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Working Conditions, Mental Illness, and Professional Quality of Life among Iranian Red Crescent Society Operational Staff: A Quantitative Study

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Abstract

Background: Humanitarian workers are frequently exposed to demanding environments. This study examined perceived working conditions, mental illness symptoms, and professional quality of life among operational staff of the Iranian Red Crescent Society, and assessed whether working conditions predict psychological outcomes.

Materials and Methods: A cross-sectional quantitative study was conducted in 2024 with 233 operational staff selected through multi-stage cluster sampling from five Iranian provinces. Data were collected using Persian versions of the Health and Safety Executive Management Standards Indicator Tool, the Symptom Checklist-25, and the Professional Quality of Life Scale. Descriptive statistics, one-sample t-tests, correlations, and multiple linear regressions were performed using SPSS 25.

Results: Participants reported generally favorable working conditions and low mental illness symptoms. Mental illness scores were significantly lower than population norms. Compassion satisfaction was high, whereas burnout and secondary traumatic stress were comparatively low. Regression analyses showed that several working conditions significantly predicted mental illness and professional quality of life outcomes. In particular, demands, work control, and relationships predicted mental illness, while role clarity and managerial support predicted compassion satisfaction. Demands, role clarity, change at work, relationships, and work control predicted burnout, whereas demands, relationships, and role clarity predicted secondary traumatic stress.

Conclusions: IRCS operational staff reported favorable psychological outcomes, although working conditions remained significant predictors of mental health and professional quality of life. These findings highlight the need for continuous psychological monitoring and organizational interventions in humanitarian work settings.

Keywords: Relief Work, Red Cross, Occupational Health, Mental Health

Introduction

Humanitarian aid workers are frequently exposed to stressful and demanding environments, especially along crises such as the Covid-19 pandemic, armed conflicts, and climate-related disasters [1-2]. Research consistently indicates that these conditions elevate the risk of psychological problems, including distress, anxiety, depression, burnout, and post-traumatic stress disorder, which in turn undermine both personal well-being and organizational effectiveness [3-9].

Three variables are central to the present study. Working conditions, encompassing demands, work control, managerial support, peer support, relationships, role clarity, and change at work, refer to the psychosocial aspects of the work environment that affect employee well-being, including job demands and available resources [10-11]. Mental illness signifies

symptoms and disturbances that disrupt functioning, such as anxiety, depression, or somatization [12-13]. Professional Quality of Life (ProQOL) describes the positive and negative outcomes of working in helping professions, including compassion satisfaction, burnout, and secondary traumatic stress [14]. Existing studies suggest that poor working conditions heighten psychological strain, while job resources such as managerial and peer support can buffer negative effects [3,15-16].

In the Iranian context, and specifically within the Iranian Red Crescent Society (IRCS), responders frequently confront traumatic events such as disasters and accidents. Previous research has demonstrated that IRCS staff may experience post-traumatic stress symptoms [17] and distress during public health crises [18]. Nevertheless, comprehensive quantitative research on psychosocial predictors of mental health and ProQOL in this population is still lacking. Addressing this gap is particularly relevant for the Iranian population, as it provides context-specific evidence to guide organizational interventions.

In spite of the valuable insights offered by the existing qualitative and case-specific research, there remains a need for comprehensive quantitative studies to ascertain the psychosocial as well as organizational predictors of work-related psychological health among IRCS responders. The present study intended to address this gap, with a threefold aim to: (1) describe the working conditions, prevalence of mental illness symptoms, as well as levels of ProQOL among IRCS operational staff; (2) compare levels of mental illness and ProQOL among IRCS staff with established population norms; (3) inspect the predictive role of working conditions on mental illness and ProQOL. The objective was to answer the following research question: What are the working conditions, levels of mental illness, and dimensions of ProQOL among operational staff of the IRCS, and how do working conditions predict psychological outcomes?

This research adopted the perspective of the Job Demands-Resources (JD-R) model [19-26], a leading theoretical framework in occupational health psychology, which underscore the crucial role of working conditions in shaping workers' well-being. According to JD-R [19-26], job demands are physical, psychological, social, or organizational aspects of the job that require physical or mental effort from the employee, and result in poor work-related well-being outcomes. Meanwhile, job resources are defined as physical, psychological, social, or organizational aspects of the job that protect employee well-being [18-25]. In line with this model, two main hypotheses were developed.

H1: Job demands will negatively influence mental health and ProQOL.

H2: Job resources (work control, managerial support, peer support, relationships, role clarity, and change at work) will positively affect mental health and ProQOL.

Materials and Methods

This cross-sectional quantitative study was undertaken in 2024 among operational staff of the Iranian Red Crescent Society (IRCS). A multi-stage cluster sampling method was applied. In the first stage, five provinces (East Azerbaijan, Isfahan, Tehran, Razavi Khorasan, and) were purposively selected from the 31 provinces of Iran based on inclusion criteria. They were geographical extension, population size, presence of key industrial, military, religious, and nuclear centers, strategic significance as transportation corridors, as well as probability of exposure to natural and non-natural disasters. In the second stage, within each province, operational staff were randomly selected from the IRCS personnel list. The total statistical population consisted approximately of 7000 staff members, from which a minimum sample size of 364 was calculated using Cochran's formula with a 95% confidence level and 5% margin of error. Inclusion criteria were: (1) current employment in an operational/field position, (2) at least one year of work experience, and (3) willingness to participate. Exclusion criteria were: (1) administrative/non-operational positions, and (2) incomplete or invalid responses. Given the impracticality of distributing paper questionnaires in person, the participants completed a standardized, self-administered questionnaire in Persian, distributed electronically via IRCS research managers in the selected provinces. The respondents completed the survey individually under similar conditions. A total of 236 questionnaires were gathered (provisional response rate = 64.8%). Once univariate and multivariate outliers were excluded, 233 valid responses were retained for analysis (final response rate = 64.01%).

This was a cross-sectional quantitative study. Data were collected through a self-administered questionnaire in Persian, consisting of three standardized instruments plus a sociodemographic section. The latter captured participants' age, gender, marital status, education, work experience, employment status, as well as province of employment. The three standardized instruments were as follows.

Health and Safety Executive (HSE) Management Standards Indicator Tool: This is an instrument to ascertain working conditions, developed by the British Health and Safety Executive [10] and validated in Persian by Azad and Gholami [11]. It is a 35-item questionnaire that appraises work-related stressors across seven domains: demands (8 items, e.g. "I have to work very intensively"), work control (6 items, e.g. "I have a choice in deciding how I do my work"), managerial support (5 items, e.g. "My line manager

encourages me at work"), peer support (4 items, e.g. "I get help and support I need from colleagues"), relationships (4 items, e.g. "Relationships at work are strained"), role clarity (5 items, e.g. "I am clear what my duties and responsibilities are"), and change at work (3 item, e.g. "Staff are always consulted about change at work"). Items are rated on a five-point Likert scale including "1 = Never", "2 = Seldom", "3 = Sometimes", "4 = Often", and "5 = Always". Scores are reversed for the "demands" and "relationships" subscales. Higher scores represent more favorable working conditions. No total score is computed. In the original version, the instrument indicated acceptable reliability (α = .78). In this study, the instrument presented weak to acceptable reliability, with Cronbach's alpha values ranging from .59 (change at work) to .79 (role clarity).

Symptom Checklist-25 (SCL-25): This is an instrument to appraise mental illness, developed as a shortened version of the original 90-item tool by Derogatis and Kathryn [12] and validated in Persian by Reshvanloo and Shamir [13]. It is a 25-item questionnaire evaluating seven symptom domains: somatization (7 items, e.g. "Did you experience nausea or upset stomach?"), obsession-compulsion (3 items, e.g. "Do you have lack of attention or accuracy in doing some duties?"), interpersonal sensitivity (3 items, e.g. "Did you feel that people are unlikely or unfriendly to you?"), phobia (3 items, e.g. "Have you been afraid in traveling by train or bus?"), anxiety (3 items, e.g. "Have you been scared suddenly without any reason?"), psychoticism (4 items, e.g. "Have you had thoughts that you feel they are not related to you but others inserted them in your brain?"), and depression (2 items, e.g. "Have you had thoughts about suicide?"). Items are rated on a five-point Likert scale including "0 = Not at all", "1 = A little bit", "2 = Moderately", "3 = Quite a bit", and "4 = Extremely". Higher scores reflect more severe symptoms. Mean scores lower than .50 show healthy individuals, mean scores between .50 to 1.50 reveal mild symptoms, mean scores between 1.51 to 2.50 indicate moderate symptoms, with mean scores higher than 2.50 demonstrating severe symptoms. In the original version, the instrument presented acceptable reliability, with Cronbach's alpha values ranging from .71 (psychoticism) to .95 (somatization, interpersonal sensitivity, and obsession-compulsion). In this study, the instrument exhibited weak to acceptable reliability, with Cronbach's alpha values ranging from 0.48 (phobia) to .85 (somatization). Cronbach's alpha for the total scale was acceptable (α = .94).

Professional Quality of Life (ProQOL) Scale, Version 5: This is an instrument to ascertain professional quality of life, developed by Stamm [14] and translated in Persian for the present study. It is a 30-item questionnaire that appraises positive and negative aspects of helping others in three domains: compassion satisfaction (10 items, e.g., "I get satisfaction from being able to help people"), burnout (10 items, e.g., "I feel trapped by my job"), and secondary traumatic stress (10 items, e.g., "I am preoccupied with more than one person I help"). Items are rated on a five-point Likert scale including "1 = Never", "2 = Rarely", "3 = Sometimes", "4 = Often", and "5 = Always". Scores are reversed for items 1, 4, 15, 17, 29. Higher scores reflect higher compassion satisfaction, higher burnout, and higher secondary traumatic stress. Mean scores lower than 22 suggest low compassion satisfaction, burnout, and secondary traumatic stress, scores between 23 and 41 represent moderate compassion satisfaction, burnout, and secondary traumatic stress, and scores higher than 42 signal high compassion satisfaction, burnout, and secondary traumatic stress. No total score is computed. In the original version, the instrument demonstrated acceptable reliability (α = .88 for compassion satisfaction, α = .75 for burnout, and α = .81 for secondary traumatic stress). In this study, the instrument presented acceptable reliability (α = .84 for compassion satisfaction, α = .76 for burnout, and α = .78 for secondary traumatic stress).

Data were analyzed using SPSS version 25. Descriptive statistics, one-sample t-tests, Pearson's correlations, and multiple linear regression analyses (stepwise method) were performed. Statistical significance was set at $p < .05$.

Results

Table 1 reports the sociodemographic characteristics of the study sample.

Table 1. Sociodemographic characteristics of the sample

Variable		Min.	Max.	M	SD
Age (years)		20	65	36.82	8.25
Work experience (years)		1	35	13.08	7.03
Variable		n		%	
Sex	Male	155		66.5	
	Female	78		33.5	
Marital status	Single	94		40.3	
	Married	139		59.7	
Education	Diploma	21		9.0	
	Associate degree	14		6.0	
	Bachelor's degree	143		61.4	
	Master's degree	53		22.7	
	PhD	2		0.9	

Employment status	Official	58	24.9
	Contractor	145	62.2
	Contract	30	12.9
Province	East Azerbaijan	36	15.5
	Isfahan	23	9.9
	Tehran	18	7.7
	Razavi Khorasan	24	10.3
	Fars	132	56.7

Note. min. = minimum. max = maximum. M = mean. SD = standard deviation. n = absolute frequency. % = percentage frequency

Perceptions of working conditions: Mean scores and standard deviations for the seven domains of working conditions were as follows: demands (M = 25.46, SD = 6.02), work control (M = 12.15, SD = 3.49), managerial support (M = 11.01, SD = 3.93), peer support (M = 8.36, SD = 2.97), relationships (M = 11.63, SD = 4.10), role clarity (M = 7.65, SD = 2.92), and change at work (M = 6.42, SD = 2.30).

Prevalence of mental illness and professional quality of life: Mean scores and standard deviations for the mental illness total score as well as the seven symptom domains of mental illness were as follows: mental illness total score (M = 15.18, SD = 14.93), somatization (M = 3.92, SD = 4.66), obsession-compulsion (M = 2.42, SD = 2.59), interpersonal sensitivity (M = 2.35, SD = 2.58), phobia (M = 1.15, SD = 1.60), anxiety (M = 2.03, SD = 2.48), psychoticism (M = 2.03, SD = 2.53), and depression (M = 1.29, SD = 1.58).

Table 2 reveals the sample percentage distribution of symptom severity across mental illness domains. Further, one-sample t-test revealed IRCS workers' mean mental illness scores (M = .60, SD = .50) to be significantly lower than established population norms (test value = 2.50), indicating better mental health status than the general population (t(232) = -48.30, p < .0001).

Table 2. Mental illness distribution

Symptoms	Healthy	Mild	Moderate	Severe
Somatization	61.4%	28.3%	8.2%	2.1%
OC	47.6%	33.6%	12.9%	6.0%
IS	50.2%	32.6%	10.3%	6.9%
Phobia	71.2%	23.2%	5.2%	.4%
Anxiety	56.2%	26.2%	13.3%	4.3%
Psychoticism	70.0%	22.3%	6.9%	.9%
Depression	65.2%	24.5%	8.6%	1.7%

Note. OC = Obsession-compulsion. IS = Interpersonal sensitivity

Mean scores and standard deviations for the three domains of ProQOL were as follows: compassion satisfaction (M = 45.92, SD = 4.85), burnout (M = 19.58, SD = 6.08), and secondary traumatic stress (M = 22.35, SD = 6.52).

Table 3 indicates the sample percentage distribution of levels in ProQOL domains. In addition, one-sample t-test exhibited IRCS workers' mean scores on compassion satisfaction (M = 4.50, SD = 0.40), burnout (M = 1.90, SD = 0.60) and secondary traumatic stress (M = 2.20, SD = .60) to be higher, lower, and lower than established population norms respectively (test value = 3), reflecting better compassion satisfaction (t(232) = 50, p < .0001), burnout (t(232) = -26, p < .0001), and traumatic stress (t(232) = -17.9, p < .0001) than the general population.

Table 3. Professional quality of life distribution

ProQOL domain	Low	Moderate	High
CS	.0%	14.5%	85.5%
Burnout	68.4%	31.6%	.0%
STS	58.5%	40.6%	.9%

Note. ProQOL = Professional quality of life. CS = Compassion satisfaction. STS = Secondary traumatic stress

Working conditions' impact on mental illness and ProQOL: Table 4 outlines correlations between working conditions and outcome variables. All working conditions were positively and significantly linked to mental illness, burnout, and secondary traumatic stress. In contrast, all working conditions but demands were negatively associated with compassion satisfaction.

Table 4. Correlation matrix of working conditions, mental illness, and professional quality of life

	1	2	3	4	5	6	7
1. Demands							
2. Work control							
3. Managerial support							
4. Peer support							
5. Relationships							
6. Role clarity							
7. Change at work							
8. Mental illness	.44**	.38**	.25**	.30**	.45**	.28**	.31**
9. Compassion satisfaction	-.11	-.46**	-.36**	-.39**	-.26**	-.62**	-.40**
10. Burnout	.48**	.45**	.34**	.39**	.48**	.42**	.48**
11. Secondary traumatic stress	.51**	.29**	.15*	.18**	.46**	.27**	.29**

Note. Values represent Pearson correlation coefficients. $p < .05$ (*), $p < .01$ (**).

Table 5 presents the results from multiple regression analysis. Several working conditions positively predicted mental illness, burnout, and secondary traumatic stress. Conversely, role clarity and manager support negatively forecasted compassion satisfaction.

Table 5. Significant predictors of mental illness and professional quality of life

Predictor	Outcome	β	t	CILB	CIUB
Relationships	Mental illness	.23**	3.41	.356	1.334
Work control		.25***	4.32	.579	1.551
Demands		.25***	3.78	.300	.952
Role clarity	Compassion satisfaction	-.56***	-11.04	-1.10	-.77
Manager support		-.23**	-4.53	-.41	-.16
Demands	Burnout	.28***	4.66	.164	.404
Role clarity		.21***	3.64	.203	.681
Change at work		.15*	2.36	.066	.737
Relationships		.16*	2.54	.054	.430
Work control		.15*	2.35	.043	.480
Demands	Secondary traumatic stress	.36***	5.58	.256	.535
Relationships		.22**	3.26	.136	.550
Role clarity		.18**	3.26	.158	.641

Note. Results are from multiple linear regression analyses (stepwise method). β = standardized coefficient. t = test statistic. CILB = 95% confidence interval lower bound. CIUB = 95% confidence interval upper bound. $p < .05$ (*). $p < .01$ (**). $p < .001$ (***).

Discussion

This study explored working conditions, mental illness, and professional quality of life among IRCS operational staff. Overall, the results revealed favorable working conditions and psychological outcomes, characterized by low levels of mental illness as well as high levels of compassion satisfaction. These findings are in line with several previous studies suggesting that humanitarian workers can demonstrate psychological resilience in spite of challenging circumstances. For instance, Ager et al. [15] as well as Foo et al. [3] found that national humanitarian staff in Uganda and Bangladesh reported moderate to low distress levels even when subjected to highly demanding environments. Conversely, international samples have reported higher rates of depression, anxiety, and burnout [9,5], suggesting that contextual and cultural factors may explain these differences. The relatively favorable mental health witnessed among IRCS staff may reflect strong organizational identity, collectivist cultural norms, and religiously rooted meaning-making processes which buffer psychological strain. Further, most respondents were nationally deployed, which often allows closer family contact and social integration—protective factors mentioned in earlier humanitarian research [8].

Nevertheless, contrary to expectations derived from the Job Demands–Resources (JD-R) model [19–26], several working conditions typically viewed as resources were positively linked to mental illness, burnout, and secondary traumatic stress, and negatively correlated with compassion satisfaction. These counterintuitive results call for careful interpretation. One plausible explanation is related to the role of confounding variables, such as dispositional optimism, personality traits, or general affectivity. Employees with higher levels of compassion satisfaction may concurrently hold more positive outlooks, leading them both to ascertain working conditions more favorably and to report fewer psychological symptoms [27–28]. This could create an inverse relationship that obscures the protective role of resources. Another explanation is that certain resources, including role clarity and managerial support, may act

differently in humanitarian contexts than in conventional occupational settings. In high-stake and unpredictable environments, greater role clarity and managerial oversight may augment responsibility, accountability, and exposure to emotionally demanding tasks, thereby intensifying strain rather than mitigating it [29–30].

The present findings are partly in accordance with prior research on humanitarian staff. Foo et al. [3] as well as Ager et al. [15] noted that organizational resources such as social support and team cohesion buffered stress but did not eliminate distress, highlighting the limits of psychosocial protection. Likewise, Lopes Cardozo et al. [9] noted that international humanitarian workers reported significant levels of depression, anxiety, and burnout despite access to supportive structures, suggesting that resources cannot fully counterbalance the demands of humanitarian work. In contrast, Cameron et al. [1] reported uniformly protective effects of workplace resources across humanitarian organizations, suggesting that contextual and cultural differences may explain inconsistencies across studies.

These findings also align with refinements of the JD-R model that distinguish between challenge and hindrance demands [31–32]. Traditionally, resources have been assumed to buffer demands and promote well-being, while demands are supposed to deplete resources and increase strain [19–26]. Recent evidence complicates this dichotomy, indicating that the meaning of both demands and resources are context-dependent. Challenge demands—such as workload, responsibility, or role clarity—may concurrently enhance motivation and exacerbate strain, while hindrance demands consistently compromise performance and well-being [31–32]. The results are further elucidated by the Challenge–Hindrance Stressor Framework [33–36], which underscores the role of appraisal in shaping outcomes. Challenge stressors may provide meaning and promote engagement while also augmenting stress and exhaustion. This perspective helps explain the paradoxical associations we observed: unfavorable working conditions may function as challenge stressors. In humanitarian contexts—where work is emotionally intense, unpredictable, and mission-driven—the motivational benefits of challenge stressors may coexist with significant psychological costs.

The present results extend prior applications of the JD-R model (Bakker & Demerouti, 2007, 2017) to humanitarian settings. While the JD-R framework generally predicts that job resources buffer demands and enhance well-being, our findings indicate that the protective effects of resources may be contingent upon their interaction with job demands, contextual stressors, and cultural factors. The dual role of resources as both motivational and taxing elements has been corroborated in recent refinements of the JD-R model [34–35]. Within the IRCS, where commitment to service and collective duty are culturally emphasized, role clarity and managerial involvement may be perceived as both empowering and demanding. This duality helps explain why satisfaction of compassion and burnout can coexist in the same workforce—a phenomenon also noted by Jachens [7] among humanitarian workers in Europe.

The relatively high compassion satisfaction scores witnessed in this study are in accordance with past evidence that humanitarian personnel often derive a strong sense of purpose and fulfillment from helping others [14,6]. The finding that burnout and secondary traumatic stress were lower than population norms supports the view that meaningfulness of work can counterbalance emotional fatigue. However, the coexistence of elevated demands with good well-being indicates that humanitarian staff may experience "sustainable engagement," where the motivational benefits of challenge stressors offset—but do not eliminate—psychological costs [33].

Taken together, these findings suggest that psychosocial resources should not be assumed to be universally protective. Rather, their effects are contingent upon contextual and individual factors, including cultural values, organizational structure, and personal resilience. This highlights the need for a more nuanced understanding of occupational health in humanitarian contexts, incorporating recent theoretical developments such as the challenge–hindrance distinction as well as culturally informed models of well-being. Future research should explore potential mediating and moderating mechanisms such as resilience, coping strategies, and cultural values to provide a more comprehensive account of how working conditions shape both mental health and professional quality of life among humanitarian workers.

This study had several limitations. Initially, the sample was unevenly distributed, with more than half of participants chosen from Fars province. This imbalance may restrict the representativeness and generalizability of the findings and could indicate province-specific working conditions or organizational culture that do not generalize to all IRCS branches nationwide. Further, although the instruments used were standardized and validated, the Cronbach's alpha coefficient for the "change at work" subscale was 0.598, which is below the commonly accepted threshold of 0.70. This reflects weaker reliability, and therefore the findings related to this variable should be interpreted with caution. This modest value may reflect the small number of items (three) and the conceptual breadth of the construct, both of which tend to lower alpha coefficients even when inter-item relationships are acceptable. To further explore this issue, we analyzed the "Cronbach's Alpha if Item Deleted" and "Inter-item Correlation Matrix" outputs in SPSS. According to the findings, removing

any single item did not meaningfully ameliorate the overall alpha value, confirming that the issue is structural rather than item-specific. The average inter-item correlation was .34, lying within the recommended range of .20–.40, suggesting satisfactory internal homogeneity of the subscale. Future research could complement Cronbach's alpha with other reliability indices such as Composite Reliability or test–retest reliability to further appraise the stability of the measure. Finally, the cross-sectional design precludes causal inferences, and reliance on self-report measures may introduce bias. Future research is recommended to include more balanced samples across provinces and apply longitudinal designs.

Conclusion

IRCS staff reported good well-being, with challenge stressors appearing to contribute to their work-related well-being, thus enhancing IRCS workers' health. This study contributes to the understanding of occupational health in humanitarian contexts by emphasizing the nuanced, and sometimes counterintuitive, effects of psychosocial factors. Practically, these results highlight the importance of continuous psychological monitoring. The findings suggest that humanitarian workers' well-being cannot be fully explained by traditional models that view job resources as protective. Rather, unfavorable working conditions may serve as "challenge stressors", psychologically taxing yet meaningful, through which workers derive purpose and motivation. These results call for refined approaches to promoting workplace health in humanitarian organizations, recognizing that even supportive conditions may involve psychological strain. For policy and practice, continuous monitoring of humanitarian responders' mental health, coupled with interventions that balance challenge and protection, is critical for sustaining both worker well-being and organizational effectiveness.

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Conflict of interest

None declared.

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Ethical Considerations

This study fully complies with the World Medical Association Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Participants [37]. All data were collected anonymously with informed consent, ensuring confidentiality and voluntary participation.

Code of Ethics

This study was approved by the Deputy for Education, Research, and Technology of the Iranian Red Crescent Society (IR.RCS.REC.1403.019).

Authors' Contributions

Davide Giusino: Conceptualization, Project administration, Validation, Writing – original draft, Writing – review & editing; Tayebe Rahimi Pordanjani: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Validation, Writing – original draft, Writing – review & editing; Ali Mohammadzadeh Ebrahimi: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Resources, Supervision, Validation, Visualization, Writing – review & editing.

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