

# Falsification of Type at Work: Assessment of Prevalence and Investigation of Predictors

Farouk Hafez\*

National Research Centre, Dokki, Egypt

## Abstract

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\***Correspondence:** Farouk Hafez. National Research Centre, Dokki, Egypt. E-mail: [salwa999\\_2000@yahoo.com](mailto:salwa999_2000@yahoo.com)

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**BACKGROUND:** Occupational-stress, job-satisfaction and poor health outcomes are closely related and strongly pertain to individuals' mental health and physiological well-being. Falsification of Type is a growing term in the field of organisational psychology that measures occupational stress when working in a job that does not match one's, natural leader.

**AIM:** The present work aims at determining the prevalence of falsification of type and associated socio-demographic and work-related factors.

**METHODS:** The study sample consists of 150 researchers working at the National Research Centre of Egypt. Participants were asked to complete a self-report Falsification of Type Questionnaire, Andrews and Withey scale for Job Satisfaction, in addition to socio-demographic and work-related variables. Statistics included descriptive and comparative analyses. A regression model was built with falsification of the type as the dependent variable.

**RESULTS:** Facilities showed the highest rate of dissatisfaction in the Job Satisfaction Questionnaire. The most prominent manifestations of falsification were fatigue and irritability, and its predictors were the position, interpersonal relationships, facilities and sex according to the regression model. Falsification of type could seriously contribute to occupational stress. Job satisfaction is highly about falsification.

**CONCLUSION:** More research on the Falsification of Type at work is recommended with the greater attention of employers to the importance of the concept of person-job fit.

## Introduction

Occupational-stress is a prevalent, costly problem in today's workplace. It is reported to cause psychological and physiological dysfunctions for the workforce and to decrease motivation in excelling in their position (Colligan et al., 2006) [1]. It is defined as the response people may have when presented with work demands and pressures that do not match their knowledge and abilities (WHO 2015) [2].

Occupational-stress was reported to be highly attributed to the surrounding working environment (Tabatabaei and Hashemi 2014) [3]. Job-satisfaction is a widely investigated job attitude that is highly associated with poor health outcomes due to occupational-stress (Khamisa et al., 2015) [4]. Gender, age, education level, years of experience and

other psychosocial and work-related factors have also shown association with occupational stress (Ali et al., 2016; Jain et al., 2015) [5] [6]. Qualitative and quantitative assessments of occupational-stress prevalence, its most predominant signs and predisposing factors are of crucial importance (Kok and Muula 2013) [7].

A recent approach relates occupational-stress to what is called *Falsification of Type*. Falsification of Type is a concept first introduced by the famous psychologist Carl Jung (1923) [8]. In his book, Jung stated that "...whenever such a falsification of type takes place as a result of external influence, the individual becomes neurotic later, and a cure can successfully be sought only in a development of that attitude which corresponds with the individual's natural way." (Jung, 1921: pp. 415-416) [9]. Extended work on falsification by Katherine Benziger (2013)

[10], highlighted the intimate relationship between pathological signs of stress and working in a job that does not match one's natural talents and interests. Studies on the physiological foundations for Falsification of Type over the past two decades found that the short-term consequences of Falsification of Type were increased irritability, headaches, and difficulty in mastering new tasks. Long-term sequelae of falsification included exhaustion, depression, lack of joy, homeostatic imbalance, premature ageing of the brain, and a vulnerability to illness.

Although the idea is appealing, yet, very little is known about Falsification of Type at work. The present study is an attempt to assess Falsification of Type among a pilot sample of researchers at the National Research Centre (NRC) of Egypt and the factors that may influence such falsification.

## Subjects and Methods

A random sample of 150 researchers (16% males and 84% females) working at the NRC of Egypt voluntarily participated in the study. Participants were asked to complete a questionnaire for socio-demographic data and work-related factors. Socio-demographic data included age, gender, marital status, income and presence of chronic diseases. Work-related factors encompassed daily working hours ( $\leq 5$ hrs or  $> 5$ hrs), total working years ( $< 10$ years or  $\geq 10$ years) and job satisfaction.

Job satisfaction was measured using Andrews and Withey (1976) [11] Job Satisfaction Questionnaire. Respondents were asked to indicate how they feel about their job on a 7-point Likert scale where 1 is most satisfied, and 7 is least satisfied. The scale consists of five subscales about position, interpersonal relationships, job nature, job demands and facilities. The average score of the five subscales was used to represent overall job satisfaction.

Falsification of Type Scale is another self-report measure that was used to estimate falsification of type (Benziger 1996) [12]. It assesses stress resulting from a violation of one's natural preferences at work. The questionnaire targets some common signs of stress: laziness at work, irritability, loss of concentration, headache, loss of sense of humour, chronic fatigue and excess caffeine intake. It also asks about the feeling that time moves slowly at work, being bored at work, finding job demands non-interesting, feeling that one's work is underestimated, feeling that one's ideas are always offended at and feelings of disrespect of one's achievements. A three-point Likert scale with scores of zero, half and one represented the answering scheme. Average scores were then calculated for all the 14 items of the questionnaire to create a score of zero to one where

one represented the greatest degree of falsification.

Analyses were performed using SPSS, version 23 (SPSS Inc., Chicago, IL, USA). Means, standard deviations and frequencies were calculated for all study variables. Multiple linear regressions were used to examine the influence of age, sex, marital status, monthly income, education level, chronic disease, working years and job satisfaction on falsification of type. Choice of the predictors above was based on our results from univariate analyses, in addition to the previously established impact on outcomes. All statistical tests were two-sided, and a p-value of 0.05 or less was considered significant.

## Results

As shown in Table 1, the majority of the study population were female (84%), less than 40 years old (69%), married (79%), not suffering from chronic diseases (78%), have been working for more than 10 years (54%) and working for less than 5 hours per day (57%). Approximately 13% were dissatisfied with their job, and 11% suffered falsification of type.

The job satisfaction subscale showing highest rates of dissatisfaction was that pertaining to facilities (mean = 4.5, SD = 1.36). Fatigue (mean = 0.62, SD = .44) and irritability (mean = 0.54, SD = 0.46), were the most prevalent signs of falsification.

**Table 1: Descriptive data of variables and measures as frequency percentage**

Study Variables (N)	N (%)
Gender (150)	
Male	24 (16%)
Female	125 (84%)
Age (138)	
< 40	95 (69%)
$\geq 40$	43 (31%)
Social Status (95)	
Married	110 (79%)
Single	29 (21%)
Monthly income (133)	
< 5000LE	53 (40%)
$\geq 5000$ LE	80 (60%)
Education (143)	
Post doctorate	65 (45%)
Postgraduate	78 (55%)
Daily Working Hours (129)	
$\leq 5$	73 (57%)
$> 5$	56 (43%)
Working Years (144)	
$\leq 10$	66 (46%)
$> 10$	78 (54%)
Chronic Diseases (144)	
Yes	32 (22%)
No	112 (78%)
Falsification of type (150)	
$\leq 0.5$ (non-falsified)	133 (89%)
$> 0.5$ (falsified)	17 (11%)
Job Satisfaction	
$\leq 4$ (satisfied)	130 (87%)
$> 4$ (dissatisfied)	20 (13%)

As shown in Table 2, none of the demographic or work-related variables differed significantly between the falsified and non-falsified groups except for job satisfaction. The vast majority (90%) of participants were satisfied with their jobs

when non-falsified compared to 65% of the falsified group (chi sq. = 8.002, p = 0.013).

**Table 2: Demographic and job characteristics: Comparison of falsified versus non-falsified participants**

Study Variables (N)	Non falsified group ≤ 0.5 (N = 133) N(%)	Falsified group > 0.5 (17) N(%)	P value
Gender (150)			
Male	24 (18%)	0 (0.0%)	0.076
Female	108 (81%)	17 (100%)	
Age (138)			
< 40	81 (66%)	14 (88%)	0.148
≥ 40	41 (34%)	2(12%)	
Marital Status (95)			
Married	97 (79%)	13 (81%)	1.000
Single	26 (21%)	3 (19%)	
Monthly income (133)			
< 5000LE	49 (41%)	4 (31%)	0.563
≥ 5000LE	71 (59%)	9 (69%)	
Education (143)			
Post doctorate	61 (48%)	4 (27%)	0.172
Postgraduate	67 (52%)	11 (73%)	
Daily Working Hours (129)			
≤ 5	67 (56%)	6 (55%)	1.000
> 5	51 (43%)	5 (45%)	
Working Years (144)			
≤ 10	57(44%)	9 (60%)	0.282
> 10	72 (56%)	6 (40%)	
Chronic Diseases (144)			
Yes	27 (21%)	5 (33%)	0.325
No	102 (79%)	10 (67%)	
Job Satisfaction			
≤ 4(satisfied)	119 (90%)	11 (65%)	0.013
>(dissatisfied)	14(10%)	6(35%)	

The group suffering from falsification of type showed significantly higher job dissatisfaction overall and in all domains, namely; position, interpersonal relationship and job nature and facilities at the working environment with the only exception being job demands (Table 3).

**Table 3: Comparing job satisfaction scores between falsified and non-falsified participants**

Job Satisfaction scale and its items	Non-falsified group ≤ 0.5 N=133	Falsified group > 0.5 N=17	P value
Job Satisfaction total score	3.2 ± 0.8**	4.1 ± 0.7**	< 0.001
Satisfaction with position	2.9 ± 0.8**	3.9 ± 1.2**	< 0.001
Satisfaction with interpersonal relationships	2.8 ± 0.91**	3.8 ± 1.3**	0.006
Satisfaction with job nature	2.8 ± 1.0**	3.8 ± 1.3**	< 0.001
Satisfaction with job demands	3.5 ± 1.2	3.9 ± 1.2	0.169
Satisfaction with facilities	4.4 ± 1.4*	5.2 ± 1.3*	0.029

\*significant at p < 0.05, \*\* significant at p < 0.001.

Multiple linear regression was performed with falsification of type as the dependent variable and age, sex, marital status, income, educational level, chronic diseases, working years and Job Satisfaction total score as the independent variables (Model 1a, Table 4).The model was significant (F (8, 99) = 6.100, p < 0.001, adjusted R2 = 0.276). The job satisfaction total score was the only significant predictor for falsification of type.

**Table 4: Linear regression predicting falsification of Type (Model 1a)**

	Falsification of type				
	Beta	SE	Standardised beta	T	P
Age	-0.016	0.050	-0.037	-0.308	0.759
Sex	0.081	0.042	0.164	1.918	0.058
Marital status	-0.061	0.046	-0.120	-1.328	0.187
Monthly income	0.005	0.039	0.014	0.137	0.891
Education level	0.079	0.048	0.203	1.638	0.105
Chronic diseases	-0.068	0.040	-0.147	-1.709	0.091
Working years	-0.018	0.043	-0.046	-0.413	0.680
Job Satisfaction	0.105	0.022	0.422	4.810	<.001

Replacing job satisfaction total score with its five subscales; position, interpersonal relationship, job nature, job demands and facilities produced Model 1b, Table 5 that was still significant (F (12, 95) = 6.784, p < 0.001, adjusted R2 = 0.393). Significant predictors for Falsification of Type were position, p = 0.002, interpersonal relationships, p = 0.004, facilities, p = 0.004 and sex, p = 0.027.

**Table 5: Linear regression predicting falsification of Type (Model 1b)**

	Falsification of type				
	Beta	SE	Standardised beta	T	P
Age	-0.043	0.048	-0.102	-0.892	0.374
Sex	0.088	0.039	0.179	2.245	0.027
Marital status	-0.026	0.044	-0.052	-0.599	0.551
Monthly income	0.019	0.036	0.047	0.518	0.606
Education level	0.041	0.047	0.106	0.880	0.381
Chronic diseases	-0.043	0.037	-0.094	-1.176	0.242
Working years	-0.022	0.041	-0.056	-0.527	0.599
Position	0.061	0.020	0.286	3.107	0.002
Interpersonal relationship	0.049	0.017	0.255	2.917	0.004
Job nature	0.005	0.017	0.027	0.289	0.773
Job demands	0.014	0.014	0.084	0.971	0.334
Facilities	0.039	0.013	0.269	2.970	0.004

## Discussion

In a sample of Egyptian researchers, we have found that the majority (87%) are satisfied with their work and are not suffering falsification of type (89%). However, a minority of researchers (11%) do show signs of falsification, and 35% of them are dissatisfied with their work.

According to our regression analysis and in agreement with the literature (Saleh et al., 2016; Lindholm and Szelényi 2013; Pillay 2009; Piko 2006; Kalliath and Morris 2002) [13-17], job satisfaction was the main predictor of Falsification of Type among the study population; less job satisfaction was associated with higher levels of falsification of type. When the same regression analysis was repeated with Job Satisfaction total score being replaced by scores of its subscales, position, facilities and inter-personal relationships were the subscales significantly influencing Falsification of Type together with gender.

The less job-satisfaction with the availability of facilities among the falsified group in the present study is consistent with the findings stated by Graham and his colleagues (2011) [18] and emphasises how lack of resources represent a prominent stressor at work generally and for researchers specifically. Another predictor of falsification was employee's position or post that could be attributed to the imbalance between effort and reward as stated by Mark and Smith (2012) [19]. Researchers, rather than other occupations, are reported to suffer from chronic fatigue and anxiety due to the nature of their work and the various other challenges they are exposed to (Holleman et al., 2015) [20]. As for the role of interpersonal relationships in predicting work stress, conflict with

peers (Malinauskienė et al., 2009) [21] could be one explanation. Brown et al., (2015) [22], on the other hand, found a link between employees' relation with managers, concerning the issue of trust, and their overall performance.

Strikingly all subjects experiencing falsification of the type were females. This is not unusual in the Egyptian working environment where Ali et al., (2016) [5] found significantly higher Allostatic Load Index (ALI) of primary mediators -that predicted stress at its early stage- for females (2.0) than males (1.1). They also found that all the population group with ALI exceeding the normal limit (12.9%) were females.

One similar study conducted by Amer et al., (2016) [23] on researchers working at NRC in Egypt showed that those who didn't receive their PhD/MD had a significantly higher score on Falsification of Type scale compared to PhD/MD holders. Falsification of type score also showed a significant negative correlation with income among researchers in the same study. Similarly, but non-significantly, in the present work, 73% of the group suffering falsification of the type were postgraduates, yet, with no impact of income on falsification of any sort.

Results of this study together with reports from the literature suggest that attempts to improving working conditions and hence the level of job satisfaction among workers are needed. Enhanced Job Satisfaction is related to better performance, better mental, psychological and physical health, better coping with stressors and creates positive emotions in the working environment (Choo and Bowley 2007; Luthans 2006) [24] [25]. This study provides evidence for the suffering of Falsification of Type by some researchers in Egypt. More research, both theoretical and empirical is needed to further understand this phenomenon and better match peoples' jobs to their interests and abilities.

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