



Temperament, Character and Organisational well-being among Obstetrics and Gynaecology Personnel: a pilot study

Temperamento, Carácter y Bienestar Organizacional entre el Personal de Obstetricia y Ginecología: un estudio piloto

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Abstract

Few studies in the literature have related organisational well-being and temperament according to Cloninger's bio-psycho-social model. This paper investigates the relationship between dimensions of temperament (NS; HA; RD) and character (CO; SD; ST; P) and dimensions of organisational well-being in Obstetrics and Gynaecology personnel. Thirty-eight subjects, predominantly women (89.5%) aged between 18 and 63 years, participated in the study ($M=50.20$ $SD=9.81$). The Temperament and Character Inventory of R. Cloninger et al. (1994) extended version and the C.I.V.I.T. questionnaire. Positive correlations emerged between Self-Directedness and positive perceptions of the context and work and negative correlations between Self-Directedness and negative perceptions of job security and discrimination. Work well-being may be related to certain character traits rather than temperament and this correlation suggests a connection between personality and work adaptation.

Keywords: Obstetrics; Temperament; Bio-psycho-social Model; Organisational Well-being

Resumen

Pocos estudios en la literatura han relacionado el bienestar organizacional y el temperamento según el modelo bio-psico-social de Cloninger. Este trabajo investiga la relación entre las dimensiones del temperamento (NS; HA; RD) y el carácter (CO; SD; ST; P) y las dimensiones del bienestar organizacional en el personal de Obstetricia y Ginecología. Treinta y ocho sujetos, predominantemente mujeres (89.5%), con edades comprendidas entre 18 y 63 años, participaron en el estudio ($M=50.20$ $SD=9.81$). Se utilizó la versión extendida del Inventario de Temperamento y Carácter de R. Cloninger et al. (1994) y el cuestionario C.I.V.I.T. Surgieron correlaciones positivas entre la Autodirección y las percepciones positivas del contexto y el trabajo, y correlaciones negativas entre la Autodirección y las percepciones negativas de la seguridad laboral y la discriminación. El bienestar laboral puede estar relacionado con ciertos rasgos de carácter en lugar de temperamento, y esta correlación sugiere una conexión entre la personalidad y la adaptación laboral.

Palabras clave: Obstetricia; Temperamento; Modelo Bio-psico-social; Bienestar Organizacional

INTRODUCTION

Organisational well-being and health

The state of 'Organisational Well-being' or 'Organisational Health' is inseparable from the concept of 'Health', which has been defined by the World Health Organisation (WHO, 2006) in a holistic sense. 'Health' comprehensively encompasses the mind-body unity of the individual within his or her socio-cultural context, it represents 'a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity' (WHO Constitution, 2006, p. 1).

Organisational well-being refers to the way in which people live in relation to several aspects of the organisation in which they work. Anthony J. Montgomery et al. (2020) describes well-being challenge as 'the ability of an organisation to promote and maintain the highest degree of physical, psychological and social well-being of workers in all types of employment'. Organisational malaise, on the contrary, represents the antithesis of what has been stated about organisational well-being, a condition of worker discomfort and suffering (Torri & Toniolo, 2010). The main components representing the macro dimensions that every organisation must refer to in order to achieve and maintain the well-being objective are: satisfaction with the organisation; desire to be committed to the organisation; feeling of being part of a team; desire to go to work; high involvement; feeling of self-efficacy; perception of success of the organisation; positive work-life relationship; satisfactory interpersonal relationships; recognition of organisational work; positive image of managers (De Simone, 2014; Wall et al. 2021).

All public administrations must periodically carry out surveys to detect workers state of well-being. These surveys are aimed at a recognition of the 'health state' of the organisation itself and aim to implement interventions to improve the workers well-being and consequently increase the productivity of the health authority (Carvajal-Arango et al., 2021).

The bio-psycho-social model of Temperament and Character

Over the past twenty years, data has shown several studies related to Temperament and Character, conducted on specific groups such as military personnel (Elsass, 2001; Han & Lee, 2013; Jang et al. 2014), nurses (Eley et al., 2011; Mihailovic et al., 2022; Yazici et al., 2014), office workers (Hwang et al., 2020), physicians (Sievert et al., 2016; Vaidya et al., 2004), students (Rizzo & Liang, 2017) etc. and in international, rather than national, contexts, neglecting the obstetrical-gynaecological sphere.

Temperament is the result of biological evolution that conditions the individual from birth and is determined by intrinsic factors in humans. Temperament, personality and character are independent concepts, although often misunderstood and interchanged. They are the result of various factors, both innate and acquired, that influence each individual throughout his or her life history (Cloninger et al., 1993; Rizzo, 2013).

Considering that each healthcare professional, before being considered as a 'worker' is an individual with unique personality, character, and temperament, who consciously influence and is influenced by the work context, the career choices, and the care setting (Mento, Rizzo et al., 2016; 2019).

Robert C. Cloninger's biosocial theory (1993) suggests that personality is a combination of neurobiologically inherited traits (temperamental dimension) and traits influenced by sociocultural factors (character dimension). Cloninger's classification of personality types includes a three-dimensional model (Novelty Seeking, Harm Avoidance, and Reward Dependence), later expanded to a seven-dimensional structure. The temperament dimensions include Novelty Seeking, Harm Avoidance, and Reward Dependence, while the character dimensions encompass Self-directedness, Cooperativeness, Self-transcendence, and Persistence (for a complete description see: Rizzo, 2013). The Temperament and Character Inventory (TCI) is a validated self-administered test that assesses these dimensions, aiding in the diagnosis and treatment planning of psychiatric disorders. The TCI provides a profile that helps understand an individual's personality in categorical diagnostic assessments (Cloninger et al., 1994).

Temperament in Healthcare

A study conducted in Norway by Michael Kluger et al. (1999) recruited doctors, anaesthetists and anaesthetist residents as part of the sample, administering the TCI in a sample of 364 physicians. Findings showed the anaesthetist specialists reporting high scores on the Cooperativeness, Harm Avoidance and Self-Directionality scales compared to the general population sample. Physicians reported high scores on Cooperativeness compared to their anaesthetist colleagues, while residents scored high on Novelty Seeking and Reward Dependence. A personality disorders was found in 10% of residents, 2% of physicians, and 9% of anaesthetists with implications for recruitment, risk management and professional development.

In 2009, a study was conducted on nurses within the psychiatric department, assessing self-esteem and temperament, to determine which factor determines occupational stress. The results showed a gender difference, women presented

a higher self-esteem, furthermore, the study shows that the most prevalent subtype was Hyperthymic Temperament, observing an interaction between the subtypes of temperament, self-esteem, and professional experience. This shows the importance of investigating in the healthcare field to detect those factors that indicate personality and temperament disorders to improve organisational well-being and customer satisfaction (Cordeiro & Figueira, 2009).

Objective of the present study

Analyzing the well-being process and all the related intrinsic and extrinsic factors, we hypothesize a correlation between the dimensions of the health professional's temperament (persistence, self-transcendence, cooperation, harm avoidance, self-directedness, reward dependency, novelty seeking) and the dimensions of organisational well-being perceived by the worker. There is much evidence in the literature of the interconnection between temperament and adaptation (Vaughn & Shin, 2011). Adaptability is that characteristic which allows one to easily adapt to changes or to a new environment. Temperament can be assumed to be the basis on which perceptions of one's environment are built (Rothbart & Hwang, 2005).

At the same time, there is scientific evidence that events and the environment, due to their reciprocal interaction with the person, can create changes in traits, which from a clinical point of view constitute an attempt at adaptation, an accommodation reaction (Quinn et al., 2009).

To our knowledge, few studies in the literature have related organisational well-being and temperament according to Robert Cloninger's bio-psycho-social model, especially among obstetrics personnel. Given these premises, it is easy to understand how both, as a biological and genetic disposition, and character, as the result of reciprocal interactions between person and environment, can be closely related to organisational well-being.

METHODS

Procedure

The study took place before Covid-19. The participants were individually interviewed in person, after signing an informed consent, with reference to the regulations requiring the periodic assessment expected by the health system of perceived organisational well-being. The participants completed two paper-and-pencil tests consisting of a pool of over 320 items. Completion took between 20 and 40 minutes on average, in a single session. The research guaranteed anonymity, as requested by the ethical principles stated in the Declara-

tion of Helsinki regarding subjects involved in research. The present survey did not involve any manipulation or risk.

Instruments

Temperament and Character Inventory (Cloninger, 1993)

The TCI, in its most comprehensive version (version 9) consists of 240 items: 89 are derived directly from the TPQ and, together with a further 27 items added ex novo to improve the reliability of the scales, explore temperamental traits (NS, HA, RD and P), 119 assess character traits (SD, C and ST) and a further 5 serve as indicators of the presence of PD. The scale scores are still calculated on the 226 items of the previous version. There is also a reduced version of the TCI with 125 items, which is usually used as a screening instrument.

As the item assessment is dichotomous (true/false), the score is 1/0 for positive items and 0/1 for negative items. The raw scores are transformed into standardized T-scores that allow a personality profile to be drawn up. For each temperamental and character trait and for the corresponding subscales, T-scores and percentile scores corresponding to the respective raw scores are prepared on the basis of a normative sample. For interpretation purposes, the following cutoff points are indicated for the percentile scores: very low 0-16.7%; low 17-33%; medium 34-66.7%; high 67-83%; and very high 84-100%. In the present study, the Italian version was used ($\alpha=.79$).

CIVIT Organisational Well-being Questionnaire

The questionnaire of the Independent Commission for the Evaluation, Transparency and Integrity of Public Administrations (Independent Commission for the Evaluation and Transparency and Integrity of Public Administrations, 2013) consists of 73 items and an anagraphic sheet (gender; type of contract; age range; length of service; qualification). CIVIT Sections (see Table 1) are rated on a degree of agreement on a 6-point likert scale from 0= not at all to 6=at all.

The questionnaire is formulated in Italian language and obtained in the present study a value of $\alpha=.80$.

Organisational Well-being

A - Occupational Safety and Health and Work-related Stress

B - Discrimination

C - Fairness in my administration

D - Career and professional development

E - My work

F - My colleagues

G - The context of my work

H - The sense of belonging

I - The image of my administration

Degree to which the assessment system is shared

L - My organisation

M - My performance

N - The functioning of the system

Evaluation of the Hierarchical Superior

O - My boss and my growth

P - My boss and equity

Table 1. CIVIT Structure*Participants*

According to the National Institute of Health, the number of midwives in Italy is 29 per 100,000 inhabitants. The convenience sample used for the study consisted of 38 subjects from a pool of 42 eligible workers; 89.5% were women, while the remaining 10.5% were men working in Obstetrics and Gynaecology Units, belonging to different Hospitals of the city of Messina, Southern Italy (250,000 inhabitants). Of these, 21% had a fixed-term contract type, while the majority (78.9%) have a permanent employment contract. Regarding the age groups represented, the distribution of subjects according to age group emerged as follows: 21.1 % up to 30 years; 15.8 % 41 to 50 years; 57.9 % 51 to 60 years; 5.3 % over 60 years. Regarding length of service, most of the subjects (68.4%) have worked for a minimum of 11 and a maximum of 20 years. The 26.3% have worked for less than 5 years, and only 5.3% have worked for between 5 and 10 years. The position held in the organisation was also noted, resulting in 100% of the individuals holding a non-management role.

Statistical analysis

Data were analysed using the Statistical Package for Social Sciences SPSS 27.0 (IBM, Chicago, Illinois). We focused on descriptive statistic, which would give an account of the results obtained from the sample, to adequately describe the expression of the variables measured. Furthermore, it was possible to explore

the mutual influence between Temperament, Character and Organisational Well-being through the calculation of Pearson's correlations.

RESULTS

Descriptives

Temperament in the Obstetrics Units

Table 2 shows the overall statistics concerning the minimum and maximum scores obtained and the corresponding averages and standard deviations.

TCI Descriptive Statistics	Min	Max	Mean	SD
Novelty Seeking	12	25	17.63	4.258
Harm Avoidance	6	32	18.53	7.09
Reward Dependence	6	18	14.79	2.879
Persistence	4	7	5.63	0.955
Self-directedness	19	42	29.84	6.012
Cooperativeness	24	40	31.05	4.223
Self-transcendence	9	30	18.84	6.56

Table 2. Descriptive statistics for raw TCI scores

The prevailing temperament

In order to obtain information on the prevailing temperament type in the group examined, after transforming scores, it was possible to determine which temperament type was the most prevalent among the three temperament types. Table 3 shows the distribution of the temperament types in the sample. As can be observed, the prevalent is the Reward-dependent temperament.

Temperament type	Percent
Novelty Seeking	10.5
Harm avoidance	21.1
Reward Dependence	68.4

Table 3. Prevalent Temperament Types

Type of prevailing character

Table 4 shows the prevailing character type for the sample examined. Most of the subjects show a cooperative character, i.e., based on social acceptance.

Character type	Percent
Self-directedness	36.8
Cooperativeness	47.4
Self-transcendence	15.8

Table 4. Types of Character in the sample

Analysis of organisational well-being

For the analysis of organisational well-being, the sections indicated in the questionnaire were followed, and a total score was also calculated from the sum of all raw scores (see table 5). Higher scores indicate a positive attitude and vice versa, lower scores suggest poor organisational well-being. Table 5 shows the descriptive statistics obtained for the various sections of the organisational well-being questionnaire.

C.I.V.I.T.	Minimum	Maximum	Mean	Std. Deviation	Mean %
Security	24	54	38.63	8.578	65.85%
B. Discrimination	31	53	39.47	6.363	67.72%
C. Equity	6	24	16.53	5.015	46.11%
D. Career	5	29	16.47	6.467	70.95%
E. Work	20	30	25.63	2.813	45.89%
F. Colleagues	9	31	22.74	5.404	70.95%
G. Context	8	30	20.21	7.231	60.84%
H. Membership	15	30	22.95	3.993	71.79%
I. Image	9	18	15.74	3.052	84.91%
L. Organisation	4	22	15.37	4.890	56.84%
M. Performance	8	24	15.32	4.843	56.58%
N. Functioning	5	26	16.74	6.314	46.95%
O. Boss and growth	5	30	17.89	7.233	51.58%
P. Boss and equity	4	24	13.89	6.699	49.47%

Table 5. Descriptive Statistics of row scores

The analysis of organizational well-being CIVIT sections highlights that the highest scores were recorded in the areas of discrimination, career opportunities, relationships with colleagues, division of responsibilities (membership), and organizational image. The overall picture that emerges is high satisfaction in these areas, with the exception for the discrimination area, which shows elevated scores.

Inferential statistics

Relationship between temperament and organizational well-being

In order to test whether there was a relationship between temperament, character and organizational well-being, and thus to answer the correlational hypothesis of the pilot research, Pearson's correlations were used. All variables of the study were normally distributed. The skewness values were between ± 3 , and kurtosis values between ± 10 (Brown, 2006). Only one negative relationship emerged between the type of novelty-seeking temperament and the aspect of equity in the organisation: the more the subject is inclined to seek new stimuli, the less satisfactory he considers the level of equity in the unit.

Relationship between character and organizational well-being

Ultimately, the character scales were correlated with the dimensions of organizational well-being (see Table 6).

Results indicates that character is the aspect of personality most closely related to the perception of well-being. Significant associations emerged between self-directedness and satisfaction with work and the work context ($p < 0.05$).

A correlation also emerged between the self-transcendent type and the perception of job security and discrimination. In fact, the result shows that the higher the dimension of Self-transcendence, the lower the person perceives the security of their work environment ($p < 0.01$). Moreover, the level of Self-transcendence is also associated with higher work discrimination ($p < 0.05$).

	SD	C	ST
A. Security	-0,07	-0.122	-.467*
B. Discrimination	0.025	0.162	.698**
C. Equity	0.049	0.151	-0.175
D. Career	0.151	-0.084	-0.09
E. Work	.460*	0.282	0.138
F. Colleagues	0.014	0.047	-0.167
G. Context	.567*	0.214	0.101
H. Membership	0.312	0.185	-0.215
I. Image	0.203	-0.102	-0.097
L. Organisation	-0.047	-0.052	-0.017
M. Performance	0.084	0.04	-0.161
N. Functioning	-0.026	-0.124	-0.319
O. Boss and growth	0.005	0.015	-0.114
P. Boss and equity	0.122	0.151	-0.142

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

SD= Self-Directedness; C=Cooperativeness; ST=Self-Transcendence

Table 6. Correlations between character dimensions and organizational well-being

DISCUSSION

The objective of the present study was to examine the influence of temperament and character, as fundamental components of personality based on Robert Cloninger's bio-psycho-social model, on the perception of organizational well-being within the obstetrics personnel population.

In their 2019 article titled *Well-being at work from a multilevel perspective: what is the role of personality traits?* Parent-Lamarche, Annick, and Alain Marchand examined the impact of work organization conditions and personality traits on well-being among Canadian workers. The study found that factors such as psychological demands, number of working hours, job insecurity, self-esteem, locus of control, extraversion, neuroticism, and conscientiousness significantly influenced well-being.

Despite these evidences, literature studies which addressed the role of temperament in organizational well-being among midwives are completely missing. Recently, Gabriel Raoust, Petri Kajonius, and Stefan Hansson (2023) examined the relationship between personality traits and decision-making styles among obstetricians and gynaecologists during childbirth emergencies. The results

showed that these medical professionals had distinct personality traits compared to the general population, scoring lower on Neuroticism and higher on Extraversion, Agreeableness, and Conscientiousness. As regards temperament in the field of gynaecology, studies were mostly focused on mothers (Mento, Settineri et al., 2016; 2017; Rizzo, Bruno et al., 2022; Settineri et al., 2015). The results of the present study indicate that the most prevalent temperament type among midwives was the Reward-dependent type. This finding suggests that these individuals tend to base their actions in the workplace on the rewards and punishments they receive from their environment. Reward-dependent individuals generally exhibit a strong orientation towards promptly and appropriately responding to social demands in order to gain approval. They are often highly sensitive to the reactions of others, susceptible to social pressures, and reliant on external rewards. Consequently, they tend to display sociability, willingness to help others, and altruistic behaviour. Their heightened emotional sensitivity and desire to please others may also have influenced their choice of university study course, as previous research has identified associations between temperamental traits and the selection of specific degree programs (Mento, Rizzo et al., 2016; Jaracz et al., 2021).

In response to the specific research question at hand, our findings indicate that character is the personality aspect most closely associated with the perception of well-being. Particularly, we observed significant associations between self-directedness and satisfaction with work and the work context. Specifically, our analysis revealed significant correlations between self-directedness and levels of satisfaction with work and the work context. This implies that individuals who demonstrated higher levels of self-directedness, characterized by traits such as autonomy, independence, and personal responsibility, also reported greater satisfaction with their work and the surrounding work environment. These findings are consistent with John D. Politis (2006) which argued that possessing a strong sense of self-direction and personal agency is positively associated with overall work satisfaction and the perception of favourable work conditions.

Furthermore, we observed a negative association between the self-transcendent temperament and the perception of job security and discrimination. Higher levels of self-transcendence were linked to a more negative perception of work environment safety and increased perception of discrimination. Self-transcendence, as a personality trait, encompasses the expansion of personal boundaries and includes spiritual ideas, such as a sense of connection to the universe (Chirico, 2016). In our study, we discovered that individuals with higher levels of self-transcendence possess a heightened awareness and sensi-

tivity towards aspects associated with belongingness, acceptance, feelings of exclusion, and discrimination. They tend to be more attuned to discerning attitudes or perceiving threats that may compromise their sense of security. On the contrary, José J. Pizarro et al.'s (2021) research on self-transcendent emotions, found which promote a stronger identification with humanity and motivations to help others. Together, these findings suggest that individuals with higher self-transcendence are more inclined to prioritize collective well-being and exhibit pro-social behaviours.

There are several limitations that need to be addressed before considering the generalizability of these findings. First, the present study is limited by the small sample size, which currently categorizes it as a pilot study, since data were collected through individual face-to-face sessions. Secondly, there is an imbalance in gender representation. It is well known that Temperament traits depend on gender. Literature showed a higher prevalence of Novelty Seeking among men and Reward Dependence and Harm Avoidance among women (Else-Quest et al., 2006). However, it should be acknowledged that obstetrics departments typically exhibit a notable predominance of female staff, which may contribute to the skewed gender distribution in this study.

In conclusion, the findings of this study support the hypothesized relationship between temperament, character, and organizational well-being. Specifically, it is the individual's character, shaped by social interactions, rather than temperament alone, that appears to play a significant role in shaping the perception of organizational well-being within the work environment.

Moving forward, it is crucial to build upon these findings and explore additional factors that may influence organizational well-being. Future research should delve deeper into understanding how specific character traits and social interactions impact various dimensions of well-being (Rizzo, 2023; Rizzo et al., 2023; Tarchi et al. 2023), such as job satisfaction (Rizzo, Alfa et al., 2022), work-life balance (Chirico, 2017), and overall mental health (Yildirim, et al., 2023). Furthermore, investigating the potential mechanisms through which character traits are developed and how they interact with work organization conditions can provide valuable insights into promoting and enhancing well-being within organizations.

Overall, further research in this area has the potential to contribute to the design of evidence-based interventions and policies aimed at enhancing organizational well-being and promoting positive work experiences.

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Amelia Rizzo contributed to the design, interpretation of the data, drafting, and critically revised the article. Patrizia Marra contributed to data collection, analysis, and interpretation of data and revised the article. Amelia Rizzo contributed to data analysis, and interpretation and revised the article.

DATA ACCESSIBILITY STATEMENT

The data that support the findings of this study are available from the corresponding author, [AR], upon reasonable request.

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