

The Impact of Job Incongruence on Job Stress, Job Satisfaction on Health Mediated by Solution-Oriented Coping

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Holland presented a personality typology representing investigative, social, enterprising, intellectual, realistic and artistic types, which he argued could also be used to classify job types. This study was designed to test the hypotheses that incongruence between one's preferred job and one's actual job would be stressful and contribute to levels of job stress and impoverished health. Job satisfaction and solution-oriented coping were proposed as mediators of this relationship. Seventy-two people completed the Occupational Stress Inventory, The Deakin Coping Scale and the Vocational Preference Inventory. Job incongruence, job dissatisfaction and job stress predicted 42 percent of the variance in respondents' ratings of their physical health. The results provided support for the negative impact of lack of job congruence on health but not for the proposition that incongruence would also predict job stress. Although incongruence negatively predicted the use of solution-oriented coping strategies, coping did not act as a mediator variable between incongruence and health. The results are discussed in terms of state versus trait indicators of health, as well as the implications for career and health advisors.

The negative impact of stress on job satisfaction and wellbeing has been reported consistently. These effects include impairment of cognitive (e.g., Cohen, Evans, Stokols, & Krantz, 1986), emotional (e.g., Isard, Hembree, Dougherty, & Spizzirru, 1983) and behavioral functioning (e.g.,

Chen & Spencer, 1992) to more specific effects such as cardiovascular diseases (Sutherland & Cooper, 1990). While these studies are enlightening, the source of job stress has often been predicated upon the level of job demands or job pressure. Yet it may be that a mismatch between one's job preference and one's actual job is a more influential source of job stress. Such a mismatch

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may contribute to job stress and through this exert a more harmful impact upon health than job stress alone. The aims of this study are to investigate the level of incongruence between actual job and preferred job types, and to evaluate any discrepancy between these on levels of job stress, job satisfaction and health, and to determine the mediating effect of solution-oriented-coping. The findings from this study have implications for management strategies and for career and health advisors.

While stress has been seen variously as a stimulus (Cannon, 1932) or a response (Selye, 1956), it is the dynamic interaction between the person (internal response) and the environment (external stimuli) (Lazarus & Folkman, 1984) which offers a more embracing concept of stress. Holland's Theory of Vocational Personalities and Work Environments (1973, 1992), which seeks to match people to their preferred job role, is based on such a matching between people and their environment. As the workplace occupies some third or more of employed people's lives, the level of discrepancy between preferred and actual job roles may be related to levels of workplace stress. Workplace stress, often identified as job demands, job overload, role ambiguity and role conflict, is prevalent in modern society and has been shown to impact upon health. Examples of the psychological effects of job stress are job dissatisfaction, depression, anxiety, boredom, frustration, isolation (e.g., Greenglass, Burke, & Konarski, 1997; Ross & Altnaier, 1994) while physical symptoms and illnesses such as high blood pressure, cardio-vascular disease, diabetes, migraines and ulcers have been associated with high stress (Sutherland & Cooper, 1990). Behavioral symptoms, such as avoidance of work,

high absenteeism, high turnover rates, decreased productivity, increased alcohol and drug use, and aggression towards fellow employees are further organizational and individual behavioral symptoms (Moore & Cooper, 1996; Rees & Cooper, 1992; Schaefer & Moos, 1993; Spector, 1987).

Clearly, it is important to understand the factors that contribute to workplace stress and its impact upon job satisfaction and upon health. In order to do this, it is important to 'look outside the square' which in the literature to date, is comprised typically of job factors and person factors. It is also necessary to evaluate the level of congruence, or incongruence, between the person and the job. According to Holland (1973, 1992), one's personality reflects a vocational preference and, because different personality types have different interests, competencies, and dispositions, they tend to seek situations and others congruent with and similar to themselves. Thus, according to Holland, where people congregate, such as in the workplace, they create an environment that reflects their personality types, and it becomes possible to assess the environment along the lines used to assess personality types.

Holland (1973) proposed six theoretical personality types which he subsequently argued translate to the interests and competencies people bring to the workplace (Holland, 1992). These types are realistic (asocial, conforming, frank, genuine, materialistic), investigative (analytical, cautious, critical, independent), artistic (complicated, disorderly, emotional, imaginative), social (ascendant, cooperative, friendly, generous), enterprising (acquisitive, adventurous, ambitious, argumentative) and conventional (conforming, conscientious, defensive, efficient) (see Holland, 1973, for a fuller description). There is, of course,

some overlap between types most frequently, neighbouring types, and some types are diametrically opposed - so that there is one dominant type and two secondary types. Figure 1 provides an indication of the relationships between the personality types and, by extension, jobs categories. It follows then, that if people are not well matched to their jobs, this incongruity may contribute to increased job stress and through this, decreased job satisfaction. These factors may, in turn, lead to an inability to cope with job stress, and subsequently to poorer health.

Coping is the process by which people attempt to manage the stress resulting from demands that are perceived as taxing their available resources (Lazarus & Folkman, 1984). Moore and Greenglass (1999) referred to solution-oriented coping, or mastery, as a proactive coping style where people ask themselves 'why this issue is a problem for me' and, based upon that appraisal, they proceed to take steps to redress the problem.

Solution-oriented coping has been negatively related to the emotional reactions to stressors (e.g., felt miserable) (Moore & Vasile, 2000) and, as such, it might also protect or promote physical health. It may be however, that incongruence impact upon people's sense of solution-oriented coping.

The aim of this study is to investigate the paths between job incongruence, job stress, and health, and to ascertain the mediating effects of job satisfaction and solution coping (see Figure 2). It is hypothesized that job incongruity will contribute directly to perceptions of job stress, to reduced job satisfaction and health. Solution-oriented coping will mediate the impact of job incongruity and job stress on health while job dissatisfaction, resulting from job incongruence and job stress, will also demonstrate a mediating effect.

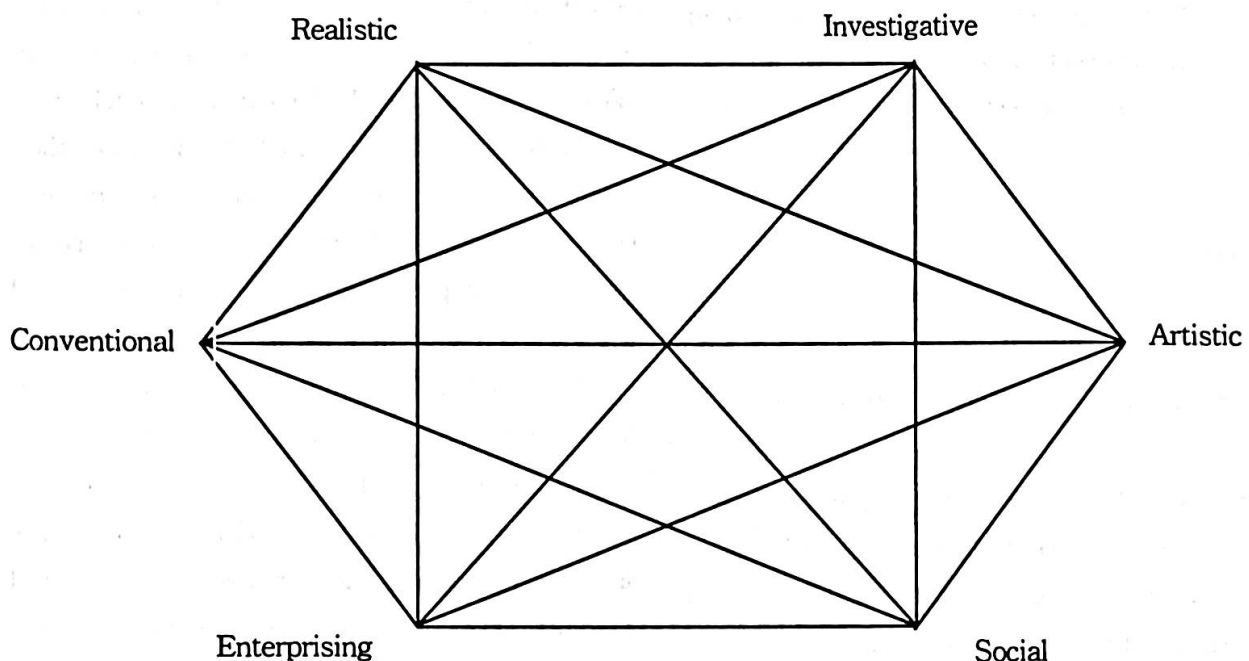


Fig. 1. Hexagonal model of personality and job environments (adapted from Holland, 1992)

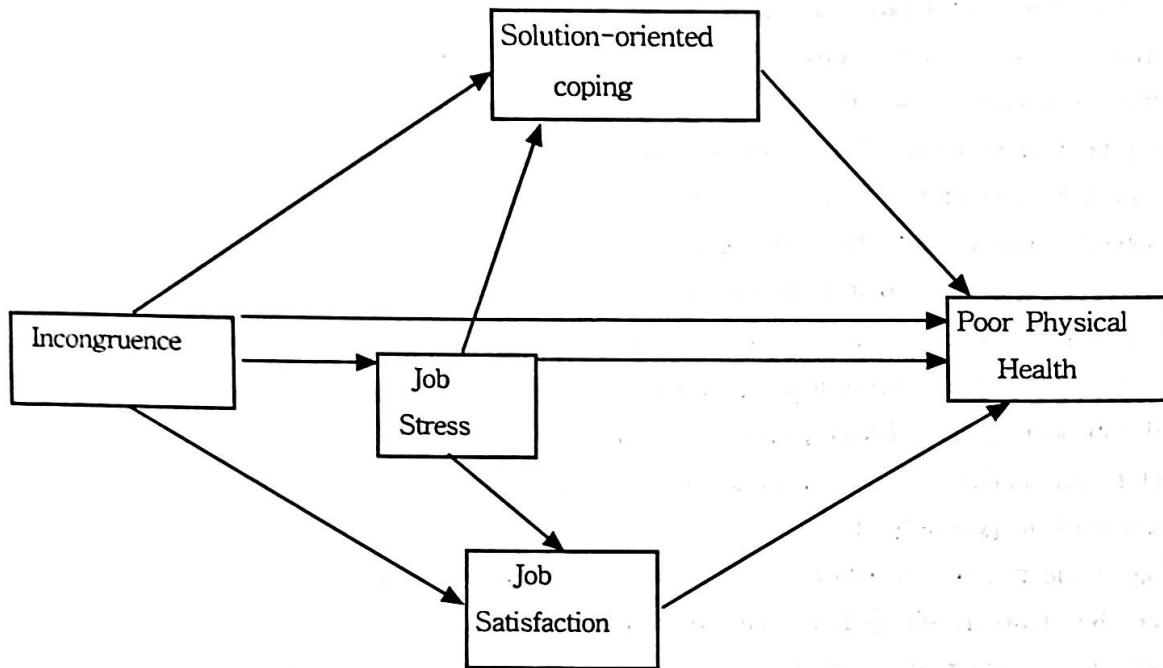


Fig. 2. Proposed model of job incongruence and job stress, mediated by solution-oriented coping and job satisfaction, on physical health

Method

Participants

Seventy-two people (48 females, 24 males) in full-time employment whose ages ranged from 21 to 54 years ($M=37.34$, $SD=9.19$) participated in this study.

Measures

The Occupational Stress Indicator (OSI) (Cooper, Sloan, & Williams, 1988) was used to measure physical health (e.g., 'Feeling unaccountably tired or exhausted'), job satisfaction (e.g., 'Communication and the way information flows around your organisation'), and job stress (e.g., 'Having too much work to do'). The OSI is answered on a 6-pt Likert scale with higher answers indicating greater levels of job stress, job satisfaction, and poorer physical health. The

internal reliabilities of the OSI factors are reported as moderate to strong ($\alpha \geq .71$).

The Vocational Preference Inventory (VPI) (Holland, 1973) measures the preference of people for jobs according to six personality/interest types: realistic, investigative, artistic, social, enterprising, and conventional. The VPI contains 160 job titles and respondents are required to indicate their preference for each job by choosing 'yes' or 'no'. The VPI was based upon reports that people possess stereotypical perceptions of job titles and these are classified into the six domains. Holland reported moderate to strong internal reliabilities for the six scales ($KR_{21} \geq .69$) and retest stability over periods of 6 weeks to 4 years ($r=.54$ to $r=.86$).

Congruence Measure. Many congruence calculations are available for use with the VPI measures (e.g., Swanye & Prediger, 1985). However, the M Index developed by Iachen (1984, 1990) was advocated by Holland (1985) as 'the most accurate technique' (p. 15) to assess the

congruence, or incongruence, between actual and preferred jobs, and will be used in the current study. Scores closer to zero represent greater congruence.

Procedure

Following Ethics approval from Deakin University for the conduct of this study on stress, health and coping, the Australian Human Resources Institute mailed an invitation to participate to 199 randomly selected members. Recipients of the mail-out received a plain language statement, a notice that completion and return of the questionnaire would constitute informed consent, and the questionnaire itself. Participants were asked to complete the questionnaire in their own time and to return it to the University in the reply-paid envelope provided. The response rate of 72 was approximately 36%.

Data were coded and entered for analyses under SPSS Version 10 and AMOS Version 3.6 (Arbuckle, 1996).

Results

Respondents were classified according to their

typology and incongruence score between this classification and actual job was calculated (see Iachen, 1984, 1990). The majority of respondents were classified as enterprising, followed by conventional and social. The congruence ratings were less disparate for the enterprising typology followed by the investigative and then the conventional typologies although no typology demonstrated a high level of convergence (Table 1).

The means, standard deviations, Pearson correlations, and Cronbach's internal reliability estimates for each variable in the model are presented in Table 2. The mean scores for the OSI subscales and for solution-oriented coping are similar to those reported by the authors (Cooper, Sloan, & Williams, 1994; Moore & Greenglass, 1999).

Path analysis was conducted using AMOS to ascertain the fit of the data to the model presented in the Figure 2. The independence model confirmed the presence of inter-correlations in the data and therefore its suitability for analysis using this technique, $\chi^2 (10, N=72)=48.15, p=.000$. The data provide support for the hypothesised model $\chi^2_{(11)}=3.04, p=.081$ (Normed $\chi^2=3.04$; GFI=.983; AGFI=.752; NFI=.937; IFI=.957; CFI=.946), and the χ^2 difference test indicated a significant improvement

Table 1.
Means and Standard Deviations of Incongruence by Typology and Frequency of Typology Classifications

	Realistic	Investigative	Artistic	Social	Enterprising	Conventional
<i>Frequency</i>	2	3	0	10	35	21
<i>Incongruence</i>						
M	250.00	120.00	0	159.50	117.21	145.23
SD	7.07	111.36	0	70.45	83.72	73.62

Table 2
Mean, Standard Deviations, Reliability and Intercorrelations of Variables

	1	2	3	4	5
1 Incongruence	1				
2 Solution oriented coping	-.16	1			
3 Job Stress	.01	-.09	1		
4 Job Satisfaction	.03	.21	-.22	1	
5 Health	.17	-.21	.59	-.33	1
<u>M</u>	135.76	34.83	201.74	90.48	31.69
<u>SD</u>	80.15	4.85	42.18	14.12	9.55
<u>α</u>	-	.77	.96	.91	.84

Correlations greater than .19 are significant at $p < .05$

in fit between the hypothesized model and the independence model, $\chi^2 (9, N=72)=45.70, p=.000$. There were however, non-significant paths in the model and an adjusted GFI that was lower than desirable. For reasons of parsimony, the paths with Beta-weights less than .05 were removed from the model. The final model (see Figure 3) provided a good fit of the data to the model $\chi^2 (3)=3.11, p=.375$ (Normed $\chi^2 =1.03$; GFI=.981; AGFI=.916; NFI=.935;

IFI=.998; CFI=.997; RMSEA=.023).

Overall, 42 percent of the variance in health was explained by the variables in the model. The largest predictor of poor health was high levels of job stress ($\beta=.54$) followed by job (dis)satisfaction ($\beta=-.20$) and lack of congruence between job preference and actual job ($\beta=.16$). Solution-oriented coping failed to demonstrate a significant impact on health ($\beta=-.09$). Incongruence

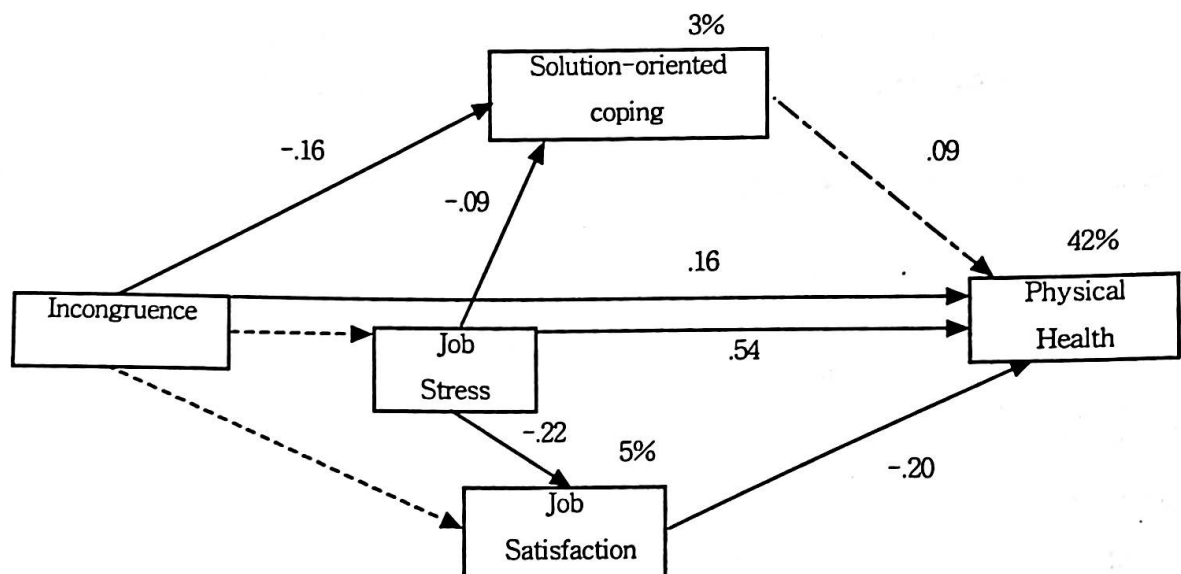


Fig. 3. Final model

impacted negatively upon solution-oriented coping ($\beta = -.16$) and job stress contributed negatively to job satisfaction ($\beta = -.21$).

Job stress exerted a total effect on health of $\beta = .58$, being the sum of its direct impact plus its contribution through job satisfaction. Lack of congruence between actual and preferred job had a total effect on health of $\beta = .175$, being the sum of its direct contribution and the additional effect through solution-oriented-coping.

Discussion

The aim of this study was to investigate a model of health predicted by job incongruence and job stress, and to ascertain the mediating effects of job satisfaction and solution-oriented coping on health. The findings provide support for many of the hypothesized relationships in the model.

The distribution of personality typologies in the current data was weighted towards enterprising (e.g., ambitious, energetic, self-confident, argumentative, see self as possessing leadership qualities) and conventional (e.g., orderly, persistent, self-controlled, see self as conforming, value business and commercial achievement). This spread is not surprising in a sample drawn from the membership of an institute of human resources management. What is more surprising is that, although people classified into these two typologies were among the three best in terms of congruence ratings, there was still a large disparity between preferred and actual job. This difference may be based in reality or, it may more accurately reflect the difficulties in classifying people according to one dominant typology. Holland (1985) himself has indicated that individuals have a profile that is

comprised of a hierarchy of three typologies (e.g., Enterprising, Conventional, Social = ECA) and elements of each form our disposition. From this, it follows that the same combination of elements may need to be considered in classifying jobs before attempting to rate congruence.

As expected, reports of higher levels of job stress did predict poorer physical health ratings. This finding is consistent with previous reports in the literature (e.g., Moore & Cooper, 1996; Spector, 1987). Job stress also predicted lower levels of job satisfaction and reduced job satisfaction also predicted poorer health. These findings in the current data are also consistent with past research (e.g., Greenglass et al., 1997; Moore, 2000).

The hypothesis that lack of congruence of preferred job with actual job would predict job stress was not supported. However, incongruence did have a direct impact upon respondents' ratings of their physical health. Furthermore, job incongruence negatively impacted upon the use of solution-oriented coping. This finding might be used to suggest that whatever mechanism was involved in the mismatch between preferred and actual job also disabled these individuals' ability to employ solution-oriented coping. Future research needs to investigate what might constitute such a mechanism and factors such as learned helplessness, negativity, and pessimism are some that may be considered.

Although solution-oriented coping contributed to an indirect path between incongruence and health, the effect of it as a mediating variable between congruence and health was negligible. Likewise, the role of job satisfaction as a mediator of incongruence on health was not supported although it did act as a mediator of job stress.

While support was not provided in the current

data for all paths in the proposed model, the findings are none the less highly informative. Lack of congruence between preferred and actual job did impact upon physical health and upon respondents' ability to engage in solution-oriented coping strategies. This finding is notable in terms of early career counselling as well as health promotions and health care. People presenting with stress and its attendant health implications may also need to consider whether, in their job, they are 'a square peg in a round hole.' That lack of congruence was not related to job stress in the current data may stem from the diverse nature of the questions and from a possible trait (incongruence) versus state (job stress) dichotomy rather than from a lack of commonality as a 'stressor'. Future research that frames an investigation in these terms may prove to be more enlightening on the interrelationship between job stress and job incongruence.

In conclusion, a substantial amount of variance in physical health ratings was predicted by lack of job congruence, job dissatisfaction and job stress. While the relationship between job incongruence and job stress was not supported in the current data, future research may consider these factors in terms of state and trait variables and this framework may reveal job incongruence as a vulnerability factor to job stress.

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직무 스트레스에 대한 직무불일치, 건강에 대한 직무만족, 해결지향적 대처의 매개 효과

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Holland는 성격을 탐구적, 사회적, 진취적, 지적, 현실적 및 예술적 유형으로 구분하는 유형론을 제시하였는데, 이것은 직무 유형을 분류하는 데에도 사용될 수 있다고 주장하였다. 본 연구는 개인이 선호하는 직무와 실제 직무간의 불일치가 스트레스를 유발할 수 있으며, 직무 스트레스 수준 및 건강 수준에 기여한다는 가설을 검증하고자 하였다. 직무만족과 해결지향적 대처가 이 관계의 매개변인이라고 제안되었다. 조사대상 72명에게 직업 스트레스 질문지, Deakin 대처 척도, 및 직업선택 검사를 실시하였다. 직무 불일치, 직무 불만족 및 직무 스트레스는 응답자들의 신체 건강 평정치 변량의 42%를 예언하였다. 이 결과는 직무 불일치가 직무 스트레스를 예언할 뿐만 아니라, 건강에 부정적 영향을 미친다는 점을 지지해 준다. 불일치가 해결 지향적 대처 전략 사용을 부적으로 예언했지만, 대처는 불일치와 건강간의 매개변인으로서 작용하지 않았다. 본 연구 결과들을 건강의 상태 지표 대 특성 지표의 측면에서 논의하고, 경력 및 건강 조언자들을 위한 함의를 논의하였다.