

TRANSLATION AND VALIDATION OF THE ANTICIPATED TURNOVER SCALE: SAUDIAN HEALTH-CARE CONTEXT

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ABSTRACT: *The present study focuses on the translation and validation of the Anticipated Turnover Scale (ATS) in a Middle Eastern healthcare milieu. Data was collected from the nursing staff from 3 private hospitals located in Jeddah, Saudi Arabia. Confirmatory Factor Analysis (CFA) was carried to study the psychometric properties of the ATS scale and Inter Item consistency was measured using Cronbach's alpha. The present study supported the structure of ATS and the results also matched with previous studies on the same scale. The results of the present study will provide impetus to the managers of health care institutions to use ATS in their respective institutions and to have an in-depth know how of the turnover concept in order to contain turnover of nursing staff in their respective organizations.*

Keywords: Validity, Reliability, Anticipated, Turnover, Measurement Model, Goodness of Fit Indices, Measurement Model

1. Introduction:

Nearly nine million nurses will be needed worldwide by 2030, according to the reports of the World Health Organization¹ and the International Council of Nurses (ICN)². Nursing shortages are primarily caused by aging populations and less-than-ideal working conditions for nurses (Organization for Economic Co-operation and Development, 2017). The issue has gained increasing importance in recent years. The shortage of nurses is further compounded by the fact that the turnover intention of nurses is generally higher than in other occupations [3] and [4]. This is likely due to the profession's intense physical and emotional demands, long hours, low pay, and lack of job satisfaction. Since the need for nurses is already high. The turnover rate in Middle Eastern countries is also high, and the situation is even more critical [2].

The phenomenon of turnover enables the probable introduction of fresh assets driven by and supports short-term development in the wards/department in which they are employed. Negative environments are a significant loss of intellectual capital. Risks to the well-being of the staff and the security and standard of care are all associated with turnover. A person might consider not saying with absolute certainty that they will leave anytime soon if they plan to stay in their current position for the foreseeable future. It is feasible that someone who plans to work in their current job for an extended time has no thoughts of quitting shortly. A person's decision to stay or leave a job is not an essential issue. In the short term, they might be considering leaving this organization if they have already made the decision to stay or leave. It may be asked whether there is no intention to

end one's current job on this scale. The extended stay at work has led some employees to contemplate departing the workplace [4],[6] and [8]. According to [9] as a result, turnover can increase the length of patients' hospital stays, push them away to other health facilities due to a lack of resources, and increase the frequency of incidents, among other adverse outcomes. The recruiting, hiring, and training of new nurses is a costly process that can threaten the long-term viability of health services [7]. An enormous obstacle for healthcare companies in their pursuit of profit and sustainability is the cost of transition of a nurse in a hospital environment in the United States³, which ranges from \$37,700 to \$58,400 [10].

Going through the relevant literature one finds scarce research on the translation and validation of ATS in the Middle Eastern milieu and specially in the health care sectors. The authors have chosen a validation study of the ATS scale because it is a well-known procedure to translate scales into local languages. Translation and validation of the projected turnover scale for the other context (e.g., Portuguese cultural context) have been utilized to adopt the scale [5]. For in depth studies on psychometric studies see [11] & [12]. Learning through a native language can help to build a deeper understanding of the culture and its traditions, which can be beneficial for nurses working in the Saudi healthcare setting. This deeper understanding can help to better appreciate the culture's values and norms, leading to a more positive attitude towards it and reducing the anticipated turnover intention [1].

1.2. Format of the Study: Rest of the paper will proceed as: Sec (2) will present the methodology; Sec (3) will present the results of the confirmatory factor analysis with suitable goodness of fit indices; Sec (4) discusses the results and briefly concludes the study; Sec (5) enumerates some limitations of the study.

2. METHODS:

2.1. Research design/Method: The study is quantitative in nature and a cross-sectional study where the respondents had to

¹ World Health Organization (2013). *A universal truth: No health without a workforce*. Geneva, Switzerland: WHO

² International Council of Nurses (2018). *World's nurses need a pay rise and better working conditions, concludes new report*. *Atas de International Council of Nurses Workforce Forums*. Geneva, Switzerland: ICN; 2018

³ Colosi, B. (2016). *National Healthcare Retention & RN Staffing Report*. Pennsylvania: Nursing Solutions Inc

response on several variables at one time on a self-reported questionnaire.

2.2. Questionnaire/Inclusion and Exclusion Criteria/ Study Setting:

The scale for eliciting responses had two parts, Part A dealt with sampling characteristics like Gender, Age, Length of Service and Qualification etc; etc. Part B pertained to ten items of ATS. Each item had seven options ranging from Strongly Disagree = 1 to Strongly Agree =7. Questionnaire is attached per Annexure ‘A’. Both English and Arabic translated questionnaire were used online. An automatic provision was inserted in the online questionnaire where by the respondents were asked some preliminary questions based on which the respondents were allowed to proceed further or barred from taking the survey. Participants did not receive any compensation for completing the survey.

2.3. Study setting/Collection of data: Responding to on line survey was open for 15 working days. Total of 260 questionnaires were downloaded on a specific data and after scrutiny 240 questionnaires were short listed based on complete information, hence the response rate was 92%.

2.4. Statistical analysis and tools: ATS was already validated in Portuguese cultural context therefore, for assessing the validity, a commonly used structural equation modelling technique (Confirmatory Factor Analysis) is employed using

statistical software SPSS and an adds in Analysis of Moments Structure (AMOS) ver 21.

3. RESULTS:

3.1. Sampling Characteristics of Respondents: The sample was composed mostly of Female nurses (72%) with an average age was 36 years and were predominantly married (67.5%). Majority (53.8%)of nurses have professional category of staff nurse and are non-Saudis. The average Length of Service in the profession was 12 years (SD = 7.320) and have spent less than 10 years in the current function unit. 44% of the respondents were working in Community Care unit and Personalized Health Care Unit. The study lacks equi-distribution regarding Gender.

3.2. Measurement Model (Confirmatory Factor Analysis):

Figure 1 depicts the measurement model for ATS and since ATS is already a validated scale so CFA is used to assess the validity of the scale. Factor loadings of the ten items will be assessed to study the validity. Factor loadings of the measurement model for the ATS scale were exhibited in Figure 1, whereas, model fit statistics are presented in Table 1. A tolerable factor loading value 0.5 and above is considered suitable for one indicator [13]. Figure 1 exhibits the factor loadings of ten items, ranging between (0.62 – 0.80) as per [13] seems to be a reasonably good measurement structure for ATS.

Table 1: Model Fit Indices for ATS

Model (CFA)	χ^2 / df	GFI	CFI	RMSEA	AIC	BCC
10 items	13.132	0.906	0.899	0.068 (0.062-0.073)	163.877	151.225

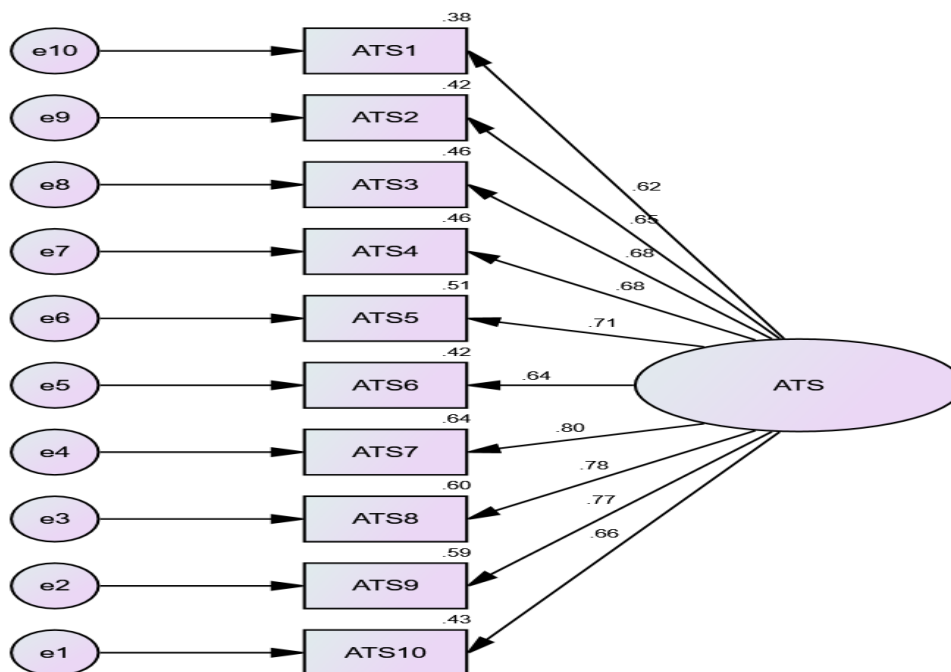


Figure 1: CFA for ten items ATS

By looking at the χ^2 statistic for ten items factors, it is apparent that the model is not fitting the data as well as it should have been, alternatively looking at the goodness of fit indices, both CFI and RMSEA matched the suggested limits as given by

[14] & [15] and thus we can say that the model fit is somewhat acceptable. Inter-item consistency is measured through Cronbach’s Alpha and for ATS scale with ten items

Cronbach's alpha = 0.903 which is quite satisfactory as suggested by [16].

4. DISCUSSION/CONCLUSION:

Current study was conducted to translate and validate the ten item ATS within the Saudian Health-care context, which had been previously validated in Portuguese cultural context. The study is an adaptation of [5] in which the scale was validated in the Portuguese cultural context. The results of the present study verified that the ten items that constitute the ATS are good indicators of Turnover Intentions. Inter Item consistency of the ATS was satisfactory (0.903). The ten items had good factor loadings as suggested by [13]. The item with the highest factor loading (0.80) on the ATS is item # 7 "I am sure I will be here for some time" followed by item # 8 "I intend to keep my job in this organization for some time" with the factor loading (0.78). Overall the translated Arabic version of ATS exhibited satisfactory goodness of fit indices, like the other equivalent versions validated by [5]. Thus we can confidently say that the reliability and validity of the translated ATS using data of 240 male/female nurses working in three private hospitals located in Jeddah, Saudi Arabia is reliable and can be confidently used in the Saudi Health-Care context to study Turnover Intentions of nurses.

5. Limitations of the Study:

Current study has two limitations. First the criterion validity was not assessed reason being non-availability of another scale that evaluated the ATS in the Saudian population. Second, the target population of this study were nurses working in just private hospitals in just three cities in Saudi Arabia, so future research can be conducted in more than 3 cosmopolitan cities of KSA for generalizability of the results across the kingdom.

Conflict of Interest: No conflict of interest exists amongst the co-authors regarding the publication of the content.

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REFERENCES

- [1] Al Sabei, S. D., Labrague, L. J., Miner Ross, A., Karkada, S., Albashayreh, A., Al Masroori, F., & Al Hashmi, N. (2020). Nursing work environment, turnover intention, job burnout, and quality of care: The moderating role of job satisfaction. *Journal of nursing scholarship*, 52(1), 95-104.
- [2] Alotaibi, S. M., Amin, M., Winterton, J., Bolt, E. E. T., & Cafferkey, K. (2022). The role of empowering leadership and psychological empowerment on nurses' work engagement and affective commitment. *International Journal of Organizational Analysis* (ahead-of-print)
- [3] Alzamel, L. G. I., Abdullah, K. L., Chong, M. C., & Chua, Y. P. (2020). The quality of work life and turnover intentions among Malaysian nurses: the mediating role of organizational commitment. *Journal of the Egyptian Public Health Association*, 95(1), 1-8
- [4] Callado, A., Teixeira, G., & Lucas, P. (2023). Turnover Intention and Organizational Commitment of Primary Healthcare Nurses. *Healthcare*, 11(521), 1-11
- [5] de Sul, S. I. R., & Lucas, P. R. M. B. (2020). Translation and validation of the anticipated turnover scale for the Portuguese cultural context. *Nursing Open*, 7(5), 1475-1481
- [6] Hussain, S., Hussain, Z., & Hussain, S. (2020). Workplace Spirituality And Turnover Intentions Among The Doctors Working In Private Hospitals In Karachi, Pakistan: A Cross Sectional Study. *British Journal of Medical & Health Sciences*, 2(8), 402-407.
- [7] Kovner, C. T., Brewer, C. S., Fatehi, F., & Jun, J. (2014). What does nurse turnover rate mean and what is the rate? *Policy, Politics, & Nursing Practice*, 15(3-4), 64-71
- [8] Labrague, L. J., & de Los Santos, J. A. A. (2021). Fear of Covid-19, psychological distress, work satisfaction and turnover intention among frontline nurses. *Journal of nursing management*, 29(3), 395-403
- [9] Li, Y. I. N., & Jones, C. B. (2013). A literature review of nursing turnover costs. *Journal of nursing management*, 21(3), 405-418 <https://doi.org/10.1111/j.1365-2834.2012.01411.x>
- [10] MacNeill, A. J., Hopf, H., Khanuja, A., Alizamir, S., Bilec, M., Eckelman, M. J., . . . Thiel, C. (2020). Transforming the medical device industry: road map to a circular economy: study examines a medical device industry transformation. *Health Affairs*, 39(12), 2088-2097
- [11] Munshi, M. M., Fateh, E. A., Alam, F., & Khan, K. (2018). Assessing Psychometric Properties of Servqual and Evaluation of Students' satisfaction in King Abdulaziz University. *Sci. Int*, 30, 497-505.
- [12] Almarashi, A. M., Alshehri, I. A., Khawaji, A. T., Alghamdi, S. H., Alandanoosi, H. I., Alenezi, A. B., ... & Khan, K. (2022). Validation of PSQ (18) scale in OPDs: Saudian context. *Advances and Applications in Statistics*, 83, 107-119.
- [13] Hair, J. F., Black, W. C., Balin, B. j., & Anderson, R. E. "Multivariate data analysis:" Maxwell Macmillan International Editions.2010
- [14] Hu, L.T. and Bentler, P.M "Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives," *Structural Equation Modeling*, 6 (1), 1-55.1999
- [15] Steiger, J.H., "Understanding the limitations of global fit assessment in structural equation modeling," *Personality and Individual Differences*, 42 (5), 893-98.2007
- [16] Nunnally, J.C. (1978). *Psychometric theory* (2nd ed.).New York: McGraw-Hill

APPENDIX

Questionnaire

Part –A (Demographic Profile)

Gender:	Male(1)	Female(2)	L25,26-35,36-45,46+	Years				
Age:								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Single (1)</td> <td style="width: 25%;">Married (2)</td> <td style="width: 25%;">Widowed(3)</td> <td style="width: 25%;">Divorce/Separated(4)</td> </tr> </table>					Single (1)	Married (2)	Widowed(3)	Divorce/Separated(4)
Single (1)	Married (2)	Widowed(3)	Divorce/Separated(4)					
Marital Status:								
Professional Category:								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Staff Nurse(1)</td> <td style="width: 25%;">Nurse Specialist(2)</td> <td style="width: 25%;">Nurse Manager(3)</td> <td style="width: 25%;">Other(4)</td> </tr> </table>					Staff Nurse(1)	Nurse Specialist(2)	Nurse Manager(3)	Other(4)
Staff Nurse(1)	Nurse Specialist(2)	Nurse Manager(3)	Other(4)					
Years of Professional Activity:								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 75%;">Less than5,6-10,11-15,16-20,21-25,26-30,31+</td> <td style="width: 25%;">Years</td> </tr> </table>					Less than5,6-10,11-15,16-20,21-25,26-30,31+	Years		
Less than5,6-10,11-15,16-20,21-25,26-30,31+	Years							
Academic Qualification:								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Nursing Diploma(1)</td> <td style="width: 33%;">Under-Graduate Education (2)</td> <td style="width: 33%;">Post-Graduate Education(3)</td> </tr> </table>					Nursing Diploma(1)	Under-Graduate Education (2)	Post-Graduate Education(3)	
Nursing Diploma(1)	Under-Graduate Education (2)	Post-Graduate Education(3)						

Current Functional Unit:	Community Care Unit	(1)
	Personalized Healthcare Unit	(2)
	Family Healthcare Unit	(3)
	Public Health Unit	(4)
	Other	(5)

Length of Service in Current Unit:	L10,10-20,21+	Years
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Nationality:	Saudi(1)	Non-Saudi (arabic speaking)(2)	Non-Saudi (non-arabic speaking) (3)
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Part – B *Anticipated Turnover Scale* (ATS Scale)

Strongly Disagree(SD) =1, Moderately Disagree(MD)=2, Slightly Disagree(SLD) = 3, Uncertain(U) = 4, Slightly Agree (SLA)= 5, Moderately Agree(MA) =6, Strongly Agree(SA) =7

(Circle only one number on each item)

S.No:	Items	SD	MD	SLD	U	SLA	MA	SA
1®	I intend to stay at my current workplace for some time.	1	2	3	4	5	6	7
2	I am pretty sure I will leave my workplace in the near future.	1	2	3	4	5	6	7
3®	Deciding to stay or leave my workplace is not a key issue for me at the moment.	1	2	3	4	5	6	7
4	If I received another job offer tomorrow, I would seriously consider it.	1	2	3	4	5	6	7
5®	I have no intention of leaving my current workplace.	1	2	3	4	5	6	7
6	I have been in this workplace as long as I wanted to.	1	2	3	4	5	6	7
7®	I am sure I will be here for some time.	1	2	3	4	5	6	7
8®	I intend to keep my job in this organization for some time.	1	2	3	4	5	6	7
9	I have serious doubts about whether or not I will actually stay in this organization.	1	2	3	4	5	6	7
10	I plan to leave this workplace in near future.	1	2	3	4	5	6	7