SHORT MEASURES OF ORGANISATIONAL COMMITMENT, CITIZENSHIP BEHAVIOUR AND OTHER EMPLOYEE ATTITUDES AND BEHAVIOURS: ASSOCIATIONS WITH WELL-BEING[1]

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ABSTRACT

Background:
There is considerable literature on Psychological Contract Fulfilment and other employee attitudes and behaviours. Similarly, there is increasing literature on well-being at work, the well-being process and short measures of psychosocial concepts.

Aims and objectives
The first aim of the present study was to develop short measures of employee attitudes and behaviours and validate these by examining associations with longer established measures. The second aim was to examine associations of these short measures with Psychological Contract Fulfilment and aspects of well-being.

Methods
The study involved an online survey of 166 workers from the USA recruited using Mechanical Turk and delivered using Qualtrics software. The survey included established measures and the newly developed short items.

Results
There were high correlations between short items and established measures. The short items were associated with Psychological Contract Fulfilment and the well-being variables in the predicted direction.

Conclusion
The new short items can be used in future multi-variate analyses of the well-being of workers. This will lead to an increase in our knowledge and the development of new models that can be of theoretical and practical significance.

Keywords: Wellbeing; Psychological Contract Fulfilment; Organisational Commitment; Citizenship Behaviour; Intention to Quit; Job Security; Work Effort; Work Life Balance.

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ÖRGÜTSEL BAĞLILIK, ÖRGÜTSEL VATANDAŞLIK DAVRANIŞI VE DİĞER ÇALIŞAN TUTUMLARI VE DAVRANIŞLARININ KISA ÖLÇÜMLERİ: İYİ OLUŞ İLE İLİŞKİLENDİRME

ÖZ

Literatür Taraması

Psikolojik Sözleşmenin Gerçekleştirilmesi ve çalışanların diğer tutum ve davranışlarına yönelik hakkında önemli bir literatür bulunmaktadır. Benzer şekilde işyerinde refah, refah süreci ve psikososyal kavramların kısa ölçütleri hakkında da var olan literatür giderek genişlemektedir.

Amaç ve hedefler

Bu çalışmanın ilk amacı, çalışanların tutum ve davranışlarına yönelik kısa ifadeler ve önlemler geliştirmek ve bunları daha uzun vadeli önlemlerle olan ilişkilerini inceleyerek onaylamaktır. İkinci amaç, bu kısa önlemlerin Psikolojik Sözleşme Yerine Getirilmesi ve iyi oluş durumuyla ilişkilerini incelemek yönündedir.

Yöntemler

Çalışma, Mekanik Turk kullanılarak işe alınan ve Qualtrics yazılımı kullanılarak teslim edilen ABD'den 166 işçinin çevrimiçi bir anketini içermektedir. Anket, var olan önlemleri ve yeni geliştirilen kısa ifadeleri içermektedir.

Sonuçlar

Kısa ifadeler ve hâlihazırda var olan ifadeler arasında yüksek korelasyonlar bulunmaktadır. Kısa ifadeler, Psikolojik Sözleşmenin Gerçekleştirilmesi ve iyi oluş değişkenlerinin beklenen yönde gerçekleşmesi ile ilişkilendirilmiştir.

Sonuç

Yeni kısa ifadeler, çalışanların refahının gelecekteki çok değişkenli analizlerinde kullanılabilir. Bu, konuya dair bilginin ve farkındalığın artmasına ve teorik ve pratik anlamdaki yeni modellerin geliştirilmesine yol açacaktır.

Anahtar Kelimeler: *İyi oluş; Psikolojik Sözleşmenin Gerçekleştirilmesi; Örgütsel Bağlılık; Örgütsel Vatandaşlık Davranışı; İşten Ayrılma Çıkma Niyeti; İş Güvenliği; İşe Dair Çaba; İş Yaşam Dengesi*

1. INTRODUCTION

Today, organisations have developed and changed drastically to fulfil the needs of the globalisation era. These developments include changes in the economy, technology, innovation and organisational restructuring and these have been the main factors influencing the labour market, organisations, nature of jobs and work activity (Isaksson et al., 2003). These changes seem to contribute to the changes of employee management and need serious attention because, if not controlled carefully, they can contribute to various problems as employees are an important element who act as the backbone of an organisation (Ng et al., 2012).

In this context, the Psychological Contract is seen as playing an important role in explaining changes in relationships between employees and their organisation (Rousseau, 1995; Guest and Conway, 2002; Dabos and Rousseau, 2004). The Psychological Contract is the exchange relationship between the organisation and employee where the employee offers an obligation to the organisation and the organisation in return will appreciate this obligation with some terms and agreement (Rousseau, 1989). This means the employee will deliver what is necessary on condition that they receive rewards equitable with the effort being put in. The Psychological Contract is also an unwritten agreement regarding the relationship between employer and employee and is different from work contracts that are often formally written down. When changes in the nature of work occur, employees need to reorganise their Psychological Contract so that it is in line with the requirements of change for

the benefit of the organisation and the employee. If this reorganisation fails, the employee may exhibit resenting behaviour (Rousseau, 2011).

This situation is known as 'Psychological Contract Breach' which happens when employees feel that the organisation no longer supports their well-being but instead is merely safeguarding the interests and well-being of the organisation. The employee might not have been given ample training to face change but may be forced to give their best without rewards that are commensurate with the difficulties caused by the change. As a result, their well-being at work is disturbed and eventually could lead to various performance-related effects such as low work performance (Marks, 2001; Millward and Hopkins, 1998), low engagement (Bal et al., 2003) and weak organisational citizenship behaviour (Zhao et al., 2007; Lee and Allen, 2002; Turnley, 2003). Finally, both parties may suffer negative consequences where the organisation could no longer operate effectively and employees no longer have an interest in their work.

The Psychological Contract is an implicit understanding between employee and employer (Argyris, 1960) and is a relationship that has been developed throughout the career processes where employees have higher productivity and lower grievances in return for acceptable wages and job security (Taylor and Tekleab, 2004). Rousseau (1989) also described the Psychological Contract as an individual's beliefs concerning the mutual obligations that exist between the individual and their employer. The Psychological Contract has long been identified in the field of human resource management as well as industrial and organisational psychology. Rousseau (1989) was responsible for bringing the concept of the Psychological Contract to the attention of others and this has greatly influenced contemporary research.

The development of the Psychological Contract began with the seminal works of Argyris (1960), Levinson et al. (1962) and Schein (1965). Two other theories namely social exchange theory developed by Blau (1964) and Gouldner (1960) have also been as a significant as theories based on the Psychological Contract. Research on the Psychological Contract has been extremely important because it can influence many factors related to performance (Rousseau, 1989; Coyle-Shapiro and Parzefall, 2008). In a business world with lots of ambiguity, adjustment and anxiety, it has become more important than ever to ensure the healthy and progressive relationship between employers and their employees.

When a breach of the Psychological Contract occurs, employees may exhibit negative emotional stress like anger, disappointment and betrayal and, finally, they may cease to work efficiently and may intend to quit the organisation (Robinson et al., 1994). The model proposed by Guest (1989) shows the attitudinal and behavioural effects related to changes in the Psychological Contract (see Figure 1).
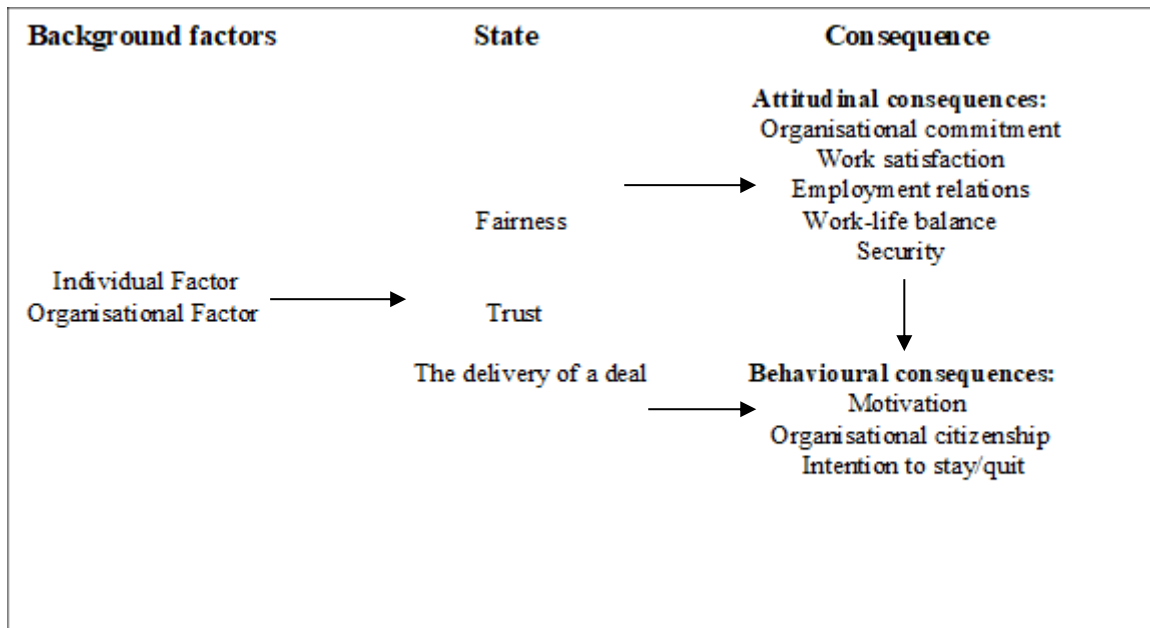
Figure 1. A Framework For The State Of The Psychological Contract (Guest, 1989)

The present study aimed to integrate all models and theories discussed earlier in an effort to provide an understanding of the meaning of the phenomena in a comprehensive manner based on the variables stated in the models. Sonnentag and Frese (2013) suggested that results will be richer and able to explain the related phenomenon effectively and comprehensively if many of the factors are studied simultaneously. Psychological Contract Fulfilment is now a popular construct because it can influence many aspects of work performance factors and wellbeing. However, the research is still ongoing due to many gaps in our knowledge. For example, there is a lack of research integrating different theoretical perspectives. Most of the research on the Psychological Contract has used social exchange theory and very little research attempts to integrate Psychological Contract Fulfilment with other theories. In addition, there is little research examining key antecedents and consequences of the Psychological Contract in the same study. There is also a lack of research examining the effect of the Psychological Contract on well-being. Most of the research on Psychological Contract Fulfilment has explored the attitudes and behavioural outcomes, but very little has looked at the well-being of employees.

De Cuyper and De Witte (2006) compared the well-being of permanent and temporary staff. Psychological Contract theory assumes (1) that job insecurity effects are due to a violation of the relational Psychological Contract, and (2) that permanent staff engage more in relational Psychological Contracting than temporary staff. This suggests that job insecurity is expected to be more problematic in terms of outcomes for permanent staff than temporary staff. The results supported these hypotheses. De Cuyper, Van der Heijden and De Witte (2011) investigated interactions between perceived employability and employees' perceptions about Psychological Contract obligations made by the

employer in relation to life and job satisfaction, self-rated performance, and turnover intention. It was hypothesized that perceived employability would relate positively to job satisfaction, life satisfaction, and self-rated performance and negatively to turnover intention under the condition of few promises by the employer. Perceived employability was positively related to all outcomes except job satisfaction. The number of promises was positively related to job and life satisfaction, and to self-rated performance, and negatively to turnover intention. The relationships between perceived employability and the outcomes were relatively stronger and positive under the condition of few promises compared with many promises.

In the present study fairness, trust and delivery of deals was measured using The Psychological Contract Fulfilment Scale developed by Guest and Conway (2002). The measurement assessed the extent to which the respondent felt the organisation had kept its promises (7 items), treated them fairly (2 items) and how much they trusted the organisation (4 items). Sample items include "Has the organisation fulfilled its promise or commitment to.... provide you with a reasonably secure job", "Overall, do you feel you are fairly rewarded for the amount of effort you put into your job." and "To what extent do you trust your immediate manager to look after your best interests."

The main focus of the study was on the attitudinal and behavioural consequences of Psychological Contract Fulfilment. A key variable was organisational commitment. Organisational commitment is a set of employee's attitudes and behaviours that can help the organisation to achieve its goals and at the same time, maintain the strong desire in the employee to stay as a member of the organisation (Steers, 1977). Similarly, Mowday et al. (1984) proposed the same definition as mentioned by Steers (1997) that organisational commitment is actually a stronger trust embedded among employees on organisational goals and values, readiness to provide an effort and the strong desire to stay as a member in an organisation. However, in defining organisational commitment, Meyer and Allen (1991) have described it comprehensively when they stated that organisational commitment is a psychological state that binds an employee with his or her organisation and can be categorised based on three components, namely an affective commitment, continuance commitment and normative commitment.

There has been some previous research on organisational commitment and well-being. Siu (2002) found that in a sample of Chinese workers organisational commitment and well-being were positively related. Similarly, Coetzee and Rothmann (2005) found that organisational commitment moderated the effect of occupational stress on ill-health. Research by Nikolaou and Tsaousis (2002) also linked organisational commitment to a positive characteristic namely emotional intelligence. Panaccio and Vandenberghe (2009) examined the contribution of perceived organizational support and four categories of organizational commitment (affective, normative, perceived sacrifice associated

with leaving and perceived lack of alternatives) to employee psychological well-being. Affective organizational commitment mediated a positive relationship between perceived organizational support and well-being. In addition, perceived organizational support was negatively related to perceived lack of employment alternatives which, in turn, was negatively related to well-being. Normative commitment and perceived sacrifice associated with leaving were unrelated to well-being.

Another key variable in this research was work-life balance (WLB). Work-life balance can be defined as the absence of conflict between work and personal/family matter (Frone, 2003; Frone et al., 1992; Quick et al., 2004). This concept can also be known as work-family balance and most of the previous research has used this term interchangeably (Reiter, 2007). In further defining this, it seems to be hard for employees to diminish conflict in totality, but they can minimise the degree of conflict by balancing emotional, behavioural and time demands of paid work, family and personal duties simultaneously (Hill et al., 2001). There is extensive research showing that work-life balance influences well-being (Feigon et al., 2018; Haar et al., 2014; Yu, Manku & Backman, 2018). Some research treats work-life balance as an outcome whereas other studies see it as a predictor of well-being outcomes (e.g. Siu, 2013; Bell et al., 2012) or as both an outcome of job characteristics and predictor of health (Kinman and Jones, 2008). Other research suggests more complex relationships between work-life balance and work outcomes. For example, Haider, Jabeen and Ahmad (2018) found that psychological wellbeing mediates the link between work-life balance and job performance, and employees' satisfaction with coworkers enhances job performance by strengthening the effect of work-life balance on psychological wellbeing. Recovery from work may also be a key variable in having a good WLB (Demeroutiet al., 2013) although other researchers suggest that resource allocation is the key variable (Grawitch et al., 2010) whereas others emphasise need fulfilment (Gropel and Kuhl, 2009).

Job security was also included in the present study. Job security can be defined as a state where the individual feels secured in their current job. This definition can be supported by the definition used by Dasgupta (2001: 2) when he described job security as "the absence of fear of employment threat and loss". On the other hand, "job security means that workers have protection against arbitrary and short notice dismissal from employment, as well as having a long-term contract of employment and having employment relations that avoid casualization" (ILO, 1995). This state of security will contribute to positive psychological aspects such as a reduction of anxiety, prevention of mental strain and avoidance of any ambiguities among employees. Again, there is an extensive literature confirming the associations between job security and well-being (De Witte, 1999; De Witte et al., 2016; Schaufeli, 2016). Research has examined the antecedents of job insecurity, the negative consequences of it, and variables that may buffer the job insecurity-outcomes relationship (De Witte et al., 2015; Silla et al.,

2009; Stiglbauer et al., 2012). Other research has found that job insecurity mediates the relationship between employability and employees' well-being (De Cuyper et al., 2008). The relationship between job insecurity and psychological outcomes is more negative among permanent compared with temporary workers (De Cuyper and De Witte, 2007). Job satisfaction, another attitudinal consequence of Psychological Contract Fulfilment, was also included in the present survey. This concept also plays a key role in models of well-being at work (see next section on the Demands-Resources-Individual Effects model).

The behavioural consequences of Psychological Contract Fulfilment included motivation/effort, organisational citizenship and intention to quit. Motivation is a state of needs or a desire for something that makes an individual work towards the goal (Reeve, 2009). Guay et al. (2010) described motivation as the reason underlying individual's behaviour. Without the sense of motivation, individuals would achieve nothing in their life. On the other hand, motivation can also be understood as "the attributes that move us to do or not to do something" (Gottfried et al., 2004). Motivation can be divided into two types, namely intrinsic and extrinsic motivation (Deci et al., 1999). Intrinsic motivation is when an individual is doing some actions because of their inner desire, and it is different from extrinsic motivation, which needs external factors such as rewards and high wages to drive the person's motivation. Motivational processes play a pivotal multifunctional role in adaptation to the workplace and reaction to stress (Fernet and Austin, 2014). Changes in motivation are also associated with changes in well-being at work (Bjorklund et al., 2013). Other variables such as organisational identication will combine with motivation to influence wellbeing (Wegge et al., 2006).

Work effort can be defined as the amount of energy employees put in to work successfully (Ilgen and Klein, 1989). Work effort is different from motivation and there is always some confusion between both of these definitions. In this case, motivation comes first and is the psychological state that pushes the employees to make an effort of any required behaviours (Bandura and Cervone, 1986; Patche, 1970; Naylor et al., 1980). Motivation is a psychological state and effort is a physical state and both of them are related. Both play key roles in psychological theories of stress and well-being (e.g. Effort-Reward Imbalance – Siegrist, 1996). A work-effort recovery mechanism has also been shown to play a crucial role in the associations between sleep quality, adverse work conditions, rumination, after-work fatigue and well-being (Kompier et al., 2012).

Another behavioural consequence of Psychological Contract Fulfilment included in the present study was organizational citizenship behaviour (OCB). OCB can be defined as an individual's desire to do extra-work related behaviour beyond the actual tasks and duties prescribed in their job description or measured in formal evaluations (Bateman and Organ, 1983). This includes cooperation with peers, performing extra duties without complaint, punctuality, volunteering and helping others, using time

effectively, conserving resources, sharing ideas and positively representing their organisation (Turnipseed and Rasulli, 2005). These behaviours are positive volunteering, therefore, the employee cannot be penalised if they do not show the behaviour. However, the employee can be educated on these aspects using an appropriate intervention such as training (Organ, 1988).

Organisational Citizenship Behaviour has 5-dimensions, namely altruism, conscientiousness, courtesy, civic virtue, and sportsmanship:

a)   Altruism

Altruism can be defined as helping or helpfulness (Organ, 1997). Employees who have high altruism tend to help the people inside of an organisation by voluntarily helping new employees, helping co-workers who are overloaded and assisting when workers are absent (Tambe and Shanker, 2014). This type of behaviour is important because employees must work cooperatively if they are to influence the future of the organisation. This supports the statement by Podsakoff et al. (2000), suggesting that altruism is positively correlated with high performance at work.

b)   Conscientiousness

Conscientiousness is referred to as discretionary behaviour that goes beyond the minimum roles at work such as working hard, not taking extra breaks, and obeying the rules and regulations of the organisations (Podsakoff et al., 1990). Employees with high conscientiousness are likely to avoid absenteeism, be punctual, have a penchant towards conserving resources and be responsible members of the organisation, organised, self-disciplined, hard -working and accountable (Borman et al., 2001; Tambe and Shanker, 2014).

c)   Courtesy

Courtesy refers to the employee's behaviours and gestures that help others with any interpersonal and work-related problems (Organ, 1990b). An employee with this kind of OCB is likely to avoid conflict due to confronting another employer and to avoid a crisis at work by taking early actions (Podsakoff et al., 2000). For example, courteous behaviour might involve informing co-workers about the cancelled meeting before they arrive at the meeting room.

d)   Civic virtue

Civic virtue refers to the employee's constructive involvement in the organisational political process (Tambe and Shanker, 2014). The employee may be actively involved through expressing significant opinions about organisational development and enhancement, attending meetings, discussing potential future prospects and reading all the organisation communications such as memos, emails and the internal newsletter (Podsakoff et al., 1990).

e)   Sportsmanship

Sportsmanship is referred to as "a willingness to tolerate the inevitable inconveniences and impositions of work without complaining." (Organ, 1990). The employee with high sportsmanship tends to avoid complaining about drastic changes or difficulties at work and tolerates these with a positive attitude.

There has been previous research on OCB and well-being. For example, Boyd and Nowell (2017) investigated the predictive power of a sense of community responsibility (SOC-R) and a sense of community (SOC). SOC was a better predictor of employee well-being, while SOC-R more strongly predicted organizational citizenship behaviour. Davila and Finkelstein (2013) examined the relationship between OCB and well-being. Both organizational citizenship behaviour and its motives were associated with well-being, with altruistic motives showing a stronger correlation than egoistic motives. Other research has examined the importance of the target of OCB (Kumar et al., 2016). OCB targeted at other individuals was found to be positively related with relatedness need satisfaction and OCB towards the organisation was positively related with psychological health.

The present research tests the relationship between dimensions of OCB and measures of well-being. The study hypothesizes that OCB will be related positively with psychological health and negatively with burnout. OCB targeted at other individuals (OCBI) will positively relate with relatedness need satisfaction. It further hypothesizes a negative relationship of relatedness need satisfaction with burnout and burnout with psychological health. A web-based survey was used for data collection for the study. OCBI was positively related with relatedness need satisfaction and OCB-Organization was positively related with psychological health. Further, relatedness need satisfaction was negatively associated with burnout and burnout was negatively associated with psychological health. Other research has compared the different components of OCB on well-being. Yurcu, Çolakoğlu and Atay (2015) found that three dimensions of organizational citizenship behavior, altruism, sportsmanship and civic virtue, had a significant positive effect, whereas the conscientiousness dimension had a negative effect on employees' subjective well-being.

The final measure of the behavioural consequences of Psychological Contract Fulfilment was intention to quit. Intention to quit can be defined as an employee's plan to move out or to quit from the current membership of an organisation and to search for another job in the near future (Weisberg, 1994). Since quitting from an organisation is a big issue in an employee's life, he or she must consider many factors as their work has provided them with economic funds. Usually, they will quit from the current organisation if they were shocked with the organisation's system such as merging or downsizing and the decision frames that are not meeting the current expectation (Greenberg, 2011). Alternatively, their job may represent a temporary stage of their career path. Negative job characteristics are usually related to a stronger intention to quit (Saucan et al., 2014; Grebner et al.,

2003) whereas organizational values supportive of better WLB are associated with lower intention to quit scores (Burke et al., 2003).

The aim of the present study was to combine the various components of the Psychological Contract with a model of well-being at work. The model used here was the Demands-Resources-Individual Effects (DRIVE) model (Mark and Smith, 2008). This model was initially developed to examine the stress process. Mark and Smith (2008) suggest that it is desirable to have a model of the stress process that includes negative and positive job characteristics, individual experiences, and subjective appraisals of perceived stress and job satisfaction. Their model included factors from the Demands-Control-Support model (DCS model; Johnson and Hall, 1988), the Effort-Reward-Imbalance model (ERI model; Siegrist, 1996), coping behaviours (Folkman and Lazarus, 1980), and attributional explanatory styles (Peterson, 1991). The outcomes included anxiety, depression, and job satisfaction. The variables were categorised as work demands, work resources (e.g. control, support), individual differences (e.g. coping style, attributional style), and outcomes. The model was intended as a framework into which any relevant variables could be included and in the present study the novel variables were those related to the Psychological Contract.

It is not possible to measure every possibly important variable (Smith et al., 2009) and variables were chosen to assess the broad range of variables associated with well-being while also balancing this with a realistic selection of the vast number of variables and measures that have been developed in this area. The variables that were chosen represented a multi-faceted approach to workplace well-being used in previous studies (e.g. Mark and Smith, 2012a; 2012b; Smith et al., 2004; Smith et al., 2000). The measures were congruent with international and national well-being definitions (Waldron, 2010; Wismar et al., 2013), had strong evidence for their association with well-being (e.g. Diener, et al., 1999; DeNeve and Cooper, 1998; Diener, et al., 2003; Tsutsumi and Kawakami, 2004; Van Der Doef and Maes, 1999) and were recommended for well-being assessment (e.g. Rick et al., 2001; Parkinson, 2007).

The inclusion of additional variables can improve predictive validity of the multi-dimensional nature of well-being but increases the potential for increased redundancy. While these variables have each been associated with well-being, it is unclear whether they have independent relationships or act through associations with other variables. For example, optimism may be associated with well-being through coping or explanatory style, with optimists being more likely to use problem focused coping rather than emotional coping, and having internal attributions for positive events (Kluemper et al., 2009; Scheier et al., 1994). Self-esteem may also involve a positive expectation regarding one's self-worth (Scheier et al., 1994) and both concepts may reflect broader personality traits such as extraversion and neuroticism (Sharpe et al., 2011; Scheier et al., 1994) and therefore including all of

these variables may be unnecessary. However, such variables may account for a significant amount of unique variance (Scheier et al., 1994) and it is not fully established whether they have unique associations beyond those accounted for by broad personality characteristics (Diener et al., 2003) or whether some measures may be assessing the same variance in outcomes (Judge et al., 2002). Similarly, outcome variables such as satisfaction with life, anxiety/depression and negative affect have been shown to be correlated at levels between .31 and .72, but it has also been suggested that they have some degree of unique variance (Pavot and Diener, 1993). Although there is some potential for redundancy in the components of well-being models it is unclear which the relevant variables are.

The Well-being Process Questionnaire (WPQ; Williams and Smith, 2012; Williams, 2015) was developed by using short measures that were highly correlated with longer validated scales. The newly developed single-item measures were based on guidance about uni-dimensionality and clarity for the respondent (Sackett and Larson, 1990). The single-item measures included an initial statement or question and were followed by examples of what the item was referring to. These examples were statements taken from the multi-item measure. An example (optimism) is shown below:

"In general, I feel optimistic about the future (For example: I usually expect the best, I expect more good things to happen to me than bad, it is easy for me to relax) Disagree strongly 1 2 3 4 5 6 7 8 9 10 Agree strongly". Each question either had a response scale ranging from "Disagree strongly" to "Agree strongly" (rated on a scale of 1 to 10), while those with an initial question (e.g. "On a scale of one to ten, how depressed would you say you are in general?") had the response scale from "Not at all" to "Extremely" with a response scale from 1-10 which was chosen for practical and statistical reasons. A consistent simple scale makes responding easier and a 1-10 scale allows a greater range of potential responses than shorter Likert scales. Reliability has been shown to increase with the number of alternatives and this benefit is most applicable to questionnaires using short items (Maydeu-Olivares et al., 2009). These short measures were shown to be highly correlated with the longer scales, and the correlation was often greater than the correlations between single items and scale totals from the established measures. The single items were also shown to have the same predictive validity as the longer versions and had a good test-re-test reliability (Williams et al., 2017; Williams and Smith, 2018a, b, c.; Williams et al., 2017; Williams et al., 2017).

2. AIMS AND OBJECTIVES

The present research aimed to investigate and explore the antecedents and outcomes of the Psychological Contract Fulfilment among employees by using a combination of the Guest model and the DRIVE model. There were three main research objectives:

i. To examine whether single-item measures can accurately (validity and reliability) become a measure of the antecedents and outcomes of Psychological Contract Fulfilment.

iii. To identify the relationship between work demands, work resources, individual differences, and personality with Psychological Contract Fulfilment.

iv. To identify the relationship between work demands, work resources, individual differences, personality, and Psychological Contract Fulfilment with work attitudes, work behaviours and well-being.

1. METHOD

This study was carried out with the approval of the Ethics Committee, School of Psychology, Cardiff University, and the informed consent of the volunteers.

3.1. Participants

The participants were 166 workers from the USA recruited using Mechanical Turk. Details of their demographics and job characteristics are shown in Table 1.

Table 1. Respondents' Demographic and Occupational Profile

Variable	Response Category	Frequency	Percentage (%)
Age	20-30 years	54	32.5
	31-40 years	68	41.0
	41-50 years	21	12.7
	51-60 years	11	6.6
	61-70 years	12	7.2
Sex	Male	96	57.8
	Female	70	42.2
Marital status	Single	59	35.5
	Living with partner	29	17.5
	Married	67	40.4
	Separated	3	1.8
	Divorced	7	4.3
	Widowed	1	0.6
Education	Undergraduate Degree	108	65.1
	Post-Graduate Degree	51	30.7
	Doctorate (PhD)	4	2.4
	Other	3	1.8
Race	White	135	81.3
	Black Caribbean	4	2.4
	Black African	10	6.0
	Black neither Caribbean or African	5	3.0
	Indian	3	1.8
	Chinese	4	2.4
	Other	5	3.0
Work sector	Public	68	41.0
	Private	98	59.0
Yearly income (£)	<10000	3	1.8
	10001-20000	13	7.8
	20001-30000	28	16.9
	30001-40000	38	22.9
	40001-50000	24	14.5
	50001-60000	23	13.9
	60001>	37	22.3
Sick leave	None	51	30.7
	1-5 days	96	57.8
	6-10 days	14	8.4
	11-15 days	2	1.2
	>15 days	3	1.8
Illness	Yes	29	17.5
	No	137	82.5
General health	Very good	36	21.7
	Good	97	58.4
	Fair	28	16.9
	Bad	5	9.04
	Very bad	0	0.0
Work at night	Never/almost never	70	42.2
	Seldom	39	23.5

	Sometimes	41	24.7
	Often	16	9.6
Work shift	Never/almost never	104	62.7
	Seldom	13	7.8
	Sometimes	26	15.7
	Often	23	13.9
Work long or unsociable hours	Never/almost never	66	39.8
	Seldom	42	25.3
	Sometimes	46	27.7
	Often	12	7.2
"On call" work	Never/almost never	89	53.6
	Seldom	36	21.7
	Sometimes	32	19.3
	Often	9	5.4
Unpredictable working hours	Never/almost never	74	44.6
	Seldom	53	31.9
	Sometimes	25	15.1
	Often	14	8.4
Work harmful exposure	Never/almost never	122	73.5
	Seldom	20	12.0
	Sometimes	17	10.2
	Often	7	4.2
Handle or touch harmful substances or materials	Never/almost never	122	73.5
	Seldom	25	15.1
	Sometimes	15	9.0
	Often	4	2.4
Work task that leave with ringing or temporary feeling of deafness	Never/almost never	138	83.1
	Seldom	17	10.2
	Sometimes	8	4.8
	Often	3	1.8
Noise disturbs work environment	Never/almost never	103	62.0
	Seldom	31	18.7
	Sometimes	26	15.7
	Often	6	3.6
Do you work part time or full time	Full time	151	91.0
	Part-time	15	9.0
Work pattern	Fixed hours	116	69.9
	Flexi hours	37	22.3
	Shift work	13	7.8
Work type	Permanent	154	92.8
	Temporary/casual	5	3.0
	Fixed contract	7	4.2

3.2. The Survey

An online survey was carried out using Qualtrics software. The complete survey is shown in the supplementary material (link below) and the measures summarised in the next section:

https://www.researchgate.net/publication/329311391_SURVEY_-_SHORT_MEASURES_OF_ORGANISATIONAL_COMMITMENT_CITIZENSHIP_BEHAVIOUR_AND_OTHER_EMPLOYEE_ATTITUDES_AND_BEHAVIOURS_ASSOCIATIONS_WITH_WELL-BEING

3.3. Measures

Psychological Contract Fulfilment (global) was measured using a scale adopted from Conway and Briner (2002). The measure assessed the general perceptions of Psychological Contract Fulfilment. An example was: "In general, this organisation has kept its promises to me about what I will get from them." Organisational commitment was measured using the Affective, Normative and Continuance Commitment Scale (Meyer and Allen, 1997). This scale comprised 3-dimensions which are affective, normative and continuance commitment. Affective commitment refers to the emotional attachment

between the employee and the organisation. An employee tends to give full loyalty to the organisation and will put in an extra effort to achieve the organisation's goals. Normative commitment refers to the obligation given to stay with their current organisation. The obligation is the responsibility of one employee and they should obey to the organisation's goals, values and norms. On the other hand, continuance commitment reflects the responsibility of employees to stay with the organisation whereby if they leave, it will affect the development and well-being of the organisation. However, in this research, only one dimension of the organisational commitment which is affective commitment as most of the literature shows that it's related significantly with the psychological contract.

In this research, work-life balance was measured using the Work-Family and Family-Work Conflict scale developed by Netemeyer et al. (1996). Work-family conflict refers to any work demands and duties that affect employee's life at home. In contrast, family-work conflict refers to any problems related to the family that have a negative effect on duties and responsibilities at workplace.

Job insecurity was measured using 4-items developed by De Witte (2000). This scale is measured through 2-dimensions, which are affective and cognitive components related to insecurity in the person's current work. The four items can be combined together as a single dimension by summing all the items.

Motivation was measured using the Cassidy and Lynn Achievement Motivation (CLAM) scale (Cassidy and Lynn, 1989). This scale is based on 3-dimensions which are ethics, excellence and mastery. Ethics achievement is an individual desire to work earnestly and it is related to an individual's values and attitudes toward their job. Excellence motivation refers to an individual's desire to do his or her work the best he or she can do based on their ability and standard. Finally, mastery motivation refers to the desire of individuals to solve every problem faced until it is completed successfully. In the present study, the Work Effort Scale developed by De Cooman et al. (2009) was used. This scale consists of 10-items which measure three dimensions of work effort, namely intensity, direction and persistence. These dimensions were summed to give an overall work effort score.

Organisational Citizenship Behaviour was assessed using the scale developed by Podsakoff et al. (1990). This scale comprised 5-dimensions, namely altruism, conscientiousness, courtesy, civic virtue, and sportsmanship. In this study, intention to quit/ leave was measured using the scale developed by Kuvaas (2006). This scale contains 5-items and asks general questions about intention to leave the current job.

Single items of some of the concepts examined here (job satisfaction; job security; work-life balance) have already been developed as part of the validation of the WPQ. The following new short scales were developed from the above longer scales (affective commitment; work effort; intention to quit; and organisational citizen ship behaviour):

Affective commitment:

To what extent do you agree or disagree with each of the following statements (Please circle one number for each)

1.   I feel that I am emotionally attached with my organisation (for example: I love and I am proud of my organisation, my organisation's problems are mine, I feel I belong to my organisation etc.).

1……….2……….3……….4……….5……….6……….7……….8……….9……….10

2.   How much loyalty would you say you feel toward the organisation you work for, as a whole? Please circle one number only.
A lot of loyalty   Some loyalty   Only a little loyalty   Not at all loyalty
1……………………………2……………………3……..…………………….4

3.   Are you proud to tell people who you work for? Please circle one number only.

Very proud indeed   Quite proud   A little proud   Not at all proud

1……………………………2……………………3…………….............4

Work Effort:

To what extent do you agree or disagree with each of the following statements (Please circle one number for each)

1.   In general, I feel that I put in an optimum effort to do my work (for example: I do my best to get work done in the best way, I do not give up quickly, I work hard etc.).

1……….2……….3……….4……….5……….6……….7……….8……….9……….10

2.   Which of the following statements best describes your current feelings about how much effort you put into work or how hard you work? Please circle one box only.
I am not working particularly hard   I am working quite hard
                1…………………………………….2
I am working very hard   I am working as I can and could not imagine being able to work any harder
                3…………………………..4

Organisational Citizenship Behaviour:

To what extent do you agree or disagree with each of the following statements *(Please circle one number for each)*

1.   I feel that I am an altruistic employee in my workplace (for example: helping co-workers with heavy workloads, helping new workers to adapt within the organisation, always being ready to offer help to those around me).

1……….2……….3……….4……….5……….6……….7……….8……….9……….10

2.   I feel that I am a courteous person in my workplace (for example: I try to avoid problems with another worker, I respect others' rights, I am always considering the impact of my actions on co-workers).

1……….2……….3……….4……….5……….6……….7……….8……….9……….10

3.   I feel that I am a conscientious employee for my organisation (for example: working beyond office hours even though not being asked to, being punctual and obeying the organisation's rules and regulations)

1……….2……….3……….4……….5……….6……….7……….8……….9……….10

4.   I feel that I am willing to tolerate with inevitable inconveniences and impositions of work without complaining (for example: accepting and doing any drastic works, accepting organisation changes, not complaining or finding fault with what the organisation is doing).

1……….2……….3……….4……….5……….6……….7……….8……….9……….10

5.   I feel that I am involved constructively and comprehensively with my organisation (for example: attending meetings that are not compulsory but are considered important, attending functions that help improve organisation image even if it is not compulsory, being up-to-date with organisation changes and reading all organisation communications).

1……….2……….3……….4……….5……….6……….7……….8……….9……….10

DRIVE model variables from the WPQ:

The DRIVE model was used as the theoretical framework of the research and the original variables used in previous research were also included (Mark and Smith, 2012a, 2012b). These variables were effort, demands, control, support, reward, coping styles, attributional style, job satisfaction, anxiety and depression. Additional variables were included because other factors fit into this framework and add to a multi-dimensional approach. The HSE Management Standards represent the current UK recommended method of measuring well-being psychosocial hazards in the workplace (Black, 2008), other variables not already accounted for by the DCS and ERI models were included.

These variables were role understanding, supervisor relationship and consultation on change. Bullying has also been identified as an important risk factor (Quine, 1999).

While individual differences in coping and attributional style were included in the DRIVE model, personality variables represent a significant omission, especially as personality has been shown to be the most important predictor of subjective well-being outcomes (Diener et al., 2003). The most commonly used model of personality is the "Big 5" model (Steel et al., 2008) and extraversion and neuroticism in particular have demonstrated significant relationships with positive and negative well-being outcomes, although specific associations with other big 5 variables have also been demonstrated (Hayes and Joseph, 2003). Extraversion, emotional stability, conscientiousness, agreeableness, and openness were therefore included. Use of these broad personality characteristics may be an oversimplification of the associations between personality and well-being (Diener et al., 2003) and may have less predictive validity than the use of specific personality variables (Schimmack et al., 2004). Other frequently cited variables associated with well-being are optimism, self-esteem, and self-efficacy. Optimism has frequently been associated with life satisfaction and happiness (Sharpe et al., 2011; Scheier et al., 1994; Kluemper et al., 2009). Others (e.g. Bandura, 1988) suggest that perceived self-inefficacy is the major source of reduced well-being. Loss of self-esteem has been shown to be an important variable in depression, negative affect, and stress (Lee-Flynn et al., 2011). Optimism, self-efficacy and self-esteem have also been suggested as potential buffers against negative well-being outcomes (Lee-Flynn et al., 2011) and reviews of well-being measures (Parkinson, 2007). Deneve and Cooper (1998) conclude that the most important personality variables appear to be those that are concerned with making healthy attributions. Self-esteem, optimism, and self-efficacy represent positive attributions related to one's self, one's future, and one's abilities respectively. Measures of optimism, self-esteem, and self-efficacy were therefore also included.

Outcomes represented the well-being variables implicated in policy (Knapp et al., 2006; Waldron, 2010; Wismar et al., 2013) and previous well-being research (e.g. Smith et al., 2004; Mark & Smith, 2012a; Smith et al., 2009). Stress, depression, and anxiety were included the UK monitored negative psychological well-being outcomes (e.g. in the Labour Force Survey) and because they are frequently assessed well-being outcomes in the workplace (e.g. Smith et al., 2009). In order to assess subjective wellbeing (SWB), positive mood, negative mood, and life satisfaction were also included. SWB has been shown to be distinct from mental health outcomes such as depression and anxiety (Headey and Wearing, 1989) and may be useful as an outcome for those who may not recognise anxiety or depression in themselves or may not want to report it. Furthermore, the subjective element of well-being and satisfaction judgements have been suggested as integral parts of a holistic concept of well-being (Diener, 1984; Diener et al., 1998; Waldron, 2010). Measures relating to perceived stress and

satisfaction both at work and outside work were recorded. Hassles and uplifts were also measured to complement the job characteristics.

4. RESULTS

4.1. Stages of Analysis

There were three main stages in the analyses. The first examined the descriptive statistics of the variables to check that there was appropriate variation in scores. The second examined the construct validity of the new items by examining the association between the new short items and the original longer scales. Correlations between the scale total scores and new single items were computed. These were then compared with the correlations of individual items from the original scale and the total score. The final set of analyses examined associations between the original long scales, the new single items and the WPQ variables. The aim of these analyses was to compare the predictive validity of the long and short measures.

4.2. Descriptive Statistics for Variables: Work Characteristics, Coping Styles, Personality, Psychological Contract Fulfilment, Job Attitudes, Work Behaviours and Well-Being

The descriptive statistics for the complete set of variables are shown in Table 2. Generally, there was appropriate variation in the scores, which made a correlational approach appropriate.

Table 2. Descriptive Statistic Analysis of Work Characteristics, Coping Styles, Personality, Psychological Contract Fulfilment, Job Attitudes, Work Behaviours and Well-Being

Variable	N	Mean	Standard Deviation	Minimum	Maximum
Job characteristics:					
Effort	166	4.11	2.61	1.00	10.00
Demands	166	4.19	2.57	1.00	10.00
Role understanding	166	2.69	2.05	1.00	10.00
Consultation of change	166	4.21	2.57	1.00	10.00
Workplace bullying	166	1.98	1.85	1.00	9.00
Control	166	6.81	2.25	1.00	10.00
Colleagues support	166	7.34	2.06	1.00	10.00
Supervisor relationship	166	7.15	2.46	1.00	10.00
Reward	166	6.42	2.28	1.00	10.00
Coping Styles:					
Problem-focused	166	7.63	1.85	1.00	10.00
Social support	166	6.06	2.32	1.00	10.00
Avoidance	166	4.41	2.46	1.00	10.00
Self-blame	166	6.08	2.54	1.00	10.00
Wishful thinking	166	3.73	2.34	1.00	10.00
Personality:					
Openness	166	7.72	1.92	1.00	10.00
Conscientiousness	166	8.25	1.67	1.00	10.00
Extraversion	166	6.19	2.75	1.00	10.00
Agreeableness	166	7.90	1.96	1.00	10.00
Emotional stability	166	8.01	1.92	1.00	10.00
Self-efficacy	166	7.54	2.28	1.00	10.00
Self-esteem	166	7.90	1.88	1.00	10.00
Optimism/pessimism	166	7.52	2.13	1.00	10.00

Psychological contract	166	52.88	12.04	19.00	76.00
Affective commitment	166	6.13	2.61	1.00	10.00
Employment relations	166	3.88	0.80	1.00	10.00
Work security	166	3.05	2.31	1.00	10.00
Motivation 1	166	7.25	2.11	1.00	10.00
Motivation 2	166	6.14	2.63	1.00	10.00
Work effort	166	8.29	1.53	1.00	10.00
Altruism	166	7.79	1.73	1.00	10.00
Courtesy	166	8.05	1.96	1.00	10.00
Conscientiousness	166	7.95	1.83	1.00	10.00
Sportsmanship	166	7.36	1.98	1.00	10.00
Civic virtue	166	7.34	1.91	1.00	10.00
Intention to quit	166	5.05	3.11	1.00	10.00
Work-life balance 1	166	4.02	2.47	1.00	10.00
Work-life balance 2	166	2.95	1.91	1.00	10.00
General well-being 1	166	7.09	2.34	1.00	10.00
General well-being 2	166	7.61	2.08	1.00	10.00
Flourishing	166	7.40	2.23	1.00	10.00
Positive affect	166	7.48	2.21	1.00	10.00
Negative affect	166	3.60	2.62	1.00	10.00
Life satisfaction	166	7.36	2.24	1.00	10.00
Job satisfaction	166	6.99	2.26	1.00	10.00
General health	166	3.00	0.75	1.00	6.00
Uplifting	166	6.60	2.09	1.00	10.00
Hassle	166	4.14	2.15	1.00	10.00
Anxiety	166	4.28	2.39	1.00	10.00
Depression	166	3.20	2.31	1.00	10.00
Job stress	166	4.93	2.33	1.00	10.00
Outside work stress 1	166	2.17	2.17	1.00	10.00
Outside work stress 2	166	4.22	2.73	1.00	10.00

4.3. Construct Validity of New Single Items (Affective Commitment, Work Effort, Turnover Intention and Organisational Citizenship Behaviour)

Affective commitment

Table 3 shows that the correlation between the total affective commitment scale and the new single item was 0.805. The single item was also significantly correlated with the individual items of the original scale.

Table 3. Construct Validity of Affective Commitment Single Item using Item-Total Correlation Analysis

Item	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
AC (1)	1								
AC (2)	.630**	1							
AC (3)	.390**	.576**	1						
AC (4)	.341**	.198*	.192*	1					
AC (5)	.518**	.491**	.442**	.318**	1				
AC (6)	.549**	.527**	.516**	.257**	.786**	1			
AC (7)	.597**	.594**	.530**	.222**	.562**	.695**	1		
AC (8)	.581**	.542**	.611**	.301**	.738**	.759**	.676**	1	
AC (T) (9)	.730**	.763**	.709**	.156*	.790**	.858**	.826**	.859**	1
AC (Si) (10)	.566**	.606**	.687**	.324**	.592**	.712**	.772**	.724**	.805**

*p<.05
**p<0.01
(T) Summation of the original items into a total score of construct
(Si) New single item

Work Effort

The correlation between the work effort single item and total score of the longer scale was 0.733. Correlations between the new single item and the individual items of the original scale were also significant (see Table 4).

Table 4. Construct Validity of Work Effort Single Item using Item-Total Correlation Analysis

Item	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
WE (1)	1										
WE (2)	.632**	1									
WE (3)	.654**	.741**	1								
WE (4)	.556**	.663**	.720**	1							
WE (5)	.573**	.676**	.711**	.751**	1						
WE (6)	.586**	.793**	.765**	.756**	.814**	1					
WE (7)	.613**	.735**	.694**	.679**	.738**	.703**	1				
WE (8)	.544**	.765**	.681**	.680**	.689**	.789**	.739**	1			
WE (9)	.580**	.745**	.719**	.650**	.695**	.771**	.719**	.777**	1		
WE (10)	.569**	.695**	.676**	.674**	.648**	.715**	.726**	.679**	.688**	1	
WE (T) (11)	.754**	.877**	.865**	.831**	.852**	.900**	.866**	.864**	.863**	.864**	1
WE (Si) (12)	.553**	.626**	.622**	.613**	.540**	.629**	.609**	.715**	.684**	.627**	.733**

*p<.05
**p<0.01
(T) Summation of the original items into a total score of construct
(Si) New single item

Intention to Leave the Job

The correlation between intention to quit single item and total score of the longer scale was 0.817. Correlations between the new single item and the individual items of the original scale were also significant (see Table 5).

Table 5. Construct Validity of Turnover Intention Single Item using Item-Total Correlation Analysis

Item	(1)	(2)	(3)	(4)	(5)	(6)
Ti (1)	1					
Ti (2)	.877**	1				
Ti (3)	.812**	.778**	1			
Ti (4)	.789**	.838**	.769**	1		
Ti (5)	.717**	.765**	.707**	.769**	1	
Ti (T) (6)	.923**	.935**	.899**	.917**	.868**	1
Ti (Si) (7)	.732**	.717**	.797**	.756**	.703**	.817**

*p<.05
**p<0.01
(T) Summation of the original items into a total score of construct
(Si) New single item (reverse scored)

Organisational Citizenship Behaviour

The correlations between the new single items and the total scores for the sub-scales are shown in Table 6. These were all significant but were lower than those seen in the previous analyses (range 0.448 to 0.679). Again, all the correlations between the new single items and original individual items were significant.

Overall, these analyses show that the new single items were significantly correlated with the original longer scales. The next set of analyses examine their associations with the WPQ variables (i.e. their predictive validity).

Table 6: Construct Validity of Organisational Citizenship Behaviour (OCB) Single Items using Item-Total Correlation Analysis

Item	(1)	(2)	(3)	(4)	(5)	(6)
Altruism						
Alt (1)	1					
Alt (2)	.666**	1				
Alt (3)	.603**	.674**	1			
Alt (4)	.551**	.745**	.612**	1		
Alt (5)	.592**	.814**	.654**	.778**	1	
Alt (T) (6)	.799**	.909**	.824**	.857**	.898**	1
Alt (Si) (7)	.530**	.587**	.630**	.509**	.652**	.679**
Courtesy						
Court (1)	1					
Court (2)	.485**	1				
Court (3)	.496**	.591**	1			
Court (4)	.440**	.639**	.532**	1		
Court (5)	.399**	.577**	.529**	.601**	1	
Court (T) (6)	.722**	.831**	.810**	.798**	.784**	1
Court (Si) (7)	.363**	.578**	.521**	.529**	.529**	.637**
Conscientiousness						
Cons (1)	1					
Cons (2)	.190*	1				
Cons (3)	.288**	.410**	1			
Cons (4)	.232**	.392**	.571**	1		
Cons (5)	.195*	.183*	.388**	.449**	1	
Cons (T) (6)	.609**	.649**	.747**	.748**	.642**	1
Cons (Si) (7)	.337**	.358**	.451**	.502**	.337**	.580**
Sportsmanship						
Sports (1)	1					
Sports (2)	.615**	1				
Sports (3)	.427**	.591**	1			
Sports (4)	.257**	.319**	.383**	1		
Sports (5)	.612**	.633**	.527**	.230**	1	
Sports (T) (6)	.742**	.815**	.780**	.638**	.780**	1
Sports (Si) (7)	.346**	.482**	.357**	.107	.453**	.448**
Civic Virtue						
Civic (1)	1					
Civic (2)	.519**	1				
Civic (3)	.313**	.300**	1			
Civic (4)	.237**	.215**	.480**	1		
Civic (T) (5)	.744**	.762**	.689**	.647**	1	
Civic (Si) (6)	.500**	.523**	.363**	.361*	.623**	1

*p<.05
**p<0.01
(T) Summation of the original items into a total score of construct
(Si) New single item

4.4. Associations Between WPQ variables and Psychological Contract Fulfilment

Work Characteristics and Psychological Contract Fulfilment

The correlations between work characteristics and Psychological Contract Fulfilment are shown in Table 7. Psychological Contract Fulfilment was negatively correlated with demands and other negative job characteristics and was positively correlated with control, support and rewards (resources).

Individual Differences and Psychological Contract Fulfilment

The correlations between individual differences and Psychological Contract Fulfilment are shown in Table 8. Psychological Contract Fulfilment was negatively correlated with avoidance coping and was positively correlated with the Big 5 dimensions (openness; conscientiousness; extraversion; agreeableness; and emotional stability) and the positive personality dimensions of self-esteem, self-efficacy, and optimism.

Well-being Outcomes and Psychological Contract Fulfilment

The correlations between well-being outcomes and Psychological Contract Fulfilment are shown in Table 9. Psychological Contract Fulfilment was positively correlated with well-being both at work (e.g. job satisfaction) and in life generally (e.g. positive affect; life satisfaction). In contrast, it was negatively correlated with low well-being scores both at work (e.g. job stress) and in life generally (e.g. negative affect; stress outside of work; anxiety and depression).

Table 7. The Relationship between Work Demands, Work Resources and Psychological Contract Fulfilment

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Extrinsic effort (1)	1								
Work Demand (2)	.619**	1							
Role understanding (3)	.309**	.331**	1						
Consultation of change (4)	.257**	.460**	.316**	1					
Work bullying (5)	.318**	.402**	.471**	.239**	1				
Work control (6)	-.205	-.331	-.202**	-.269**	-.226**	1			
Colleagues support (7)	-.094	-.185*	-.324**	-.178*	-.208*	.549**	1		
Supervisor support (8)	-.196	-.212**	-.319**	-.284**	-.356**	.483**	.649**	1	
Reward (9)	-.149	-.286**	-.167**	-.335**	-.176*	.596**	.578**	.653**	1
Psychological contract (10)	-.262**	-.392**	-.349**	-.463**	-.337**	.421**	.544**	.614**	.674**

*p<.05

**p<0.01

Table 8. The Relationship between Coping Styles, Personality and Psychological Contract Fulfilment

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1)	1													
(2)	.238**	1												
(3)	-.214**	-.131	1											
(4)	.132	.208**	.209**	1										
(5)	-.203**	.011	.469**	.211**	1									
(6)	.466**	.294**	-.055	.285**	-.048	1								
(7)	.588**	.292**	-.076	.203**	-.119	.467**	1							
(8)	.401**	.359**	-.325**	.099	-.143	.359**	.275**	1						
(9)	.612**	.353**	-.075	.149	-.088	.441**	.648**	.399**	1					
(10)	.537	.349**	-.079	.172*	-.166**	.497**	.630**	.400**	.718**	1				
(11)	.607**	.346**	-.444**	.084	-.207**	.481**	.505**	.604**	.574**	.590**	1			
(12)	.657**	.312**	-.258**	.210**	-.147	.503**	.706**	.464**	.634**	.694**	.741**	1		
(13)	.577**	.354**	-.269**	.158*	-.060	.480**	.538**	.515**	.550**	.556**	.793**	.788**	1	
(14)	.384**	.135	-.107	-.019	-.157*	.195*	.361**	.227**	.300**	.239**	.361**	.415**	.457**	1

(1): problem-focused, (2): social support, (3): self-blame, (4): wishful thinking, (5): avoidance, (6): openness, (7): conscientiousness, (8): extraversion, (9): agreeableness,
(10): emotional stability, (11): self-esteem, (12): self-efficacy, (13): optimism, (14): psychological contract.
*p<.05
**p<0.01

Table 9. The Relationship between Psychological Contract Fulfilment and Well-Being Outcomes

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
(1)																
(2)	.183 **	**1**														
(3)	.827 **	.717 **	**1**													
(4)	.804 **	.786 **	.754 **	**1**												
(5)	-.296 **	-.387 **	-.358 **	-.472 **	**1**											
(6)	.796 **	.775 **	.763 **	.824 **	-.398 **	**1**										
(7)	.482 **	.374 **	.420 **	.447 **	-.280 **	.446 **	**1**									
(8)	.350 **	.258 **	.313 **	.360 **	-.37**	.403 **	.097	**1**								
(9)	.612 **	.531 **	.605 **	.634 **	-.320 **	.523 **	.504 **	.284 **	**1**							
(10)	-.564 **	-.497 **	-.484 **	-.511 **	.407 **	-.493 **	-.363 **	-.234 **	-.405 **	**1**						
(11)	-.554 **	-.442 **	-.543 **	-.522 **	.668 **	-.548 **	-.343 **	-.478 **	-.419 **	.553 **	**1**					
(12)	-.430 **	-.389 **	-.369 **	-.443 **	.499 **	-.395 **	-.259 **	-.364 **	-.371 **	.555 **	.633 **	**1**				
(13)	-.332 **	-.211 **	-.273 **	-.292 **	.291 **	-.267 **	-.377 **	-.157 *	-.234 **	.565 **	.424 **	.396 **	**1**			

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
(14)	-.345**	-.346**	-.217**	-.306**	.249**	-.314**	-.328**	-.124	-.142	.454**	.334**	.426**	.376**	1		
(15)	-.135	-.173*	-.085	-.106	.158*	-.110	-.133	-.092	-.036	.258**	.254**	.323**	.332**	.602**	1	
(16)	.503**	.390**	.460**	.435**	-.233**	.431**	.723**	.132	.391**	-.410**	-.371**	-.225**	-.398**	-.235**	-.198*	1

(1): Well-being 1 (2): Well-being 2 (3): flourishing, (4): + affect, (5): - affect, (6): life satisfaction (7): job satisfaction, (8): general health, (9): uplifting, (10): hassle, (11): depression, (12): anxiety, (13): job stress, (14): outside work stress 1, (15) outside work stress 2, (16) Psychological Contract

*p<.05   **p<0.01

4.5. The Relationship Between Job characteristics, Psychological Contract Fulfilment, Job Attitudes and Work Behaviours

The next analysis examined associations between Psychological Contract Fulfilment and job attitudes and work behaviours. Psychological Contract Fulfilment was positively correlated with affective commitment, employment relations, work motivation, work effort, altruism, courtesy, conscientiousness, sportsmanship and civic value (see Table 10). It was negatively correlated with job insecurity and intention to quit. Job demands were positively associated with job insecurity and intention to quit (see Table 11). In contrast, they were negatively correlated with employment relations, courtesy and sportsmanship. Job control was positively correlated with affective commitment, employment relations, motivation, effort, altruism, courtesy, conscientiousness, sportsmanship and civic virtue. However, control was negatively correlated with job insecurity and intention to quit. Most negative job characteristics showed a similar profile to job demands and most positive characteristics showed the same pattern of associations as control. The number of significant correlations varied slightly depending on the specific characteristic. For example, bullying was associated with more significant correlations than job demands and rewards were associated with more significant associations than control.

Table 10. The Relationship between Psychological Contract Fulfilment, Job Attitudes and Work Behaviours

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1)	1											
(2)	.447**	1										
(3)	-.293**	-.365**	1									
(4)	. 523**	.416**	-.256**	1								
(5)	.586**	. 474**	-.293**	.816**	1							
(6)	.237**	.189*	-.152	.478**	.419**	1						
(7)	.465**	.247**	-.230**	.467**	.428**	.623**	1					
(8)	.183*	.137	-.234**	.465**	.396**	.529**	.556**	1				
(9)	. 332**	.163*	-.163*	.558**	.478**	.527**	.623**	.711**	1			
(10)	.244**	.248**	-.167*	.576**	.493**	.478**	.511**	.677**	.711**	1		
(11)	.396**	.291**	-.133	.577**	.508**	.443**	.544**	.578**	.690**	.706**	1	
(12)	-.147	-.455	.484**	-.469	-.472	-.132	-.145	-.174*	-.232**	-.292**	-.225**	1
(13)	.514**	.591**	-.473**	.612**	.583**	.361**	.251**	.367**	.323**	.453**	.414**	-.555**

(1): affective commitment, (2): employment relations, (3): work security, (4): work motivation 1, (5): work motivation 2, (6): work effort, (7): altruism, (8): courtesy,

(9): conscientiousness, (10): sportsmanship, (11): civic virtue, (12): intention to quit, (13): psychological contract.

*p<.05

**p<0.01

Table 11. The Relationship between Job Characteristics (Work Demands & Work Resources) and Job Attitudes & Work Behaviour

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Extrinsic Effort (1)	1																				
Work Demand (2)	.619**	1																			
Role understanding (3)	.309**	.331**	1																		
Consultation of change (4)	.257**	.460**	.316**	1																	
Work bullying (5)	.318**	.402**	.471**	.239**	1																
Work control (6)	-.205**	.331**	-.202**	-.269**	-.226**	1															
Colleagues support (7)	-.094	-.185*	-.324**	-.178*	-.208**	.549**	1														
Supervisor support (8)	-.196*	-.212**	-.319**	-.284**	-.356**	.483**	.649**	1													
Reward (9)	-.149	-.286**	-.167**	-.335	-.167*	.596**	.578**	.653**	1												
Affective commitment (10)	-.070	-.270**	-.084	-.290**	-.059	.313**	.406**	.418**	.533**	1											
Employment relations (11)	-.240**	-.425**	-.311**	-.392**	-.336**	.313**	.362**	.547**	.450**	.447**	1										
Work security (12)	.329**	.429**	.291**	.361**	.427**	-.353**	-.366**	-.288**	-.380**	-.293**	-.365**	1									
Work motivation1 (13)	-.092	-.210**	-.257**	-.388**	-.095	.417**	.568**	.592**	.675**	.523**	.416**	-.256**	1								
Work motivation2 (14)	-.148	-.320**	-.277**	-.388**	-.094	.429**	.606**	.558**	.607**	.586**	.474**	-.293**	.816**	1							
Work effort (15)	-.099	-.104	-.477**	-.165*	-.174*	.227**	.514**	.382**	.301**	.237**	.189*	-.152	.478**	.419**	1						
Altruism (16)	-.097	-.120	-.343**	-.290**	-.138	.259**	.409**	.346**	.246**	.465**	.247**	-.230**	.467**	.428**	.623**	1					
Courtesy (17)	-.178*	-.145	-.310**	-.183*	-.184*	.365**	.556**	.464**	.452**	.183*	.137	-.234**	.465**	.396**	.529**	.556**	1				
Conscientiousness (18)	-.063	-.062	-.249**	-.112	-.150	.404**	.545**	.480**	.426**	.332**	.163*	-.163*	.558**	.478**	.527**	.623**	.711**	1			
Sportsmanship (19)	-.243**	-.128	-.242**	-.251**	-.207**	.369**	.468**	.518**	.466**	.244**	.248**	-.167*	.576**	.493**	.478**	.511**	.677**	.711**	1		
Civic virtue(20)	-.116	-.083	-.166*	-.215*	-.207*	.390*8	.485**	.568**	.478**	.396**	.291**	-.137	.577**	.508**	.443**	.544**	.578**	.690**	.706**	1	
Intention to quit (21)	.165*	.455**	.139	.384**	.312**	-.376**	-.312**	-.383	-.539**	-.417**	-.455**	.484**	-.469**	-.472**	-.132	-.145	-.174*	-.232**	-.292**	-.225**	1

*p<.05   **p<0.01

5. DISCUSSION

The general aim of the research described in this article was to integrate research on Psychological Contract Fulfilment and well-being. Two models were used to achieve this. The first, the Guest (1989) model, considers background factors such as characteristics of the organisation and individual, and then describes the state of Psychological Contract Fulfilment in terms of Fairness, Trust and the "Delivery of the Deal". There are then attitudinal consequences of PCF namely organisational commitment, job satisfaction, employment relations, work-life balance and job security. The behavioural consequences include increased motivation, organisational citizenship and increased intention to stay in the job. The DRIVE model (Mark and Smith, 2008) was used to conceptualise the well-being process. This model includes job demands, job resources (control and support), individual differences (coping and personality), job appraisals (perceived stress and job satisfaction) and positive and negative outcomes (positive and negative affect).

In order to include all of these factors in a survey it is necessary to develop short versions of the different concepts. This has already been done for the DRIVE model and led to the development of the WPQ and SWELL measuring instruments. The first objective of the present research was to do this for the consequences of PCF. Short items measuring aspects of attitudinal and behavioural consequences were constructed and validated by examining correlations with the original longer scales from which they were developed. The results showed high correlations (often in the range of 0.7-0.8) between the new short items and the longer versions.

The next step in the analysis examined associations between job characteristics, PCF and the attitudinal and behavioural consequences. Psychological Contract Fulfilment was negatively correlated with demands and other negative job characteristics and was positively correlated with control, support and rewards (resources). With regards to individual differences, PCF was negatively correlated with avoidance coping and was positively correlated with the Big 5 dimensions (openness; conscientiousness; extraversion; agreeableness; and emotional stability) and the positive personality dimensions of self-esteem, self-efficacy, and optimism. In terms of well-being outcomes, Psychological Contract Fulfilment was positively correlated with well-being both at work (e.g. job satisfaction) and in life generally (e.g. positive affect; life satisfaction). In contrast, it was negatively correlated with low well-being scores both at work (e.g. job stress) and in life generally (e.g. negative affect; stress outside of work; anxiety and depression). These findings provide support for an integrated PCF/DRIVE model.

The final analyses examined associations between short measures of job characteristics, Psychological Contract Fulfilment and job attitudes and work behaviours. Job demands were positively associated with intention to quit and job insecurity. However, demands were negatively correlated with

employment relations, courtesy and sportsmanship. Job control was positively correlated with affective commitment, employment relations, motivation, effort, altruism, courtesy, conscientiousness, sportsmanship and civic virtue. In contrast, control was negatively correlated with job insecurity and intention to quit. Most negative job characteristics showed a similar profile to job demands and most positive characteristics showed the same pattern of associations as control. The number of significant correlations depended on the specific characteristic being considered. For example, bullying was associated with more significant correlations than job demands and rewards were associated with more significant associations than control. Psychological Contract Fulfilment was positively correlated with affective commitment, employment relations, work motivation, work effort, altruism, courtesy, conscientiousness, sportsmanship and civic value. It was negatively correlated with job insecurity and intention to quit. Overall, these associations provide further support for the PCF/DRIVE model.

The present study was intended to form the basis for further research by developing short measuring instruments and integrating models of PCF and well-being. Further research is now required to extend the present approach. For example, it is now important to conduct multi-variate analyses to determine whether PCF, attitudinal and behavioural consequences influence well-being when organisational and individual factors are controlled. It is also difficult to define the causal pathways from the present study because of the cross-sectional design. Future research should use a longitudinal design, preferably with interventions aimed at increasing PCF and the consequences of it. It is also important to determine whether the present results generalise to other samples of workers in different countries.

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