

Original Article

Moral Distress Thermometer: Translation and Validation in Greek

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Abstract

Background: Moral distress occurs when people's moral integrity is compromised by external factors. Healthcare workers experience difficult situations that can increase their moral distress.

Aim: To translate and validate the "Moral Distress Thermometer" (MDT) in Greek.

Methods: Our study included 142 nurses in Greece. We collected our data during September 2023. We employed the forward-backward method to translate and adapt the MDT in Greek. We examined the concurrent validity of the MDT using the "Moral Injury Symptom Scale-Healthcare Professionals" (MISS-HP), the revised "Rushton Moral Resilience Scale" (RMRS), the "Quiet Quitting Scale" (QQS), and the single item burnout measure. Moreover, we performed a test-retest study to examine the reliability of the MDT.

Results: The MDT showed very good psychometric properties. Concurrent validity of the Greek version of the MDT was exceptional. We found statistically significant correlations between the MDT and MISS-HP ($r = 0.51, p < 0.001$), RMRS ($r = -0.33, p < 0.001$), QQS ($r = 0.41, p < 0.001$), and the single item burnout measure ($r = 0.40, p < 0.001$). We found that the MDT had excellent reliability since the intraclass correlation coefficient in test-rest reliability analysis was 0.994 (95% confidence interval = 0.991 to 0.996, p -value < 0.001).

Conclusions: The “Moral Distress Thermometer” is a reliable and valid tool to measure moral distress among healthcare workers.

Keywords: moral distress thermometer; moral distress; nurses; Greece; Quiet Quitting Scale

Introduction

Moral distress is an important problem for healthcare professionals and can be defined as the guilt, frustration and anger that healthcare professionals feel when work conditions force them to conflict with their personal values and principles (Fronek et al., 2017; Allen et al., 2013; Jameton, 1993). In another words, moral distress exists when a person's moral integrity is threatened either because of an inability to perform the actions he or she desires or because of failed attempts to achieve a desired goal (Hamric, 2014).

Various factors can lead to moral distress, such as professional uncertainty about ethical issues, the absence of a supportive environment, etc. (Gallagher, 2011; Morley et al., 2019; Epstein et al., 2019). Experiences regarding moral distress have been studied in various professional contexts such as oncology care, pediatric patient care, intensive care unit care, community care, etc. (Giannetta et al., 2021; Mehlis et al., 2018; Prentice et al., 2021).

It should also be noted that during the pandemic, healthcare professionals faced many problems at both professional and

personal level, such as pressured working hours, burnout, mental health problems, insomnia, etc. (Galanis et al., 2021, 2023g). Moreover, the phenomenon of quiet quitting has appeared in various professions, including the healthcare professions, making working conditions even more difficult and putting even more pressure on already weakened health systems (Galanis et al., 2023c, 2023d, 2023f; Scheyett, 2022; Zuzelo, 2023).

In this context, measurement of moral distress among healthcare workers with a reliable and valid tool is crucial. Various tools have been developed to measure the frequency and intensity of the moral distress, such as the Moral Distress Risk Scale, the Moral Distress Intensity Scale, the Ethical Distress Scale and the Moral Distress Scale (Giannetta et al., 2020; Corley et al., 2001; Hamric & Blackhall, 2007; Hamric, Borchers & Epstein, 2012). Wocial and Weaver have developed the “Moral Distress Thermometer” (MDT) as a single-tool to measure moral distress among individuals (Wocial & Weaver, 2013). The MDT has been used in several studies worldwide (Prentice et al., 2021; Mehlis et al., 2018; Giannetta et al., 2021; Schneider et al., 2021; Wolf et al., 2019; Powell, Engelke &

Swanson, 2018; Sonis et al., 2022). However, to our knowledge, the tool has not been translated and validated in Greek language. Therefore, we translated and validated the “Moral Distress Thermometer” in Greek.

Materials and Methods

Study design: Our study sample included 142 nurses. We collected our data in Greece during September 2023. We measured gender, age and shift work of the participants. The “Moral Distress Thermometer” measures moral distress on a scale from 0 to 10 (Wocial & Weaver, 2013). Participants are asked to rate their moral distress in a thermometer with values from 0 (not at all distress) to 10 (worst possible distress). Higher values on the MDT indicate higher levels of moral distress. We employed the forward-backward method to translate the MDT in Greek (Galanis, 2019). Then, we used the Greek version of the MDT to perform the test-retest reliability analysis (Galanis, 2013). We examined the concurrent validity of the MDT using the “Moral Injury Symptom Scale-Healthcare Professionals” (MISS-HP), the revised “Rushton Moral Resilience Scale” (RMRS), the “Quiet Quitting Scale” (QQS), and the single item burnout measure. In particular, we used the MISS-HP to measure levels of moral distress (Mantri et al., 2020), the RMRS to measure moral resilience (Rushton et al., 2023), the QQS to measure levels of quiet quitting (Galanis et al., 2023e, 2023a), and the single item burnout measure to measure job burnout (Galanis et al., 2023b; Hansen & Pit, 2016). We used the validated Greek versions of the MISS-HP (Moisoglou et al., 2023) and the RMRS (Katsiroumpa et al., 2023) in our study.

Ethical considerations: Our study protocol was approved by the Ethics Committee of

Faculty of Nursing, National and Kapodistrian University of Athens (reference number; 451, June 09 2023). Additionally, we applied the guidelines of the Declaration of Helsinki to perform this study (World Medical Association, 2013).

Statistical analysis: We use numbers and percentages to present categorical variables. We use mean, standard deviation, median, minimum value and maximum value to present continuous variables. We calculated intraclass correlation coefficients to compare scores on the MDT in the test-retest reliability analysis. We calculated Pearson’s correlation coefficient to examine the concurrent validity of the MDT. P-values less than 0.05 were considered as statistically significant. We used the IBM SPSS 21.0 (IBM Corp. Released 2012. IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp.) for the analysis.

Results

Demographic characteristics

Our sample included 142 nurses. Among them, 89.4% (n=127) were females and 10.6% (n=15) were males. Mean age of nurses was 33.9 years (standard deviation; 9.8). The majority of nurses were shift workers (69.0%, n=98).

Moral Distress Thermometer

Mean value of the MDT was 5.2, while median value was 6.0. Also, standard deviation was 3.0, while minimum value was 0 and maximum value was 10. Distribution of nurses’ answers on MDT is displayed in Table 1.

Test-rest reliability analysis

We found that the MDT had exceptional reliability since the intraclass correlation coefficient in test-rest reliability analysis was

0.994 (95% confidence interval = 0.991 to 0.996, p -value < 0.001).

Validity analysis

Concurrent validity of the Greek version of the MDT was exceptional. We found

statistically significant correlations between the MDT and MISS-HP ($r = 0.51$, $p < 0.001$), RMRS ($r = -0.33$, $p < 0.001$), QQS ($r = 0.41$, $p < 0.001$), and the single item burnout measure ($r = 0.40$, $p < 0.001$). We present the results of the concurrent validity analysis of the Greek version of the MDT in Table 2.

Table 1. Distribution of nurses' answers on "Moral Distress Thermometer"

Score on "Moral Distress Thermometer"	N	%
0 (not at all distress)	10	7.0
1-3 (low level of distress)	35	24.7
4-7 (moderate level of distress)	59	41.6
8-10 (high level of distress)	38	26.7

Table 2. Concurrent validity of the Greek version of the "Moral Distress Thermometer"

Scales	Moral Distress Thermometer	
	Pearson's correlation coefficient	P-value
Moral Injury Symptom Scale-Healthcare Professionals	0.51	<0.001
Rushton Moral Resilience Scale	-0.33	<0.001
Quiet Quitting Scale	0.41	<0.001
Single item burnout measure	0.40	<0.001

Discussion

To our knowledge this is the first study that translates and validates the "Moral Distress Thermometer" in Greek. In particular, we employed a sample of nurses in Greece to translate, adapt, and validate the MDT in Greek language. We found that the MDT had great psychometric properties.

A recent study confirmed our results that the reliability and validity of the MDT is high (Grönlund, Isaksson & Brännström, 2023). In

this study, scholars translated, adapted and validated the MDT in Swedish. In particular, they found moderate and statistically significant correlations between the MDT and the Moral Distress-Healthcare Professionals total scores. Moreover, there was a significant difference on MDT scores when authors compare healthcare workers who had never considered leaving their job with those who had considered leaving their job, and those who had left their job.

Our test-retest study revealed a strong intraclass correlation coefficient on MDT score before and after a week of the participation in the study. Moreover, concurrent validity of the Greek version of the MDT was great, since there were moderate and statistically significant correlations between the MDT and MISS-HP, RMRS, QQS, and the single item burnout measure

Our study had several limitations. First of all, we used a non-random sample of nurses to validate the MDT in Greek. Therefore, we cannot generalize our results. Additionally, we employed self-reported questionnaires, such as the MISS-HP, the RMRS, the QQS, and the single item burnout measure to investigate the concurrent validity of the MDT. Moreover, several other types of validity of the MDT can be examined. Future studies can include samples from different and more representative populations of healthcare workers to infer more valid results.

In conclusion, the Greek version of the “Moral Distress Thermometer” is a valid and reliable tool to measure moral distress among healthcare professionals.

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