

Psychometric Testing of Urdu Version of Organizational Justice Scale

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The present study was conducted to translate Organizational Justice Scale (OJS) in Urdu originally developed by Niehoff and Moorman (1993) and to establish its construct validity and reliability. OJS was translated (Brislin, 1970) and validated in two phases. For validation, a group of 334 men and 212 women ($N = 546$) employees working at various public service sector organizations in Rawalpindi and Islamabad were taken that ranged in age from 21 to 50 ($M = 31.90$, $SD = 4.42$) years. The scale was tested on two concurrent models using confirmatory factor analysis; the first model analyzed OJS into the three-factor structure in which three subscales of OJS including Distributive Justice, Procedural Justice, and Interactional Justice were taken as interrelated factors. A second hierarchical model loaded these three subscales onto a latent factor of OJS. Results established that the higher-order factor structure of OJS showed a better fit than the three-factor structure of OJS. The reliability (Cronbach alpha = .95) was high for the scale. Findings revealed that the scale is a reliable and valid instrument and can be used in measuring the perceptions of organizational justice in Pakistani organizations.

Keywords: organizational justice, construct validity, confirmatory factor analysis, public service sector employees.

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Several empirical studies have acknowledged that employees' perception of being treated justly at the workplace is a noteworthy indicator of several attitudinal and behavioral organizational consequences. Grounded in social exchange theory, researchers consider organizational justice (OJ) as a social organizational reserve that provokes reciprocal organizational behaviors from workers (Cropanzano, et al. 2001).

Systematic evaluations in several meta-analyses (Cohen-Charash & Spector, 2001; Colquitt et al., 2013) have found a significant positive effect that the employees' perceived fairness produces at different levels in their work perspectives. For example, on an individual level, OJ is significantly positively correlated to job satisfaction (Khan, Abbas, Gul, & Raja, 2015; Ouyang, Sang, Li, & Peng, 2015), organizational citizenship behavior (Garg, et al. 2013; Jafari & Bidarian, 2012), and task performance (Kalay, 2016; Swalhi, et al. 2017).

Conversely, the lack of OJ cause adverse organizational results, for example, decrease in job achievements (Greenberg, 1987), intentions to quit a job (Arif, 2018; Emeji, 2018), absenteeism (Streicher et al., 2015), deviant workplace behaviors and withdrawal (Hershcovis et al., 2007). Similarly, perceptions of injustice at the workplace are linked with different types of workplace aggressive behaviors and maltreatments toward coworkers (Magnavita & Heponiemi, 2012; Parzefall & Salin, 2010), employee theft (Ghosh, et al. 2014), and job burnout (Shibaoka et al., 2010).

As far as the literature review is concerned, a validated Urdu version of OJS is missing in indigenous culture. Considering the unavailability of the reliable Urdu scale of OJS, the present research aimed to provide a reliable and valid Urdu version of the OJS developed by Niehoff and Moorman (1993) which is employed for measuring employees' perceptions of OJ at their workplace. The major purpose for selecting this scale as the subject matter of the study is its widespread usage in both the literature as well as in the studies of OJ in nations with diverse working cultures (e.g. Lam et al., 2002; McFarlin, & Sweeney, 2001; Moorman et al., 1993).

The construct of OJ was presented with a particular focus on multidimensionality. Primarily, researchers (Adams, 1965; Leventhal, 1980) examined the perception of equity as the result of inappropriate decision makings and rules governing a workplace's resource distributions, i.e. distributive justice. Afterward, researchers (Leventhal, 1980) widen the construct by focusing on the perception of fairness in the procedures elevated by the supervisors – or all those personals monitoring the decision making processes and the rewards allocation procedures– to put into the effects of all decisions being made and dispense all the outcomes, i.e. procedural justice. Subsequently, Bies and Moag (1986) presented a third aspect to the existing construct of OJ, i.e the interactional justice, associated with the perceived fairness in the manner and behavior done by the supervisors to the juniors when processes are being sanctioned. A supplementary conceptualization highpoints further two different facets of interactional justice: one is the interpersonal aspect, associated with the level by which supervisors behave with their workers whether with pride and self-respect or not, and with the level by which supervisors gratify their workers with representational means or not; and the second one is the informational dimension, associated with the level by which supervisors offer their workers the comprehensible and swift clarifications regarding why particular measures were employed and how specific conclusions were made (Greenberg, 2001; Greenberg & McCarty, 1990).

Regardless of conceptual and theoretical overlap amongst the dimensions of distributive justice and the dimension of procedural justice, the two-dimensional framework of OJ is clearer and discriminates between diverse aspects of OJ and its attained consequences better (Cropanzano et al., 2001). On the contrary, the three or four-dimensional framework of organizational justice is remained questionable, the reason being attributed to the diversity and sometimes inappropriate instruments being used, accountable for the inconsistencies of comparison between results of the researches (Greenberg & McCarty, 1990; Colquitt, 2001). For this reason, most of the researchers (Kim & Leung, 2007; Olsen et al., 2012) have reinforced a uni-dimensional understanding of OJ, arguing that comprehensive perception of fairness and judgment can be assessed with its diverse characteristics.

Consequently, concerning the methodological and theoretical concerns linked with the conceptualization of the construct of OJ, Niehoff, and Moorman (1993) developed an Organizational Justice Scale (OJS), a questionnaire consisting of 20 self-reporting items based on the three-facets theoretical model consisting of distributive justice, procedural justice and interactional justice recommended by Greenberg (2001). The comparison between one, two, three, and four-factor models demonstrated the construct and predictive validity of the OJS and verified that the three-dimensional conceptualization of OJ was the most effective one. On the other hand, empirical data supporting alternative models of the OJS has been found in past researches. For example, Blakely, Andrews, and Moorman (2005) presented empirical evidence for the one-dimensional structure of the OJS. The three-dimensional structure of the OJS was confirmed by Spell and Arnold (2007) where interpersonal and informational dimensions were merged into one dimension. Correspondingly, in Elovainio et al.'s (2010) study, a short scale for the measurement of OJS was developed, finding that the three-factor solution, where the items of the informational and interpersonal dimensions were collapsed in the same factor, fit better.

Considering the importance of OJ in determining various work-related outcomes for individuals and organizations, research interest in investigating this construct continues to grow (Moliner, et al. 2017) worldwide. These include studies from Turkey (Gürbüz, & Mert, 2009), Iran (Mashinchi, et al. 2011), Jordan (Al-Zu'bi, 2010), India (Gupta & Singh, 2013), Japan (Inoue, et al., 2010) and Malaysia (Nasurdin & Khuan, 2011). Most of these researches conducted in different countries found consistent findings for the factor structure of OJS as illustrated by Niehoff and Moorman (1993) and the majority of these have used the English version of OJS in their work. The results of the two Pakistani studies (Ali & Saifullah, 2014; Kashif, et al. 2016) established the construct validity of OJS. However, the authors used the English version of OJS in their research. Therefore, the lack of literature addressing the factor structure of the Urdu version of OJS in the Pakistani context guided the present study.

Rationale of the Study

In the current scenario, the major emphasis of the indigenous researchers is that while using foreign developed measurements in Pakistan, one should establish the reliability and validity of the given measurement before drawing conclusions out of it. As before this realization, most of the researchers ignored this area of consideration, but Foxcroft, et al. (2001) stressed that the researchers should establish the psychometric properties of selected instruments before using the imported measurements (those measurements developed in a foreign country). Organizational Justice Scale (OJS) (Niehoff & Moorman, 1993) is a psychological instrument originally developed in a foreign country (USA). Haybatollahi and Gyekye (2015) stated that measurements such as OJS can be considered as a mono-centered measurement, that is, an instrument developed originally in a Western country; therefore, the transportability of OJS from a single Western culture to a predominately non-Western setting such as Pakistan, requires an investigation of the psychometric properties of the study instrument. The present study would help explore the OJ in Pakistani organizational settings. In addition, Pakistan provides a very good contrasting context for validating those findings identified in western cultures considering that past OJ research has been mainly conducted in western cultural settings.

As this measure was translated for the first time in the Urdu language, therefore, establishing the reliability and validity of the newly translated Urdu version of OJS was a prerequisite for its use in Pakistan. Therefore, the present study also investigated the psychometric properties of the Urdu version of OJS (Niehoff & Moorman, 1993) in the Pakistani context, and provides preliminary findings on its reliability and construct validity. The major objectives of the present research were to translate the OJS (Niehoff & Moorman, 1993) and to validate the Urdu version of OJS.

Objectives of the Study

Following are the objectives of the study:

- To translate Organizational Justice Scale (OJS) (Niehoff & Moorman, 1993) in Urdu.

- To establish its construct validity and reliability.

Method

The present investigation was completed in two phases. Phase-I included translation and adaptation of OJS, and Phase-II included validation of the Urdu version of OJS.

Phase-I: Translation and Adaptation of Organizational Justice Scale

The Urdu version of OJS was not available, therefore, the present study aimed to translate the questionnaire into the Urdu language. The translation was done by following the rules given by Brislin (1970). The researcher initially asked the author for his permission to translate the scale. After getting permission from the author, the scale was translated into the target language (Urdu) from the source language (English). Next, five bilingual experts who were acquainted with reading and writing both Urdu and English languages were approached. Researcher asked the experts to translate the scale into Urdu language and instructed them to translate the statements in such a manner that the inherent meaning of the items stay same and could be effectively comprehensible in Pakistani context. Five forward translations of the scale were acquired.

Before starting with the procedure, all five translations received for each item were written down by the researcher under respective items. After that, the translations of the items were subjected to evaluation in a committee approach. The members of the committee then evaluated the received translations and carefully selected the most suitable translation for the given item. The criterion for selecting the appropriate translation was that the statement of the translated item is understandable and shows semantic equivalence with the original item.

The next step involved in the translation was to conduct the back translation of the items from Urdu into the source language that is, English. For this process, three bilingual experts were approached and asked to translate the Urdu version of OJS back into English. Two of the bilingual experts who translated the scale into English had an M.Phil degree in Psychology, whereas the third one had a Master's degree in English. The

experts were instructed to do the translations accurately maintaining the meanings of the items the same as in Urdu translated version.

The researcher received three back translations of the scale which were later assessed in another committee approach. Same committee members were approached to complete the process of translation. This time, the aim of the committee approach was to check the similarity of the newly translated English items with the original items of OJS. For this purpose, all the back translations of the scale were written down under the respective item of the original version and then evaluated by the members of the committee. The committee later reviewed the translations and checked the semantic equivalence of the back translations with the original statements. The members of the committee found no such ambiguity in the majority of the items. Word “boss” was added besides "manager" in all the items with consent from the author, to make this item more comprehensible for the present study sample that is, in Pakistani public service sector organizations, the word "boss" is frequently used instead of word "manager". Finally, instructions of the scale were added and settled by the committee members, and the Urdu version of OJS was finalized.

Phase II: Validation of the Urdu version of Organizational Justice Scale

Phase-II involved the validation of the Urdu version of the Organizational Justice Scale.

Sample

The sample comprised 546 employees working in various public service sector organizations of Pakistan, who were approached through purposive and convenient sampling from Rawalpindi and Islamabad. The sample comprised 334 (61.2%) men and 212 (38.8%) women. Minimum job experience of 1 year in the current organization criterion was adopted. The age range of the participants was 21 to 50 years ($M = 31.90$, $SD = 4.42$). The sample characteristics are presented in Table 1 as follows:

Table 1*Frequency of Demographic Variables (Sample Characteristics (N = 546))*

Categories	<i>F</i>	%
Organization		
NADRA	168	30.8
Pakistan Post	86	15.8
SNGPL	80	14.7
PTCL	58	10.6
Railways	98	17.9
WAPDA	32	5.9
PIA	24	4.4
Age		
21-30	216	39.5
31-40	315	57.6
41-50	15	2.74
Gender		
Male	334	61.2
Female	212	38.8
Job Scale		
9-12	251	55.0
13-16	206	37.7
17-20	89	16.3
Tenure (Job Experience)		
0-5	373	68.3
6-10	156	28.5
11-15	10	1.8
16-20	4	0.7
21-25	3	0.5
Do you have some other part-time Job		
No	489	89.6
Yes	57	10.4

Table 1 shows the characteristics of the sample of the study.

Instrument

The Urdu version of OJS (Niehoff & Moorman, 1993) consists of 20 items with three subscales (Distributive Justice, Procedural Justice, and Interactional Justice). Items 1-5 measure Distributive Justice, sample item is “My work schedule is fair”; items 6-11 measure Procedural Justice, sample item is “Job decisions are made by the manager in a biased manner”; and items 11-20 measure Interactional Justice, sample item is “Job decisions are made by the manager in a biased manner”. None of the items is negatively scored. Response categories of OJS ranged from strongly disagree (1), to strongly agree (5). To get a total composite score for OJS, a total score of all 20 items was taken. Similarly, all responses for each of the items of subscales were summed to get a subscale composite score. High scores on the scale and subscales reflect the higher perception of Organizational Justice, Distributive Justice, Procedural Justice, and Interactional Justice. The OJS showed good reliability for a composite score as well as its subscales (Distributive Justice = .74, Procedural Justice = .85, and Interactional Justice = .92). The internal consistency of the scale and subscales was also found to be good in the Pakistani context (Ali & Saifullah, 2014).

Procedure

The Ethical Guidelines and Standards by American Psychological Association (APA) for conducting research were followed. Male and female employees working in various public service sector organizations were identified and approached individually based on accessibility and convenience. The heads of those organizations were clarified about the objectives of the research and permissions were taken from them for the collection of data. Participants were explained about the nature of the study, voluntary participation, anonymity, confidentiality of data, and right to quit at any stage. After taking their consent, a self-administered questionnaire booklet along with a demographic sheet was handed over to the participants with the request to honestly respond to all the items of the scales as per opinion. Moreover, the researcher was available to answer

questions during the data collecting procedure. Data was collected and respondents were thanked for their cooperation.

Results

As per the objectives of the present study, Confirmatory Factor Analysis (CFA) was conducted to establish the construct validity of the Urdu version of OJS. Furthermore, corrected item-total correlations, alpha reliability coefficients, descriptive statistics, and inter-subscale correlations were computed.

The construct validity of the Urdu version of OJS was established by conducting CFA with maximum likelihood estimation in Amos-21. Initially, a model of three inter-related factors was tested. Findings revealed a good model fit for the respective model. To signify the likelihood that individual items influence this model fit, individual item properties were also being examined. It was observed that factor loadings of all Items were above the acceptable value of $\lambda = .30$ (Field, 2009).

While the good fit of the three-factor model supports the idea of the three-dimensional nature of Organizational Justice, the three dimensions have been found to be profoundly associated ($r = .67 - .88$), proposing the plausibility of a higher-order factor underlying these three factors. Based on this observation, the present study tested a second model for OJS (Urdu version). In this model, the three factors of OJS were loaded onto a latent factor of Organizational Justice. Results of this hierarchical model are given in Table 2.

Table 2

Confirmatory Factor Analysis of OJS (Urdu Version) with Higher-Order Factor Structure (N = 546)

Mode	χ^2	df	$\chi^2/$ df	p	GF	IF	CF	SRM	RMSE
1					I	I	I	R	A
M1	1010.19	16	6.0	.00	.84	.9	.91	.04	.096
	1	7	4	0		1			
M2	522.110	16	3.2	.00	.91	.9	.96	.03	.064
		3	0	0		6			

e2 ↔									
e4									
e12									
↔									
e13									
e13									
↔									
e14									
Mo	569.540	16	3.4	.00	.90	.9	.95	.042	.067
		4	7	0		5			

Note. χ^2 = chi-square; χ^2/df = relative/normed chi-square; GFI = goodness of fit index; IFI = incremental fit index; CFI = comparative fit index; SRMR = standardized root mean square residual; RMSEA = root mean square error of approximation.

Model Mo shows results of higher-order factor structure in which four factors of OJS (Urdu version) are loaded onto a latent factor of Organizational Justice. Findings reveal that values of χ^2/df , SRMR, and RMSEA lie in acceptable ranges. Other fit indices are also in an acceptable range. The goodness of fit is attained for this higher-order factor structure after adding three error covariances that are, e2 ↔ e4, e12 ↔ e13, and e13 ↔ e14 (model M2).

Figure 1

Measurement Model of Organizational Justice Scale (OJS) (20 items)

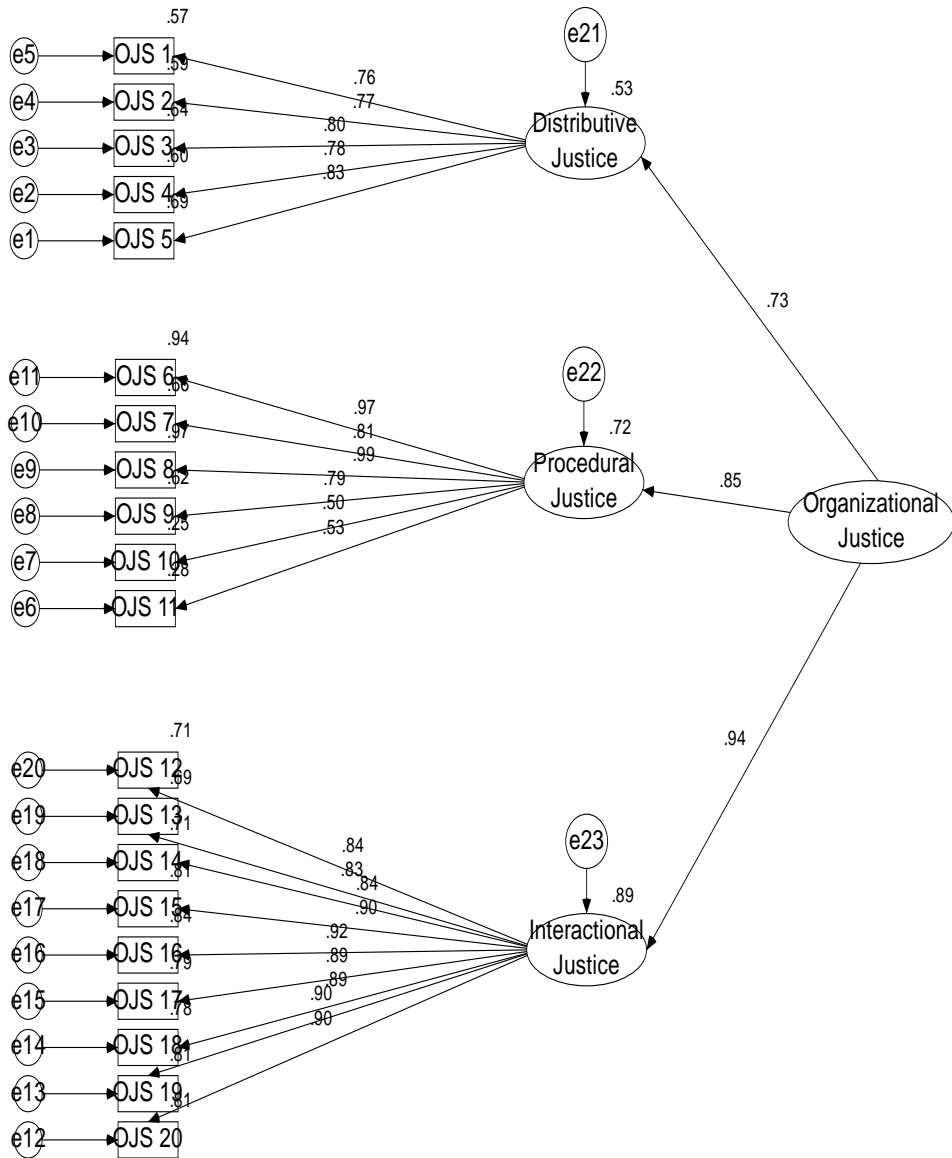


Figure 1 represents the graphical picture of the good fit model. It can be seen that all the items show factor loading > .30. Overall factor loadings range from .50 to .99. Moreover, all three factors showed the factor loadings > .40 providing evidence of a good fit measurement model.

After validation of OJS (Urdu Version), the present study finalized a 20-item scale without excluding any item from the original OJS Scale. Next, corrected item-total correlations were computed for OJS and the subscales. Results revealed that the corrected item-total correlations for OJS (Urdu Version) and its subscales were found to be above the acceptable threshold (i.e., $r \geq .30$; Ferketich, 1991), showing significant relationships between items in the scale and the respective subscales. The range of the values of corrected item-total correlations for OJS was .51 to .85, and for the respective subscales, the range was .53 to .89.

Table 3

Alpha Coefficients, Descriptive Statistics, and Inter-Subscale Correlations for OJS (N = 546)

Sr	Variable	No.	α	$M(S.D)$	Ske	Ku	1	2	3	4
.		of			w	rt				
N		Ite								
o.		ms								
1	Organizati onal Justice	20	.9 5	64.18(18 .35)	-.47	- .30	-	.79 **	.89 **	.95 **
2	Distributi ve Justice	5	.8 8	16.32(5. 40)	-.35	- .70	-	.58 **	.61 **	
3	Procedura l Justice	6	.7 9	18.24(5. 31)	-.47	- .25	-		.81 **	
4	Interactio nal Justice	9	.9 6	29.61(9. 79)	-.38	- .71	-			-

Note. Skew = Skewness; Kurt = Kurtosis.

** $p < .01$.

Table 3 shows that the values of alpha coefficients of the scale used in the present study and its respective subscales are above the acceptable value of .70 as per criteria specified by George and Mallery (2003). Descriptive statistics show that participants scored higher on OJS and its subscales. The values of Skewness and Kurtosis show that the shapes of

the curves indicated the normal distribution of test scores across the OJS and its subscales. Furthermore, negative values are showing that the distribution of scores across OJS and its subscales are flat, less peaked, and has a thin tail. The scores are not in constellation around the mean value. Lastly, the construct of OJS is found to be positively related to its subscales. Positive correlations are also found between the three subscales which further confirm the construct validity of OJS comprising of three inter-related factors.

Discussion

The main objective of the present study was to translate and validate the Organizational Justice Scale (OJS) developed by Niehoff and Moorman (1993) into the Urdu language. The basic purpose for translating the scale into the Urdu language was to make it comprehensible and approachable for the research participants who were public service, sector employees. As Urdu is our national language, therefore, people of Pakistan even with basic education can easily read it and comprehend it. Further, the scale was translated using the back translation method (Brislin, 1970). The back-translation method was applied to get the Urdu version of the given scale with items closer to the original English version items in terms of semantic equivalence as well as content similarity. The next step was to establish the psychometric properties of the newly translated Urdu version OJS to make it a valid measure.

The psychometric validation of the instrument was carried out. For this purpose, CFA was conducted for Organizational Justice Scale (OJS) (Niehoff & Moorman, 1993). For OJS, two concurrent models were tested through CFA, the first model analyzed was for a three-factor structure. In this model, three subscales of OJS including Distributive Justice, Procedural Justice, and Interactional Justice were taken as interrelated factors. And, the second model was the hierarchical model in which the three subscales mentioned above were loaded onto a latent factor of OJS. Findings show that the three-factor model displayed a better fit as compared to the hierarchical model, nevertheless the author of this instrument and other studies have confirmed the higher-order factor structure for Organizational Justice Scale (OJS) (Niehoff & Moorman,

1993). Results of this study reflect that each of the three subscales of OJS is a unique construct well as is related to one another. The findings of this study were consistent with previous literature which characterized OJS as three correlated factors (see, e.g., Abril, et al. 2020; Gürbüz, & Mert, 2009). These studies were mainly conducted in other cultures i.e., Turkey and Portugal thus provided new information regarding the expression of this construct in countries with languages other than English. The same issue was earlier highlighted by Azanza, et al. (2014) who also found that tests may show different factor arrangements when administered on varied samples or with different languages other than the source language. This might have happened in the present study as well because OJS has been translated into the Urdu language; and also the data was collected from public service sector employees which is a distinct sample.

While the good fit of the three-factor model supports the idea of the three-dimensional nature of OJS, the three dimensions seem to be exceptionally related, proposing the plausibility of a higher-order factor underlying these three factors. Based on this observation, the present study tested a hierarchical model in which the three factors loaded onto the overall OJS latent factor. Results of this hierarchical model were also found to be acceptable, thus present data also supported the higher-order factor structure for OJS as conceptualized by Niehoff and Moorman (1993). Although the model fit for the three-factor structure was superior as compared to the hierarchical model, the present study confirmed the higher-order factor structure for OJS. This is because the authors of the instrument (Niehoff & Moorman, 1993) conceptualized OJS as a higher-order construct.

The factor loadings of all the items of OJS were above the acceptable criteria. None of these items were reverse-scored items. Furthermore, as indicated by CFAs from various studies, different researchers (Inoue, et al., 2009; Pérez, et al. 2014) have also confirmed similar findings on OJS. Alpha coefficients of the scale and its respective subscales were above the acceptable value of .70 as per criteria specified by George and Mallery (2003). Findings of the reliability analysis were consistent with the overall patterns in the literature that is, the subscales of Distributive Justice, Procedural Justice, and Interactional Justice achieve

the threshold of acceptance for alpha reliability coefficient of .70. Thus, reliability estimates showed that OJS was reliable, and items of the respective scale/subscale were internally consistent. Furthermore, corrected item-total correlations of OJS and its subscales were also above the threshold of acceptance (i.e., $r \geq .30$) for all items.

Limitations and Future Recommendations

First, a convenience sampling technique was applied and the sample was taken from Rawalpindi and Islamabad only, therefore, the generalizability of the results is a serious limitation. Furthermore, present research included public service sector employees only, thus, it is suggested that future researchers should also study employees from the private sector of Pakistan to assess their general level of organizational justice and other work-related functioning.

Implications

The present study translated the OJS for the first time in Pakistan to provide an Urdu version of the instrument. The study also reported the psychometric properties of the Urdu version of OJS, thus establishing the construct validity of OJS in Pakistan. Further, this work implies that the construct OJS behaves somehow similarly in Pakistani culture as compared to the Western culture, where this variable has been conceptualized. Therefore the present research suggests that the construct of OJS and its nature needs to be further explored in the Pakistani organizational context, and how this construct is perceived by the working individuals in Pakistani culture.

Conclusion

The construct of OJS is worth studying because it is an important variable that leads to various work-related outcomes at work. Considering this, the present study attempted to translate and validate OJS which is a widely used instrument to measure perceived Organizational Justice. The Urdu translated version of OJS showed adequate construct validity and reliability.

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