,00$	$0,90 \leq RFI \leq 0,95$	0,90
NNFI (TLI)	$0,95 \leq TLI (NNFI) \leq 1,00$	$0,90 \leq TLI (NNFI) \leq 0,95$	0,95
PNFI	$0,95 \leq PNFI \leq 1,00$	$0,50 \leq PNFI \leq 0,95$	0,79
PGFI	$0,95 \leq PGFI \leq 1,00$	$0,50 \leq PGFI \leq 0,95$	0,71
GFI	$0,95 \leq GFI \leq 1,00$	$0,90 \leq GFI \leq 0,95$	0,90
AGFI	$0,90 \leq AGFI \leq 1,00$	$0,85 \leq AGFI \leq 0,90$	0,86

When Table 3 is examined; X^2/sd (Kline, 2011), IFI and RFI (Marsh, Hau, Artelt, Baumert, & Peschar, 2006) and RMSEA (Browne & Cudeck, 1993) values show excellent fit ($X^2/sd = 1.90$, IFI=0.96, RFI=0.90, RMSEA=0.05). In addition, SRMR (Browne & Cudeck, 1993), CFI, GFI, NNFI (TLI) (Marsh, Hau, Artelt, Baumert, & Peschar, 2006); AGFI (Schermelell-Engel & Moosbrugger, 2003); PNFI (Hu & Bentler, 1999) and PGFI (Meyers, Gamst, & Guarino, 2006) values are in the acceptable fit range (SRMR=0.06, CFI=0.93, NNFI (TLI)=0.95, PNFI=0.79, PGFI=0.71, GFI=0.90, AGFI=0.86). In other words, the index values acquired as a result of CFA confirm the five-dimensional structure.

While Cronbach Alpha coefficient gives accurate results for parallel or equivalent measurements (measurements with equal factor loadings), McDonald Omega coefficient gives more accurate results for congeneric measurements (measurements with different factor loadings) (Lucke, 2005; Yurdugül, 2006). Therefore, while determining the reliability coefficient, McDonald Omega (ω), which is acquired by utilizing factor loading values and specific variances, was calculated in addition to Cronbach Alpha coefficient. The calculated values are presented in Table 4.

Table 4. Reliability Coefficients for Dimensions

Dimensions	Reliability Coefficients	
	Cronbach Alpha Coefficient (α)	McDonald Omega Coefficient (ω)
Enjoyment	0,54	0,45
Pride	0,71	0,72
Frustration	0,82	0,82
Anxiety	0,77	0,77
Hopelessness	0,83	0,83

Upon a more detailed examination of Table 4, it is clear that the Omega coefficient obtained for the first sub-dimension was estimated as 0.45, for the second sub-dimension as 0.72, for the third sub-dimension as 0.82, for the fourth sub-dimension as 0.77 and for the fifth sub-dimension as 0.83. The Cronbach Alpha coefficients calculated for the five sub-dimensions were 0.54, 0.71, 0.82, 0.77 and 0.83, respectively (Table 4). It is stated that a calculated reliability coefficient of 0.70 and above is sufficient (Büyüköztürk, 2012). In this case, it can be said that the data obtained are reliable.

DISCUSSION AND CONCLUSION

This research was carried out to culturally adapt the original version of the Principal Emotion Inventory, which is used to determine the level of emotions experienced by school administrators in various situations they encounter in the school administration process, with 5 sub-dimensions and 25 items, into Turkish. For this purpose,

the validity and reliability study of the scale was conducted and the findings were analyzed. The research results are presented on the basis of the findings obtained.

To ascertain the validity of the measurement tool, firstly, the relationship between the item score and the total score obtained from the sub-dimension of the scale was performed with Pearson product-moment correlation coefficient and it was seen that all items were above 0.30. In this case, it is possible to say that the discrimination levels of the items are high. In addition, the validity of the scale was determined by construct validity and CFA method was applied.

As a result of the CFA, factor loadings ranged between 0.32 and 0.72 for the Enjoyment sub-dimension, 0.42 and 0.69 for the Pride sub-dimension, 0.59 and 0.79 for the Frustration sub-dimension, 0.55 and 0.69 for the Anxiety sub-dimension, and 0.49 and 0.77 for the Hopelessness sub-dimension. As a result of this finding, it is possible to say that the factor loading values for all items of the scale are of acceptable values. In addition, when the goodness of fit indices were analyzed, it was found that four of the eleven fit indices were excellent and seven of them were within the acceptable range.

In the light of the fit values calculated, it was concluded that the five-dimensional structure of the original scale was confirmed. In the calculation of the reliability coefficient of the scale, in addition to Cronbach Alpha coefficient, McDonald Omega (ω) acquired by utilizing factor loading values and specific variances was also calculated. The Cronbach Alpha coefficients for the five sub-dimensions were 0.54, 0.72, 0.82, 0.77 and 0.83, while the Omega coefficients were 0.45, 0.72, 0.82, 0.77 and 0.83, respectively. It is seen that Cronbach Alpha and Omega coefficient values are close to each other in all five sub-dimensions and one of the values is close to the threshold value of 0.70, while the other values are above 0.70. In this case, it can be said that the measurement tool, which was linguistically and culturally adapted to Turkish, is reliable. As a result of this research; a reliable and valid scale is presented to measure the emotions that school administrators experience in the face of various situations they encounter in school administration, which is an open system.

Statements of Publication Ethics

The procedures related to the research were carried out by the researchers within the permission of S*** U*** Ethics Committee dated 13.05.2022 and numbered 2692.

Researchers' Contribution Rate

Each author contributed equally to the study.

Conflict of Interest

There is no conflict of interest in this study.

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APPENDIX

Okul Yöneticileri Duygu Envanteri	
1. Yöneticilik yapmaktan keyif alırım.	
2. Öğretmenlerin sınıfta iyileştirmeler yapmak için verileri kullandığını görmek beni mutlu eder.	
3. Meslektaşlarıma (iş arkadaşlarıma) yetki vermekten mutluluk duyarım.	
4. Okulda belirlediğimiz hedeflere ulaşıldığında mutlu olurum.	
5. Okulumu iyi yönettiğim zaman mutlu olurum.	
6. İşimi yapabilecek yeterlilikte olduğum için gurur duyuyorum.	
7. Bana duyulan güvenden gurur duyuyorum.	
8. Öğrencilerim ve/veya öğretmenlerim başarılı olduğunda kendimi kazanan gibi hissedirim.	
9. Öğretmenlerim ortak bir hedef için birlikte çalıştıklarında gurur duyarım.	
10. Okulum diğer okullardan daha iyi performans gösterdiğinde gurur duyarım.	
11. Yönetsel yeterliliğimden şüphe duyduğum durumlarda hayal kırıklığı yaşıyorum.	
12. Kararlarım onaylanmadığı zaman hüsrana uğrarım.	
13. Öğretmelerim motive olmadıklarında ya da işbirliği yapmadıklarında hayal kırıklığına uğrarım.	
14. Okul iklimi değişime dirençli olduğunda hayal kırıklığı yaşıyorum.	
15. Yeterince yetkilendirilmediğimde hayal kırıklığına uğrarım.	
16. İş gününün sonunda kendimi bitkin hissedirim.	
17. Yöneticiliğin getirdiği yalnızlık (izolasyon) ile mücadele etmek zorunda kalıyorum.	
18. Okuldaki performansım iyi olmadığında kaygılanırım.	
19. Sürdürülebilir bir okul başarısına ulaşamama endişesi taşıyorum.	
20. Okullar arasındaki sağlıksız rekabet konusunda endişeliyim.	
21. Okulumda makul olmayan (yersiz) işler yapmak zorunda bırakıldığımda umutsuz hissediyorum.	
22. Üstlerimce sürekli teftiş edilmem ve çalışanlarımı teftiş etmek zorunda bırakılmam konusunda çaresizlik yaşıyorum.	
23. Üstlerime karşı sürekli hesap vermek zorunda olmak çaresiz hissettiriyor.	
24. Üstlerimin makul olmayan beklentilerinden dolayı umutsuzluk yaşıyorum.	
25. Çevrenin yersiz suçlamaları karşısında umutsuz hissediyorum.	

In the inventory, a 6-point Likert scale was used, with 1 point representing the lowest level of participation and 6 points representing the highest level of participation. There are no reverse items in the measurement tool.