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ΕΡΕΥΝΗΤΙΚΗ ΕΡΓΑΣΙΑ

Quiet quitting among employees
A proposed cut-off score for the "Quiet Quitting" Scale

OBJECTIVE **To identify an appropriate cut-off point for the "Quiet Quitting" Scale (QQS), in order to discriminate quiet quitters from those with a low level of quiet quitting.** METHOD **A cross-sectional study in Greece during June 2023 was conducted. We recruited adult employees from every job sector and achieved to obtain a convenience sample. The Receiver Operating Characteristic analysis was used to calculate the best cut-off point for the QQS. In that case, "Job Satisfaction Survey" (JSS), "Copenhagen Burnout Inventory" (CBI), "Single Item Burnout" (SIB) measure, and turnover intention score as external criterions were used. For each criterion, a dichotomous variable was created with the use of medians or suggested values from the literature as cut-off points.** RESULTS **A significant predictive power of QQS for job satisfaction assessed by JSS, and for job burnout assessed by CBI and SIB measure were found. The best cut-off point for the QQS was found to be 2.06. In that case, the highest values for Youden's index (0.34) and AUC (0.73) were found, while the 95% confidence interval for the AUC ranged from 0.70 to 0.76. Sensitivity and specificity of QQS were 0.68 and 0.66, respectively (p<0.001). Therefore, employees with QQS score ≥2.06 as quiet quitters, and those with QQS score <2.06 as non-quiet quitters were considered.** CONCLUSIONS **The best cut-off point for the QQS was 2.06. Employees with QQS score ≥2.06 as quiet quitters can be described as quiet quitters. Further research should be conducted to validate the present results.**

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ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2024, 41(3):381–387

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Το φαινόμενο της σιωπηρής αποχώρησης των εργαζομένων: Προτεινόμενο διαχωριστικό όριο για την κλίμακα της «σιωπηρής αποχώρησης»

Περίληψη στο τέλος του άρθρου

Key words

Cut-off analysis
Employees
Job
"Quiet Quitting" Scale
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Workers

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The COVID-19 pandemic has negatively affected working conditions, causing unemployment, job insecurity, flexible work arrangements, and remote working.[1] One out of six workers in the European Union is unable to predict their earnings in the coming few months. Additionally, work inequalities have been increased during the pandemic. For example, in 2021, only 33% of workers had a female boss, while 20% of workers worked in a gender-balanced

workplace.[2] A significant percentage of workers work in an environment that does not support them, and does not give them enough opportunities to improve their abilities. According to estimation in the United States of America (USA), 7.9% of people may need to transition to new jobs before the pandemic, while the respective percentage after the pandemic reaches 10.1%.[3]

Additionally, the phenomenon of the "great resignation", where a great number of employees voluntarily quit their jobs beginning in early 2021, almost one year after the onset of COVID-19 pandemic. [4] For example, in the USA, almost 50 million workers voluntarily resigned from their jobs during 2021.[5] Blue-collar and white-collar sectors have been affected by the great resignation with equal force. Low wages, toxic work environment, and intense competition for workers are driving the great resignation. Healthcare workforce ranks among the jobs hit the hardest by the phenomenon of "great resignation".[6] For instance, up to 47% of healthcare workers in the USA plan to resign from their jobs by 2025, while the respective percentage for nurses is 90%.

In this context, the phenomenon of "quiet quitting" is an alarming issue. Quiet quitting affects mainly younger employees and refers to a situation where a worker simply does the bare minimum at her(his) work without going above and beyond.[7] Although "quiet quitting" is not a new phenomenon, its prevalence after the pandemic has been rising.[8] Although there are several instruments to measure work-related variables, such as job satisfaction, job burnout, turnover intention, etc.,[9–11] there is only one instrument to measure quiet quitting among employees, namely the "Quiet Quitting" scale (QQS).[12]

The QQS is a newly-developed scale that has been created and validated in Greek. To the best of our knowledge, there is no optimal cut-off score for the QQS until now. Thus, we aimed to identify the best cut-off point for the QQS to discriminate quiet quitters from those with a low level of quiet quitting.

MATERIAL AND METHOD

Study design

We conducted a cross-sectional study in Greece during June 2023. We recruited adult employees from every job sector that can understand the Greek language, since the study questionnaires are in Greek. Thus, we obtained a convenience sample. We informed employees about the aim and the design of our study. Participation was anonymous and voluntary. Employees who gave their informed consent could then participate in our study. We applied the guidelines of the Declaration of Helsinki to conduct our study.[13] Moreover, our study protocol was approved by the Ethics Committee of the Faculty of Nursing, National and Kapodistrian University of Athens (approval number: 451, June 2023).

Measures

We used the QQS to measure the phenomenon of "quite quitting" among employees.[12] The QQS comprises nine items that create three factors, namely detachment (four items), lack of initiative (three items), and lack of motivation (two items). Total QQS score ranges from 1 to 5 with higher values indicative of higher levels of quiet quitting. In our study, Cronbach's alpha for the QQS was 0.88.

We measured job satisfaction with the "Job Satisfaction Survey" (JSS).[14] JSS includes 36 items and total score ranges from 36 to 216. Higher scores indicate higher job satisfaction. Values between 36 and 108 indicate low level of satisfaction, values between 109 and 144 indicate moderate level of satisfaction, and values between 145 and 216 indicate high level of satisfaction. The Greek version of the JSS is proven to be reliable and valid.[15] In our study, Cronbach's alpha for the JSS was 0.82.

The employees' burnout was measured with two instruments: "Copenhagen Burnout Inventory" (CBI), and "Single Item Burnout" (SIB) measure. CBI comprises three factors: personal burnout (six items), work-related burnout (seven items), and client-related burnout (six items).[16] Score for each factor ranges from 0 to 100 with higher values indicative of higher levels of burnout. We used the reliable and valid Greek version of the CBI.[17] In our study, Cronbach's alpha for personal burnout, work-related burnout, and client-related burnout was 0.81, 0.78, and 0.83, respectively. The SIB measure assess the overall work burnout in a scale from 0 (not at all burnt out) to 10 (extremely burnt out).[18] Greek version of the SIB is reliable and valid.[19]

We used the question "How often have you seriously considered leaving your current job?" to measure turnover intention.[20] Answers on the scale are on six-point Likert scale (never [1], rarely [2], sometimes [3], somewhat often [4], quite often [5], extremely often [6]).

Statistical analysis

We presented categorical variables with numbers and percentages, and continuous variables with mean, standard deviation, median, minimum value, and maximum value. We used the Receiver Operating Characteristic (ROC) analysis to calculate the best cut-off point for the QQS. In that case, we used JSS, CBI, SIB, and turnover intention score as external criterions. For each criterion, we created a dichotomous variable using medians or suggested values from the literature as cut-off points. For example, JSS score lower than 144 is indicative of low and moderate level of satisfaction, while a score lower than 108 is indicative of a low level of satisfaction. We calculated sensitivity, specificity, and the Youden index. These measures take values from 0 to 1 with higher values

indicating better diagnostic value of the scale. The Youden index defines an optimal cut-off point and is calculated as sensitivity + specificity – 1.[21] Moreover, we calculated the area under the curve (AUC), the respective 95% confidence interval (CI), and p-value.[22] When the AUC is 0.5–0.7 the test has low accuracy, while 0.7–0.9 indicated moderate accuracy, and AUC greater than 0.9 indicated high accuracy.[23] After defining the best cut-off point for the QSS, employees with a total score above this value were considered as quiet quitters, while those below it were considered as non-quiet quitters. We performed Chi-square test and Chi-square trend test to compare gender, and age among sample classification according to the proposed cut-off point for the QQS. We calculated Pearson's correlation coefficient to estimate correlation between study scales, i.e., QQS, JBI, CBI, SIB, and turnover intention. As statistically significant were considered p-values less than 0.05. We used the Statistical Package for Social Sciences (SPSS), version 21.0 (IBM Corporation released 2012, IBM Corporation, Armonk, NY) for the analysis.

RESULTS

Our study population included 1,868 employees. The majority of them were females (79.2%, n=1,480), while 20.8% (n=388) were males. Mean age of employees was 40.1 years (standard deviation=9.5) with a median value of 40, and a range from 21 to 74 years.

We performed ROC analysis to define cut-off points for the QQS. Detailed results of ROC analysis are shown in table 1. We found that the best cut-off point for the QQS was 2.06, using the JSS as criterion (fig. 1). In that case, we found the highest values for Youden's index (0.34) and AUC (0.73). The 95% CI for the AUC ranged from 0.70 to 0.76. Sensitivity and specificity of QQS were 0.68 and 0.66, respectively (p<0.001). Therefore, we considered employees with QQS score ≥2.06 as quiet quitters, and those with QQS score <2.06 as non-quiet quitters.

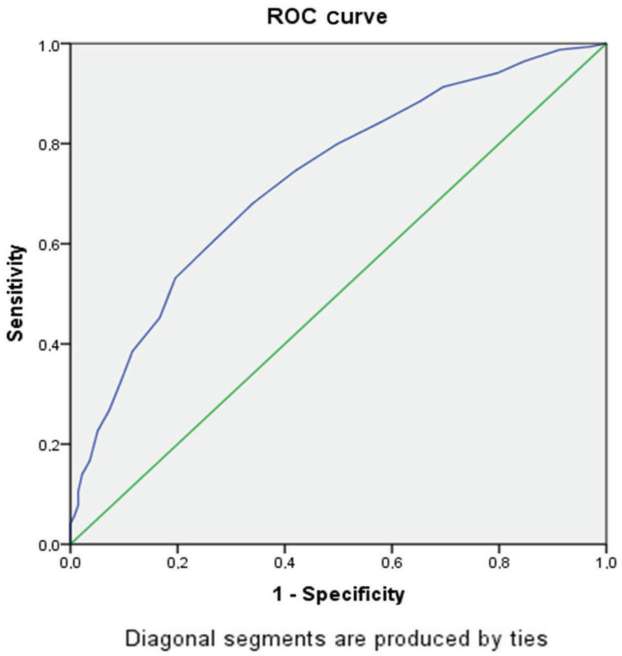

Figure 1. Receiver Operating Characteristic (ROC) curve of the "Quiet Quitting" Scale for "Job Satisfaction Survey".

We also found a significant predictive power of QQS for job burnout assessed by CBI with AUC=0.72, p<0.001, 95% CI=0.70-0.74, sensitivity=0.51, and specificity=0.82 (fig. 2). A similar significant predictive power of QQS for turnover intention was found (AUC=0.70, p<0.001, 95% CI=0.69–0.73, sensitivity=0.45, and specificity=0.83 (fig. 3). Moreover, we identified a significant predictive power of QQS for job burnout assessed by SIB measure with AUC=0.65, p<0.001, 95% CI=0.63–0.68, sensitivity=0.70, and specificity=0.50 (fig. 4).

Based on the above results, 63.1% (n=1,178) of our employees were classified as quiet quitters, and 36.9% (n=690)

Table 1. Predictive validity of the "Quiet Quitting" Scale (QQS).

Criterion	Cut-off point for criterion	Cut-off point for the QQS	Sensitivity	Specificity	AUC	95% CI	Significance	Youden's index
JSS	Low and moderate level of satisfaction (<144)	2.06	0.68	0.66	0.73	0.70–0.76	<0.001	0.34
JSS	Low level of satisfaction (<108)	2.17	0.72	0.61	0.72	0.69–0.74	<0.001	0.32
JSS	Median value (<106)	2.17	0.72	0.59	0.71	0.69–0.73	<0.001	0.31
CBI	Median value (<57)	2.50	0.51	0.82	0.72	0.70–0.74	<0.001	0.33
Turnover intention	Low level (<4)	2.61	0.45	0.83	0.70	0.69–0.73	<0.001	0.28
SIB	Median value (<7)	2.06	0.70	0.50	0.65	0.63–0.68	<0.001	0.21

AUC: Area under the curve; CBI: Copenhagen Burnout Inventory; CI: Confidence interval; JSS: Job Satisfaction Survey; QQS: Quiet Quitting Scale; SIB: Single Item Burnout

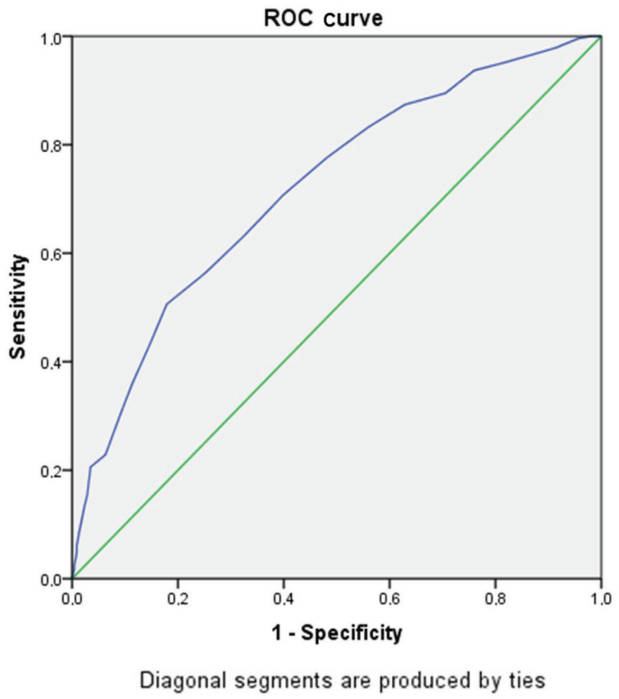

Figure 2. Receiver Operating Characteristic (ROC) curve of the "Quiet Quitting" Scale for "Copenhagen Burnout Inventory".

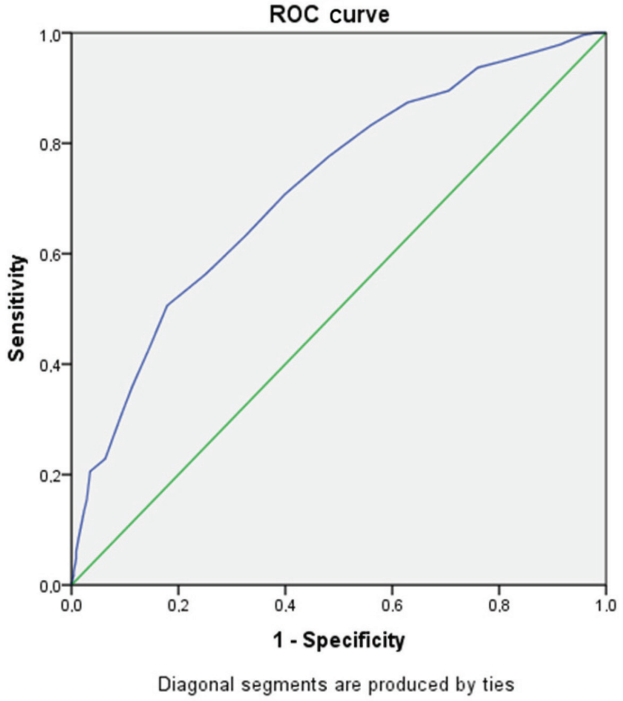

Figure 3. Receiver Operating Characteristic (ROC) curve of the "Quiet Quitting" Scale for turnover intention.

as non-quiet quitters. Sample classification according to the proposed cut-off point for the QQS is shown in table 2. Among females, 62.4% were classified as quiet quitters,

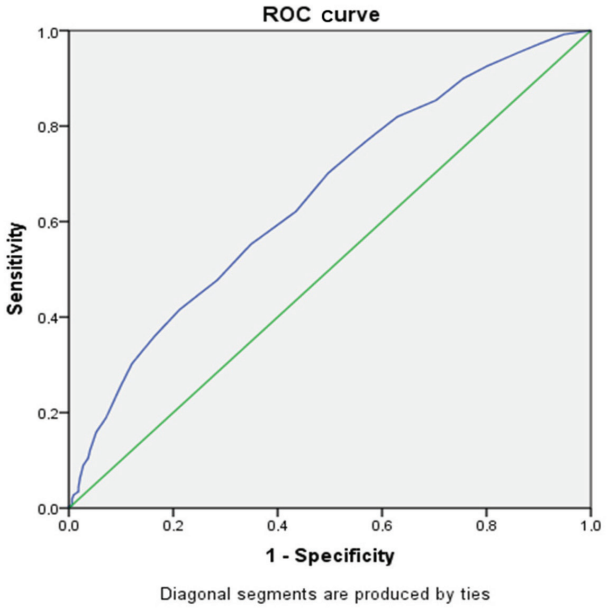

Figure 4. Receiver Operating Characteristic (ROC) curve of the "Quiet Quitting" Scale for Single Item Burnout measure.

Table 2. Sample classification according to the proposed cut-off point for the "Quiet Quitting" Scale.

Variables	Quiet quitters				p-value
	No		Yes		
	n	%	n	%	
Gender					0.28*
Females	556	37.6	924	62.4	
Males	134	34.5	254	65.5	
Age (years)					<0.001**
21–32	148	33.3	296	66.7	
33–39	146	30.7	330	69.3	
40–46	178	39.0	278	61.0	
47–74	218	44.3	274	55.7	

* Chi-square test, ** Chi-square trend test

while the respective percentage for males was 65.5% (p=0.28). Prevalence of quiet quitters was higher among younger ages (p<0.001). In particular, 66.7% of employees aged 21–32 years, and 69.3% of those aged 33–39 years were classified as quiet quitters. On the other hand, 61.0% of employees aged 40–46 years, and 55.7% of those aged 47–74 years were classified as quiet quitters.

Correlation matrix among study scales is shown in table 3. We found statistically significant correlations (p<0.001 in all cases) between the QQS and JSS (r=-0.42), work-related burnout (r=0.38), personal burnout (r=0.30), client-related

Table 3. Correlation matrix among study scales.

Scales	2	3	4	5	6	7
QQS	-0.42	0.38	0.30	0.30	0.42	0.29
JSS		-0.50	-0.45	-0.47	-0.56	-0.50
CBI (work-related burnout)			0.72	0.82	0.59	0.59
CBI (personal burnout)				0.85	0.54	0.58
CBI (client-related burnout)					0.55	0.59
Turnover intention						0.58
SIB						

All correlations were statistically significant at level <0.001

QQS: Quiet Quitting Scale; JSS: Job Satisfaction Survey; CBI: Copenhagen Burnout Inventory; SIB: Single Item Burnout

burnout (r=0.30), turnover intention (r=0.42), and SIB (r=0.29).

DISCUSSION

QQS is a newly developed instrument to measure level of quiet quitting among employees. To the best of our knowledge, scholars have not yet investigated appropriate cut-off scores for the QQS. Therefore, we estimated an optimal cut-off score for the QQS using as external criterions other valid and reliable instruments (i.e., JSS, CBI, and SIB measure). Our aim was to determine an appropriate cut-off score for the QQS to develop a valid criterion to discriminate employees with high levels of quiet quitting from those displaying normal levels of quiet quitting. Optimal cut-off points for the QQS are of great interest since they give scholars and policy makers the opportunity to make valid comparisons between different studies, populations, and cultures.[24]

We used the ROC analysis to calculate the best cut-off point for the QQS. In particular, the Youden index was selected, where the maximum value of the index corresponds to the optimal cut-off point.[22,25] Moreover, we calculated the area under the curve, where the optimal cut-off point is defined as the point where the AUC has the highest value.[26] Our analysis showed that the optimal cut-off point for the QQS was 2.06. Thus, employees with QQS score ≥2.06 could be described as quiet quitters and those with a score <2.06 could be described as non-quiet quitters. Our findings showed significant predictive power of the QQS for job satisfaction, job burnout, and turnover intention as indicated by Youden's index, AUC, sensitivity, and specificity.

We found that high levels of quiet quitting were associated with low levels of job satisfaction, and high levels of job burnout and turnover intention. Several systematic reviews confirm that work-related variables, such as job satisfaction, job burnout, and turnover intention are highly correlated.[27–29] Severe job burnout and job dissatisfaction are associated with high turnover intention, especially among healthcare workers. Moreover, our findings showed that younger age was associated with higher levels of quiet quitting. Literature supports our finding since there is a significant decline in employees' engagement among the younger generations.[30]

Our study had several limitations. First, we used several valid and reliable instruments as external criteria to establish an optimal cut-off point for the QQS, but these instruments may not be the gold standard criteria for the phenomenon of "quiet quitting". We considered JSS, CBI and SIB measure as the most relevant instruments. Thus, our optimal cut-off point should be interpreted with caution. Second, we performed the cut-off analysis to further evaluate the validity and predictive ability of the QQS, and not for diagnostic purposes. Third, since we conducted a cross-sectional study, we did not have the opportunity to estimate the effect of time on quiet quitting. Fourth, we used a convenience sample and therefore our findings could not be generalized.

In conclusion, the QQS is an instrument that was timely developed since the phenomenon of "quiet quitting" is an alarming issue especially after the COVID-19 pandemic and significant changes in work conditions. Our study provided empirical support for an optimal cut-off point for the QQS with significant predictive power for job satisfaction, job burnout, and turnover intention. Our cut-off point could be a quick, reliable and valid primary screening tool to identify employees with high levels of quiet quitting. We do not propose this cut-off analysis for diagnostic purposes, and employees with high scores on the QQS may be further assessed. Further research in different populations and cultures should be conducted in order to validate our results.

ΠΕΡΙΛΗΨΗ

Το φαινόμενο της σιωπηρής αποχώρησης των εργαζομένων: Προτεινόμενο διαχωριστικό όριο για την κλίμακα της «σιωπηρής αποχώρησης»

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ΣΚΟΠΟΣ Η εύρεση του κατάλληλου διαχωριστικού ορίου για την κλίμακα της «σιωπηρής αποχώρησης» (ΚΣΑ), έτσι ώστε να εντοπιστούν οι εργαζόμενοι που έχουν αποχωρήσει σιωπηρά από την εργασία τους. **ΥΛΙΚΟ-ΜΕΘΟΔΟΣ** Πραγματοποιήθηκε μια συγχρονική μελέτη στην Ελλάδα τον Ιούνιο του 2023. Στην μελέτη συμμετείχαν ενήλικες εργαζόμενοι από οποιονδήποτε εργασιακό χώρο. Έτσι, προέκυψε ένα δείγμα ευκολίας. Χρησιμοποιήσαμε την καμπύλη "Receiver Operating Characteristic" (ROC) για να υπολογιστεί το καλύτερο διαχωριστικό όριο σχετικά με την ΚΣΑ. Στην περίπτωση αυτή, χρησιμοποιήθηκαν οι κλίμακες "Job Satisfaction Survey" (JSS), "Copenhagen Burnout Inventory" (CBI), η μέτρηση "Single Item Burnout" (SIB) και η πρόθεση αποχώρησης από την εργασία ως κριτήρια για τον υπολογισμό του κατάλληλου διαχωριστικού ορίου. Για κάθε κριτήριο δημιουργήσαμε μια διχοτόμο μεταβλητή, χρησιμοποιώντας τις διάμεσες τιμές ή τις προτεινόμενες τιμές από τη βιβλιογραφία ως διαχωριστικά όρια. **ΑΠΟΤΕΛΕΣΜΑΤΑ** Βρήκαμε ότι η ΚΣΑ έχει σημαντική προβλεπτική ισχύ ως προς την επαγγελματική ικανοποίηση, όπως εκτιμήθηκε με την κλίμακα JSS, και την επαγγελματική εξουθένωση, όπως εκτιμήθηκε με τα CBI και SIB. Το καλύτερο διαχωριστικό όριο για την ΚΣΑ ήταν το 2,06. Στην περίπτωση αυτή, ο δείκτης Youden (0,34) και ο δείκτης AUC (0,73) είχαν τις υψηλότερες τιμές. Το 95% διάστημα εμπιστοσύνης για τον δείκτη AUC κυμαινόταν από 0,70–0,76. Η ευαισθησία και η ειδικότητα της ΚΣΑ ήταν 0,68 και 0,66, αντίστοιχα ($p<0,001$). Επομένως, οι εργαζόμενοι με βαθμολογία στην ΚΣΑ ≥2,06 μπορεί να θεωρηθεί ότι έχουν αποχωρήσει σιωπηρά από την εργασία τους, ενώ οι εργαζόμενοι με βαθμολογία <2,06 φαίνεται ότι δεν έχουν αποχωρήσει σιωπηρά από την εργασία τους. **ΣΥΜΠΕΡΑΣΜΑΤΑ** Το καλύτερο διαχωριστικό όριο για την ΚΣΑ ήταν το 2,06, με τους εργαζόμενους που έχουν βαθμολογία μεγαλύτερη από αυτήν την τιμή να θεωρούνται ως σιωπηρά αποχωρήσαντες από την εργασία τους. Απαιτείται περαιτέρω έρευνα για την επιβεβαίωση των ευρημάτων της παρούσας μελέτης.

Λέξεις ευρετηρίου: Ανάλυση διαχωριστικού ορίου, Εργαζόμενοι, Εργασία, Καμπύλη ROC, Κλίμακα «σιωπηρής αποχώρησης»

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