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Work-related well-being in the South African Police Service

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Abstract

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The objective of this study was to assess whether background variables, job stress, and personality traits could predict the work-related well-being (burnout and work engagement) of police members. A cross-sectional survey design was used. Stratified random samples ($N=1,794$) were taken of police members of eight provinces in South Africa. The Maslach Burnout Inventory-General Survey, Utrecht Work Engagement Scale, Police Stress Inventory, and Personality Characteristics Inventory were administered. The results showed that age, gender, and race explained a small percentage of the variance in exhaustion, cynicism, and vigor/dedication. Stress because of job demands and a lack of resources predicted exhaustion and cynicism. Emotional stability and conscientiousness inversely predicted exhaustion and cynicism, while emotional stability, conscientiousness and extraversion predicted vigor and dedication. Stress because of job demands predicted only a small percentage of the variance in vigor and dedication.

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Introduction

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In comparison with other occupations, police work has been identified as one of society's most stressful occupations (Alexander, 1999; Anshel, 2000; Crank & Caldero, 1991; Lord, Gray, & Pond, 1991; Paton & Violanti, 1999; Simmons, Cochran, & Blount, 1997; Whitehead, 1987). This is particularly true for South African circumstances, where the socioeconomic and political turmoil of the past three decades were characterized by high levels of crime and violence (Gulle, Tredoux, & Foster, 1998; Marks, 1995; Nel & Burgers, 1996). Statistics regarding continuous exposure to violence, retirement as a result of stress-related psychological disorders as well as the high suicide rate in the South African Police Service (SAPS) are indicative that many police officers experience their circumstances as stressful and traumatic (Kopel & Friedman, 1999). The exposure to these stressful conditions could lead to ill health and unwell-being of police officers. It is important to have a

productive and healthy police service that serves as an important contributor to the stability and economic growth of a country, thus it is necessary to investigate possible factors (which include burnout and work engagement) that contribute to the work-related well-being of police officers.

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Possible factors that could influence burnout and work engagement include job, organizational, and personal characteristics (Cordes & Dougherty, 1993; Schaufeli & Bakker, 2003). While the role of the individual had been recognized in the general stress literature for quite some time (e.g., Lazarus & Folkman, 1984), much of the early burnout research focused almost exclusively on the role of organizational factors in the prediction of burnout (Halbesleben & Buckley, 2004). No studies were found that related personality traits to work engagement. An emerging trend over the past decade, however, was a growing body of literature examining the interaction of environmental and personal factors in the burnout process (Burisch, 2002; Jansen, Kerkstra, Abu-Saad, & van der Zee, 1996).

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It is plausible that individual traits that predispose employees to burnout or work engagement interact with organizational factors (such as job stress) that are

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58 conducive to the development of well-being. Therefore,
59 the objective of this study was to assess whether back-
60 ground variables, job stress, and personality dimensions
61 could predict the work-related well-being (burnout and
62 work engagement) of police members.

63 *Burnout and work engagement*

64 Over the past three decades, interest in burnout has
65 increased dramatically as researchers have begun to
66 understand the significant negative impact it has on
67 employees. *Schaufeli and Enzmann (1998, p. 36)* define
68 burnout as “a persistent, negative, work-related state of
69 mind in ‘normal’ individuals that is primarily charac-
70 terized by exhaustion, which is accompanied by distress,
71 a sense of reduced effectiveness, decreased motivation,
72 and the development of dysfunctional attitudes and
73 behaviors at work.” Recently, the concept of burnout has
74 been expanded towards all types of professions and
75 occupational groups. Consequently, the original version
76 of the Maslach Burnout Inventory (*Maslach & Jackson,*
77 *1986*) was adapted for use outside the human services.
78 This new version was called the MBI-General Survey
79 (MBI-GS) (*Schaufeli, Leiter, Maslach, & Jackson,*
80 *1996*). In the SAPS, *Storm and Rothmann (2003a)*
81 confirmed a three-factor model of burnout consisting of
82 exhaustion, cynicism, and professional efficacy. Ex-
83 haustion refers to fatigue, but without direct reference to
84 people as the source of those feelings. Cynicism reflects
85 indifference or a distant attitude towards one’s work in
86 general. Professional efficacy encompasses both social
87 and nonsocial accomplishments at work.

88 From a theoretical point of view one could argue that
89 exhaustion and mental distancing (cynicism) constitute
90 the two key aspects of burnout (*Schaufeli, 2003*). Exhaus-
91 tion refers to an employee’s *incapability* of performing
92 because all energy has been drained, whereas mental
93 distancing involves an employee’s *unwillingness*
94 to perform because of an increased intolerance of any effort.
95 Mental distancing—or psychological withdrawal from
96 the task—can be seen as an adaptive mechanism to cope
97 with excessive job demands and resulting feelings of
98 exhaustion (*Maslach, Schaufeli, & Leiter, 2001*). When
99 this coping strategy becomes a habitual pattern, as is the
100 case in cynicism, it disrupts adequate task performance
101 and becomes dysfunctional. In turn, this condition leads to
102 an increase in job demands and exhaustion, which makes
103 the vicious circle complete. Incapacity and unwillingness
104 to perform are considered as two sides of the same coin
105 (*Schaufeli, 2003*).

106 Empirical findings point to the central role of
107 exhaustion (incapacity and unwillingness to perform)

and mental distancing, as opposed to the third component,
lack of professional efficacy in work-related well-being.
Different explanations can be envisaged for this finding.
First, relatively low correlations of professional efficacy
are observed with exhaustion and cynicism, whereas the
two burnout dimensions are found to correlate relatively
strongly (*Lee & Ashforth, 1996*) or even collapse into a
single factor (*Green, Walkey, & Taylor, 1991*). Second, it
seems that cynicism develops in response to exhaustion,
whereas professional efficacy seems to develop indepen-
dently and in parallel (*Leiter, 1993*). Third, professional
efficacy is the weakest burnout dimension in terms of
significant relationships with other variables (*Lee &*
Ashforth, 1996). Moreover, several researchers have
argued that professional efficacy reflects a personality
characteristic rather than a genuine burnout component
(*Cordes & Dougherty, 1993; Shirom, 1989*).

An important development that took place in the last
few years is that the concept of burnout is being supple-
mented by its positive antithesis—work engagement—so
that the entire spectrum of workers’ well-being is now
covered (*Schaufeli, 2003*). In line with the increased inter-
est in positive psychology, it has been proposed to study
the opposite of burnout in order to cover the entire con-
tinuum of work-related experiences, ranging from negative
(burnout) to positive (work engagement) (see *Maslach*
et al., 2001). The positive antipode of burnout is charac-
terized by vigor (high energy) and dedication (strong
identification). In addition, a third element is distinguished
(absorption) which most likely plays a less central role in
the engagement concept. The first psychometric results
with a measure that assesses these three characteristics of
engagement (the Utrecht Work Engagement Scale) are
encouraging (*Schaufeli, Martínez, Marques-Pinto, Sala-*
nova, & Bakker, 2002; Schaufeli, Salanova, González-
Romá, & Bakker, 2002). Exhaustion (low energy) and
mental distancing (poor identification) are the main
features of burnout that are assessed by the MBI
(*Schaufeli, 2003*). Vigor (high energy) and dedication
(strong identification) as measured by the UWES seem to
be the positive counterparts of exhaustion and mental
distancing (as measured by the MBI).

Occupational stress

Stress is defined in terms of a disruption of the equi-
librium of the cognitive–emotional–environmental system
by external factors (*Lazarus & Folkman, 1984*). Stress may
be studied in terms of an organism’s response to challenges
and upsets in the environment. It can also be studied where
characteristics of the environmental stimuli give rise to
stress (stressors), which may itself (themselves) become

158 the focus of the study. In the first case stress is treated as a
 159 dependent variable, in the second it is treated as an
 160 independent variable (Cox, 1978). In this study, stress was
 161 treated as an independent variable, or as a stimulus that
 162 could influence the well-being of police officers.

163 Based on the holistic model of work wellness (Nelson &
 164 Simmons, 2003), burnout and work engagement could be
 165 regarded as outcomes of job stress. This model incorporates
 166 a broad range of stressors and individual difference
 167 variables that may be salient for cognitive appraisal and
 168 coping. The Transactional Process model (Lazarus, 1991)
 169 and the Spielberger State-Trait (STP) model of occupa-
 170 tional stress (Spielberger, Vagg, & Wasala, 2003) concep-
 171 tualize stress as a complex process that consists of three
 172 major components, namely (1) sources of stress that are
 173 encountered in the work environment; (2) perception and
 174 appraisal of a particular stressor by an employee, and (3) the
 175 emotional reactions that are evoked when a stressor is
 176 appraised as threatening.

177 The STP model of occupational stress focuses on the
 178 perceived severity and frequency of occurrence of two
 179 major categories of stressor events, namely job pressures
 180 and lack of support (Spielberger et al., 2003). The STP
 181 model recognizes the importance of individual differences
 182 in personality traits in determining how workplace
 183 stressors are perceived and appraised. In this view,
 184 occupational stress is defined as the mind–body arousal
 185 resulting from the physical and/or psychological demands
 186 associated with the job. The appraisal of a stressor as
 187 threatening leads to the emotional arousal of anxiety and
 188 anger, and the associated activation of the autonomic
 189 nervous system. If severe and persistent, the resulting
 190 physical and psychological strain may cause adverse
 191 behavioral consequences (Spielberger et al., 2003).

192 According to Spielberger et al. (2003), employees
 193 evaluate their work environment in terms of the severity
 194 and frequency of occurrence of specific job demands and
 195 pressure and the level of support provided by supervisors,
 196 co-workers, and organizational policies and procedures.
 197 Failing to take the frequency of occurrence of a particular
 198 stressor into account may contribute to overestimating the
 199 effects of highly stressful situations that rarely occur,
 200 while underestimating the effects of moderately stressful
 201 events that are frequently experienced.

202 According to Kop and Euwema (2001) and Crank and
 203 Caldero (1991), organizational factors are the most salient
 204 stressors in police organizations. These organizational
 205 stressors can be divided into two groups, namely *job*
 206 *demands* and *a lack of resources* (Schaufeli & Enzmann,
 207 1998). According to Demerouti, Bakker, Nachreiner, and
 208 Schaufeli (2001), job demands refer to those aspects of the
 209 job that require sustained physical or mental effort and are

210 therefore associated with certain physiological and psy-
 211 chological costs (e.g., meeting deadlines, shift work,
 212 working overtime, excessive paper work and handling
 213 crisis situations). Job resources refer to those aspects of the
 214 job that may be functional in achieving work goals,
 215 reducing job demands and the associated physiological and
 216 psychological costs, and stimulating personal growth and
 217 development (e.g., adequate equipment, good supervision,
 218 an adequate salary, recognition, and sufficient personnel).
 219 Job demands and a lack of resources contribute to stress,
 220 which leads to burnout and low work engagement
 221 (Rothmann, Steyn, & Mostert, 2005).

222 *Personality dimensions*

223 Individuals appear to respond differently to their
 224 environments. It is therefore unclear why the role of
 225 personality differences in work-related well-being has
 226 been ignored to a great extent. Studies using personality
 227 traits as predictors that failed to employ a comprehensive
 228 model were inconclusive because the most relevant traits
 229 might have been overlooked (McCrae & John, 1992).
 230 Furthermore, psychologists had long been interested in
 231 identifying the underlying dimensions of personality.
 232 Such an endeavor was noteworthy because it addresses
 233 the field at a very fundamental level: it provides a
 234 paradigm for evaluating, interpreting, and classifying the
 235 personological qualities of any psychological variable.

236 Over the past thirty years, research had converged on
 237 the existence of five major dimensions of personality,
 238 the so-called “big five,” namely neuroticism, extraversion,
 239 openness to experience, agreeableness, and
 240 conscientiousness (Costa & McCrae, 1985; Digman,
 241 1990; Goldberg, 1990; John, 1990; McCrae & Costa,
 242 1989a, 1989b; McCrae & John, 1992). The traits
 243 emphasized in this taxonomic scheme are higher-order
 244 *super-factors* that exist at the summit of this hierarchy,
 245 and as such, represent the broadest, most general
 246 dimensions of individual differences.

247 Individuals high on *neuroticism* are characterized by a
 248 tendency to experience negative emotions such as anxiety,
 249 depression or sadness, hostility, and self-consciousness, as
 250 well as a tendency to be impulsive (see McCrae, 1992;
 251 McCrae & Costa, 1987). Those high on *extraversion* tend
 252 to experience positive emotions and to be warm, gregarious,
 253 fun-loving, and assertive (McCrae, 1992; McCrae &
 254 Costa, 1987). People high on *openness to experience* are
 255 inclined to be curious, imaginative, empathetic, creative,
 256 original, artistic, psychologically minded, aesthetically
 257 responsive, and flexible. *Agreeableness* reflects a proclivity
 258 to be good-natured, acquiescent, courteous, helpful,
 259 flexible, cooperative, tolerant, forgiving, soft-hearted, and

260 trusting (Barrick & Mount, 1991; McCrae, 1992; McCrae
261 & Costa, 1987). Those high on *conscientiousness* have
262 been characterized as having a tendency to be habitually
263 careful, reliable, hard-working, well-organized, and pur-
264 poseful (McCrae, 1992; McCrae & Costa, 1987).

265 Regarding the relationship between burnout and the big
266 five personality dimensions, Deary et al. (1996) confirmed
267 the relationship between neuroticism, exhaustion, and cyn-
268 icism. Schaufeli and Enzmann (1998) performed a
269 secondary analysis based on the data of Deary et al.
270 (1996) and reported that exhaustion was positively related
271 to neuroticism and openness (33 percent shared variance),
272 and depersonalization (cynicism) was positively related to
273 neuroticism and negatively to agreeableness (20 percent
274 shared variance).

275 Mills and Huebner (1998) found that exhaustion
276 correlated significantly with neuroticism, extraversion,
277 agreeableness, and conscientiousness, mental distance
278 was related to neuroticism and agreeableness, while re-
279 duced personal accomplishment was related to neuroticism
280 and extraversion. In a study among nurses working in a
281 hospital, Zellars, Perrewe, and Hochwarter (2000) found
282 that only neuroticism significantly predicted levels of
283 exhaustion. Nurses higher in extraversion and agreeable-
284 ness reported lower levels of mental distance. Openness
285 also negatively predicted mental distance, although this
286 relationship was only marginally significant. A meta-
287 analytic study summarizing twelve studies on burnout and
288 anxiety, which was part of the “big five” factor neuroticism,
289 showed that this trait correlated most highly with ex-
290 haustion (shared variance 23 percent), followed by deper-
291 sonalization (17 percent shared variance) (Schaufeli &
292 Enzmann, 1998).

293 Little information is available regarding the relationship
294 between personality and work engagement. It could be
295 expected, however, that work engagement would be posi-
296 tively related to extraversion and negatively related to
297 neuroticism (Keyes, Shmotkin, & Ryff, 2002). According
298 to Brief and Weiss (2002), extraverted individuals
299 (relatively to neurotic individuals) are more likely to ex-
300 perience vigor. Langelaan, Bakker, Van Doornen, and
301 Schaufeli (2006) found that work engagement is related to
302 neuroticism and extraversion.

303 *Work-related well-being and background variables*

304 Regarding age, Wissing and Van Eeden (2002) found
305 clear differences between young and older individuals on
306 various indexes of psychological well-being. Based on
307 these results, younger police officers could be expected to
308 experience lower levels of work engagement than older
309 individuals. Age is also the one variable that has been most

consistently related to burnout (Maslach et al., 2001; 310
Schaufeli & Enzmann, 1998). Younger employees reported 311
higher burnout levels than those over thirty or forty years 312
old. 313

314 Wissing and Van Eeden (2002) found significant 315
differences between the well-being of males and females. 316
Hobfoll (1989) argued that women might have less access 317
to resources that could help to buffer the negative effects of 318
stress, and maintain wellness. Therefore, female police 319
officers might experience lower levels of work engagement 320
than male officers. Some studies showed higher burnout for 321
women, some showed higher scores for men, and others 322
found no difference at all. The one small but consistent 323
difference was that women scored slightly higher on ex- 324
haustion and men on depersonalization (Maslach et al., 325
2001). Johnson (1991) found that female officers scored 326
relatively high on exhaustion, whereas males scored rela- 327
tively high on mental distance, while Kop, Euwema, and 328
Schaufeli (1999) found no difference between male and 329
female police officers.

330 Edwards (1989) and Nell (1994) perceived lower 331
levels of psychological well-being among Black people. 332
Hobfoll and Lilly (1993) found that resistance resources 333
were lower in Black communities. Wissing and Van 334
Eeden (2002) also found significant differences between 335
the scores of Black and White individuals on indexes of 336
psychological well-being. According to Alexander 337
(1999), particular officers may face additional demands 338
from other intrinsic life factors, such as their race. For 339
officers from non-White backgrounds, intrinsic and 340
organizational stressors combine together in a convolut- 341
ed manner. The factor of discrimination is too often 342
present in police departments and could contribute to a 343
sense of exhaustion and frustration characteristic of 344
burnout (Alexander, 1999).

345 The above discussion leads to the following hypotheses:

Hypothesis 1. Age, gender, and race are related to 346
burnout (exhaustion and cynicism) and work engagement. 347

Hypothesis 2. Job stress predicts burnout (i.e., exhaus- 348
tion and cynicism) and low work engagement. 349

Hypothesis 3. Personality traits (including emotional 350
stability, conscientiousness, agreeableness, and extraver- 351
sion) predict low burnout and high work engagement. 352

353 **Method**

354 *Research design*

355 A survey design was used to achieve the research 356
objectives (Shaughnessy & Zechmeister, 1997).

357 *Participants*

358 The police stations of eight of the nine South African
 359 provinces (the exception being the North West Province,
 360 which was included in a previous study) were divided
 361 into small (fewer than twenty-five staff members),
 362 medium (twenty-five to one hundred staff members),
 363 and large stations (more than one hundred staff
 364 members). All police members at randomly identified
 365 small and medium stations in each province were asked
 366 to complete the questionnaire, while stratified random
 367 samples were taken according to sex and ethnic group at
 368 large stations. The sample ($N=1,794$) included all major
 369 race groupings, namely White ($n=574$), Black ($n=559$),
 370 Colored ($n=206$), and Indian ($n=56$) police members
 371 (thirty-six missing responses).

372 Table 1 indicates the composition of the sample in
 373 terms of different language groups. Inspectors made up
 374 more than half the sample (54.16 percent). Almost 60
 375 percent of the sample had grade twelve qualifications,
 376 which is equal to twelve years of formal schooling.
 377 Officers in this sample were predominantly married
 378 males. The age of participants ranged from nineteen to
 379 sixty-six years ($M=34.53$, $SD=6.23$). The average
 380 number of years officers had been in the police service
 381 was 12.98 ($SD=6.21$). The average number of years in
 382 the current position was 4.28 ($SD=3.15$).

383 *Instruments*

384 The *Maslach Burnout Inventory-General Survey*
 385 (MBI-GS) (Schaufeli et al., 1996) was used to measure
 386 burnout. Only the items of two subscales, namely
 387 exhaustion and cynicism, were used. Internal consisten-
 388 cies (Cronbach coefficient alphas) reported by Schaufeli
 389 et al. (1996) varied from .87 to .89 for exhaustion, and .73
 390 to .84 for cynicism. Test–retest reliabilities after one year
 391 were .65 (exhaustion), and .60 (cynicism) (Schaufeli et al.,
 392 1996). All items were scored on a seven-point frequency
 393 rating scale ranging from 0 (*never*) to 6 (*daily*). Storm and
 394 Rothmann (2003a) confirmed the factor structure of the
 395 MBI-GS in a sample of 2,396 SAPS members. The
 396 following Cronbach alpha coefficients were obtained for
 397 the MBI-GS: .88 for exhaustion and .79 for cynicism
 398 (Storm & Rothmann, 2003a).

399 The *Utrecht Work Engagement Scale (UWES)* (Schau-
 400 feli, Salanova et al., 2002) was used to measure work
 401 engagement. The UWES included three dimensions,
 402 namely vigor, dedication, and absorption, but only the
 403 first two subscales were used for the purposes of this
 404 study. The UWES was scored on a seven-point frequency
 405 rating scale, varying from 0 (*never*) to 6 (*always*). Values

Table 1			
Characteristics of the participants (N=1,794)			
Item	Frequency	Percentage	t1.3
Ethnic group			
White	574	40.11	t1.4
Black	559	39.06	t1.5
Colored	206	14.40	t1.6
Indian	56	3.91	t1.7
Not indicated	36	2.52	t1.8
Language			
Afrikaans	711	49.69	t1.9
English	169	11.81	t1.10
Sepedi	87	6.08	t1.11
Sesotho	136	9.50	t1.12
Setswana	44	3.07	t1.13
SiSwati	25	1.75	t1.14
Tshivenda	27	1.89	t1.15
IsiNdebele	16	1.12	t1.16
IsiXhosa	69	4.82	t1.17
IsiZulu	135	9.43	t1.18
Other	12	2.10	t1.19
Rank			
Constable	110	7.69	t1.20
Sergeant	278	19.43	t1.21
Inspector	775	54.09	t1.22
Captain	226	15.79	t1.23
Superintendent	35	2.45	t1.24
Senior superintendent	7	0.49	t1.25
Size of station			
Small	464	32.42	t1.26
Medium	556	38.85	t1.27
Large	411	28.72	t1.28
Education			
Grade 10	140	9.78	t1.29
Grade 11	71	4.96	t1.30
Grade 12	835	58.35	t1.31
Technical college diploma	42	2.94	t1.32
Technikon diploma	289	20.20	t1.33
University degree	24	2.10	t1.34
Postgraduate degree	30	1.68	t1.35
Sex			
Male	1,172	81.90	t1.36
Female	259	18.10	t1.37
Status			
Single	283	19.78	t1.38
Married	787	55.00	t1.39
Divorced	322	22.50	t1.40
Separated	26	1.82	t1.41
Remarried	13	0.91	t1.42

of Cronbach's alpha ranged between .80 and .90
 (Demerouti et al., 2001). Storm and Rothmann (2003b)
 obtained the following alpha coefficients for the UWES in
 a sample of 2,396 members of the SAPS: .78 for vigor and
 .89 for dedication. In a sample of South African
 emergency workers, Naudé and Rothmann (2004)
 extracted two factors by using exploratory factor analysis,
 namely vigor/dedication and absorption, but found that
 Cronbach's alpha of the last factor was questionable.

415 The *Police Stress Inventory* was used to measure job
 416 stress. Pienaar and Rothmann (2003) constructed the PSI
 417 for police officers in the SAPS based on the findings of
 418 several investigations regarding stressors specific to the
 419 policing environment. The PSI was scored on a nine-point
 420 frequency and intensity rating scale, varying from 0 (*low*)
 421 to 9 (*high*). Factor analysis with a varimax rotation of the
 422 items identified two underlying factors, namely job
 423 demands and lack of resources. Pienaar and Rothmann
 424 (2003) found acceptable internal consistencies for the PSI
 425 (job demands: $\alpha = .92$; lack of resources: $\alpha = .92$).

426 The *Personality Characteristics Inventory (PCI)*
 427 (Mount & Barrick, 2002) assessed the five-factor model
 428 (FFM) of personality dimensions. It was designed to
 429 measure the characteristics of the environment adequately,
 430 including a description of the activities involved, the
 431 traits and abilities acquired, and the personal styles and
 432 values that are rewarded in the environment. Barrick
 433 (2003) conducted an exploratory factor analysis on the
 434 150 items of the PCI in a sample of 2,396 police officers in
 435 South Africa. Four factors were extracted, including
 436 conscientiousness (fifteen items), emotional stability (ten
 437 items), agreeableness (fourteen items), and extraversion
 438 (eight items). Each item was rated on a Likert type scale
 439 varying from 1 (*disagree*) to 3 (*agree*). Barrick (2003)
 440 reported alpha coefficients of .86 for conscientiousness,
 441 .80 for emotional stability, .81 for agreeableness, and .71
 442 for extraversion. The PCI scales also demonstrated
 443 adequate convergent validity and divergent validity with
 444 the Neo-Personality Inventory (Costa & McCrae, 1992).
 445 In this study, the Cronbach alpha coefficients of
 446 extraversion, emotional stability, agreeableness, and
 447 conscientiousness were .71, .81, .80, and .86 respectively.

448 *Statistical analysis*

449 First, descriptive statistics (e.g., means, standard
 450 deviations, skewness, and kurtosis) were used to explore
 451 the data. Exploratory factor analyses and Cronbach's
 452 alpha coefficients were then computed to assess the
 453 validity and reliability of the constructs, which were
 454 measured in this study. First, a simple principal
 455 components analysis was conducted on the constructs,
 456 which formed part of the measurement model. The
 457 eigenvalues and scree plot were studied to determine the
 458 number of factors. In the second step, either a principal
 459 components analysis with a direct oblimin rotation was
 460 conducted if factors were related, or a principal
 461 component analysis with a varimax rotation was used
 462 if the factors obtained were not related (Tabachnick &
 463 Fidell, 2001). The theoretical model was tested in
 464 regression analyses.

Results

Construct validity of the measuring instruments

Burnout and work engagement

A principal components analysis that was carried out
 on the nine items of the MBI-GS showed two factors
 that explained 64.47 percent of the total variance. The
 factors were moderately related ($r = .54$), thus a principal
 component analysis with a direct oblimin rotation was
 conducted on the nine items. The first factor was labeled
 exhaustion and included the following items: feeling
 emotionally drained from work (loading = .81), feeling
 used up at the end of the work day (.90), feeling tired
 when getting up in the morning, working all day is a
 strain (.72), and feeling burned out from work (.76). The
 second factor was labeled cynicism and included the
 following items: less interested in work (.74), less
 enthusiastic about work (.74), more cynical about
 whether work contributes anything (.74), and doubt
 the significance of work (.77).

A principal components analysis that was carried out on
 the ten items of the UWES showed one factor that
 explained 66.93 percent of the total variance. The factor
 (labeled *work engagement*) included the following items:
 "I am bursting with energy in my work" (.57), "I find my
 work full of meaning and purpose" (.80), "I feel strong and
 vigorous in my job" (.84), "I am enthusiastic in my job"
 (.79), "My job inspires me" (.83), "When I get up in the
 morning, I feel like going to work" (.79), "I am proud of the
 work that I do" (.80), "In my job, I can continue working for
 long periods at a time" (.69), "To me, my work is
 challenging" (.80), and "I am very resilient, mentally, in my
 job" (.63).

Job stress

A principal component analysis that was carried out on
 the thirty items of the PSI showed two strongly related
 factors ($r = .65$) that explained 47.21 percent of the total
 variance. Next, a principal factor analysis with a direct
 oblimin rotation was conducted on the thirty items. The
 factor (labeled job stress: lack of support) included the
 following items: lack of opportunity for advancement
 (loading = .75), fellow workers not doing their jobs (.71),
 inadequate support by supervisor (.74), lack of recogni-
 tion for good work (.75), inadequate or poor quality
 equipment (.74), difficulty getting along with the
 supervisor (.59), experiencing negative attitudes towards
 the organization (.68), insufficient personnel to handle
 an assignment (.70), insult from public (.45), lack
 of participation in decision-making (.58), inadequate
 salary (.69), competition for advancement (.43), poor

t2.1 Table 2
t2.2 Descriptive statistics and alpha coefficients of the MBI, UWES, PSI, and PCI

t2.3	Item	Mean	SD	Skewness	Kurtosis	α
t2.4	Exhaustion	11.17	7.88	0.52	-0.59	.87
t2.5	Cynicism	7.79	6.07	0.67	-0.26	.78
t2.6	Engagement	39.64	11.54	-0.95	0.55	.89
t2.7	Stress: job demands	56.88	19.45	-0.13	-0.40	.90
t2.8	Stress: lack of resources	63.39	19.31	-0.44	-0.28	.88
t2.9	Conscientiousness	60.98	7.55	-1.05	2.62	.86
t2.10	Emotional stability	31.38	6.93	-0.11	-0.25	.80
t2.11	Agreeableness	52.51	7.18	-0.68	1.89	.81
t2.12	Extraversion	28.61	4.74	-0.37	0.55	.71

514 supervision (.66), poorly motivated co-workers (.62), and
515 conflict with other departments (.46).
516 The second factor (labeled stress: job demands)
517 included the following items: disagreement with supervisor
518 (.40), working overtime (.64), assignment of unfamiliar
519 duties (.71), dealing with crisis situations (.68), performing
520 tasks not in the job description (.50), assignment of
521 increased responsibility (.81), periods of inactivity (.39),
522 making critical decisions (.65), noisy work area (.45),
523 frequent interruptions (.47), frequent changes in the nature
524 of the job (.77), excessive paperwork (.59), meeting
525 deadlines (.75), insufficient personal time (.61), and
526 covering work for other employees (.43).

527 *Descriptive statistics*

528 Table 2 shows the descriptive statistics and the
529 Cronbach alpha coefficients of the MBI-GS, UWES, PSI,
530 and PCI.

531 The scores on the MBI-GS, UWES, PSI, and PCI are
532 normally distributed. The Cronbach alpha coefficients of
533 all the measuring instruments are considered to be
534 acceptable compared to the guideline of $\alpha > .70$ (Nunnally
535 & Bernstein, 1994). It appears that the MBI-GS, UWES,

PSI, and PCI have acceptable levels of internal consistency. 536 537

Correlations 538

The product-moment correlation coefficients between the MBI-GS, UWES, PSI, and PCI are reported in Table 3. 539 540 541

As can be seen in Table 3, exhaustion is most strongly positively related to job stress (including both job demands and a lack of resources), and negatively related to emotional stability. Cynicism is most strongly positively related to exhaustion and stress: job demands and negatively related to conscientiousness and emotional stability. Work engagement is most strongly positively related to conscientiousness, emotional stability, and extraversion. Work engagement is statistically and practically significantly related to exhaustion and cynicism. 542 543 544 545 546 547 548 549 550 551

Multiple regression analyses 552

Next, a series of multiple regression analyses were carried out. In these analyses, age was entered in its continuous form, while dummy variables were created for gender and race groups. Whites were used as the reference group when the dummy variables for the other race groups were formed. The results of a multiple regression analysis with background variables, occupational stress (as measured by the PSI) and personality traits (as measured by the PCI) as independent variables and exhaustion (as measured by the MBI-GS) as dependent variable are reported in Table 4. Background variables were entered in step 1, while job stress and personality traits were entered in steps 2 and 3 respectively. 553 554 555 556 557 558 559 560 561 562 563 564 565

Table 4 shows that 32 percent of the variance in exhaustion was predicted by background variables, job stress (because of both job demands and a lack of 566 567 568

t3.1 Table 3
t3.2 Product-moment correlation coefficients between the MBI, UWES, PSI, and PCI

t3.3	Item	1	2	3	4	5	6	7	8
t3.4	1. Exhaustion	-	-	-	-	-	-	-	-
t3.5	2. Cynicism	.60*++	-	-	-	-	-	-	-
t3.6	3. Engagement	-.37*+	-.45*+	-	-	-	-	-	-
t3.7	4. Stress: job demands	.44*+	.31*+	-.20*	-	-	-	-	-
t3.8	5. Stress: lack of resources	.38*+	.26*	-.14*	.66*++	-	-	-	-
t3.9	6. Conscientiousness	-.23*	-.31*+	.38*+	-.15*	.09*	-	-	-
t3.10	7. Emotional stability	-.37*+	-.33*+	.29*	-.22*	-.16*	.16*	-	-
t3.11	8. Agreeableness	-.12*	-.18*	.26*	-.13*	.01	.59*++	.04	-
t3.12	9. Extraversion	-.19*+	-.19*	.33*+	-.14*	-.04	.54*+	.13*	.47*+

t3.13 * Correlation is significant at the .01 level (two-tailed).
t3.14 + Correlation is practically significant $r > .30$ (medium effect).
t3.15 ++ Correlation is practically significant $r > .50$ (large effect).

t4.1 Table 4
t4.2 Multiple regression analyses with exhaustion as dependent variable

t4.3		Unstandardized coefficients		Standardized coefficients	<i>t</i>	<i>p</i>	<i>F</i>	<i>R</i>	<i>R</i> ²	ΔR^2
t4.4		B	SE	Beta						
t4.5	Model 1									
t4.6	Constant	13.12	1.10		11.96	.00	6.15*	0.13	0.02	0.02*
t4.7	Age	-0.04	0.03	-.03	-1.18	.24				
t4.8	Gender	0.45	0.48	.02	0.94	.35				
t4.9	Race (Black)	-1.36	0.42	-.08	-3.22	.00				
t4.10	Race (Colored)	-1.96	0.55	-.09	-3.59	.00				
t4.11	Race (Indian)	1.81	0.98	.04	1.84	.07				
t4.12	Model 2									
t4.13	Constant	2.01	1.15		1.74	.08	70.30*	0.47	0.22	0.20*
t4.14	Age	-0.05	0.03	-.04	-1.78	.08				
t4.15	Gender	0.01	0.43	.00	0.03	.97				
t4.16	Race (Black)	-1.09	0.39	-.07	-2.81	.00				
t4.17	Race (Colored)	-1.29	0.50	-.06	-2.58	.01				
t4.18	Race (Indian)	1.50	0.88	.04	1.71	.09				
t4.19	Stress: job demands	0.15	0.01	.36	12.60	.00				
t4.20	Stress: lack of resources	0.05	0.01	.12	4.31	.00				
t4.21	Model 3									
t4.22	Constant	22.21	1.83		12.14	.00	75.99*	0.57	0.32	0.10*
t4.23	Age	-0.03	0.03	-.02	-1.08	.28				
t4.24	Gender	0.31	0.41	.02	0.76	.45				
t4.25	Race (Black)	0.14	0.39	.01	0.35	.73				
t4.26	Race (Colored)	-0.78	0.47	-.04	-1.66	.10				
t4.27	Race (Indian)	2.33	0.821	.06	2.84	.01				
t4.28	Stress: job demands	0.09	0.01	.22	8.00	.00				
t4.29	Stress: lack of resources	0.08	0.01	.20	7.03	.00				
t4.30	Conscientiousness	-0.19	0.03	-.18	-6.59	.00				
t4.31	Emotional stability	-0.29	0.02	-.26	-12.34	.00				
t4.32	Agreeableness	0.05	0.03	.05	1.74	.08				
t4.33	Extraversion	-0.08	0.04	-.05	-1.95	.05				
t4.34	* $p < .01$.									

resources), and personality traits ($F=75.99$, $p<.01$). Background variables explained 2 percent of the variance in exhaustion. Adding the other variables to the prediction statistically significantly increased the R^2 , with the highest increases when job stress ($\Delta R^2=.20$), and personality traits were entered into the multiple regression analyses. The results showed that Whites experienced more exhaustion than Indians. Furthermore, the regression coefficients of stress: lack of resources, (low) emotional stability, and (low) conscientiousness were statistically significant ($p<.01$).

The results of a multiple regression analysis with background variables, job stressors (as measured by the PSI) and personality traits (as measured by the PCI) as independent variables and cynicism (as measured by the MBI-GS) as dependent variable are reported in Table 5.

Table 5 shows that 24 percent of the variance in cynicism was predicted by job stress and personality traits ($F=52.05$, $p<.01$). Adding these variables to the predic-

tion statistically significantly increased the R^2 when job stress ($\Delta R^2=.10$) and personality traits ($\Delta R^2=.13$) were entered into the multiple regression analysis. The regression coefficients of stress: job demands, stress: job resources, (low) emotional stability, and (low) conscientiousness were statistically significant ($p<.01$).

The results of a multiple regression analysis with background variables, job stress (as measured by the PSI) and personality traits (as measured by the PCI) as independent variables and work engagement (as measured by the UWES) as dependent variable, are reported in Table 6.

Table 6 shows that 25 percent of the variance in work engagement was predicted by background variables, job stress, and personality traits ($F=53.25$, $p<.01$). Background variables explained 3 percent of the variance in work engagement. Adding the other variables to the prediction statistically significantly increased the R^2 , with the highest increases when personality traits ($\Delta R^2=.17$) and job stress ($\Delta R^2=.05$) were entered into the multiple

t5.1 Table 5
t5.2 Multiple regression analyses with cynicism as dependent variable

t5.3		Unstandardized coefficients		Standardized coefficients	<i>t</i>	<i>p</i>	<i>F</i>	<i>R</i>	<i>R</i> ²	ΔR^2
t5.4		B	SE	Beta						
t5.5	Model 1									
t5.6	Constant	9.45	0.85		11.12	.00	1.98	0.07	0.01	0.01
t5.7	Age	-0.04	0.02	-.04	-1.51	.13				
t5.8	Gender	-0.57	0.37	-.04	-1.53	.13				
t5.9	Race (Black)	-0.48	0.33	-.04	-1.48	.14				
t5.10	Race (Colored)	-0.85	0.42	-.05	-2.00	.05				
t5.11	Race (Indian)	0.50	0.76	.02	0.65	.51				
t5.12	Model 2									
t5.13	Constant	3.44	0.94		3.65	.00	30.85*	0.33	0.11	0.10*
t5.14	Age	-0.04	0.02	-.04	-1.92	.06				
t5.15	Gender	-0.83	0.35	-.05	-2.33	.02				
t5.16	Race (Black)	-0.38	0.32	-.03	-1.18	.24				
t5.17	Race (Colored)	-0.51	0.41	-.03	-1.26	.21				
t5.18	Race (Indian)	0.32	0.72	.01	0.44	.66				
t5.19	Stress: job demands	0.08	0.01	.27	8.88	.00				
t5.20	Stress: lack of resources	0.02	0.01	.07	2.39	.02				
t5.21	Model 3									
t5.22	Constant	22.64	1.48		15.25	.00	52.05*	0.49	0.24	0.13
t5.23	Age	-0.02	0.02	-.02	-0.93	.35				
t5.24	Gender	-0.40	0.33	-.03	-1.21	.23				
t5.25	Race (Black)	0.38	0.32	.03	1.19	.24				
t5.26	Race (Colored)	-0.14	0.38	-.01	-0.37	.71				
t5.27	Race (Indian)	1.12	0.67	.04	1.67	.09				
t5.28	Stress: job demands	0.03	0.01	.11	3.62	.00				
t5.29	Stress: lack of resources	0.06	0.01	.17	5.94	.00				
t5.30	Conscientiousness	-0.22	0.02	-.28	-9.65	.00				
t5.31	Emotional stability	-0.21	0.02	-.24	-11.04	.00				
t5.32	Agreeableness	0.01	0.02	.01	0.50	.61				
t5.33	Extraversion	0.00	0.04	.00	0.04	.97				

t5.34 * $p < .01$.

607 regression analyses. The results showed that work
608 engagement increased with age, while Whites experi-
609 enced lower work engagement than Blacks, Indians, and
610 Coloreds. Furthermore, the regression coefficients of
611 stress: job demands, stress: lack of resources, emotional
612 stability, conscientiousness, and extraversion were statisti-
613 cally significant ($p < .01$).

614 Based on these results, Hypothesis 1, which stated that
615 background variables (including gender, race, and age)
616 contribute to burnout and work engagement is partially
617 accepted. Hypothesis 2, which stated that job stress
618 contributes to burnout (exhaustion and cynicism) and
619 reduced work engagement, is accepted. Job stress,
620 however, explained only 5 percent of the variance in
621 work engagement, while three personality traits (emo-
622 tional stability, conscientiousness, and extraversion)
623 predicted 17 percent of the variance in work engagement.
624 Furthermore, Hypothesis 3 is partially accepted. Emo-
625 tional stability, conscientiousness, and extraversion
626 contributed significantly to work engagement.

Discussion

627
628 The objective of this study was to assess whether
629 background variables, job stress, and personality traits
630 could predict the work-related well-being (burnout and
631 work engagement) of police members. The results
632 showed that background variables predicted 2 percent of
633 the variance in exhaustion and 3 percent of the variance
634 in work engagement. Job stress (because of job demands
635 and a lack of job resources), as well as two personality
636 traits (emotional stability and conscientiousness) con-
637 tributed to the work-related well-being of uniformed
638 police members. Burnout (both exhaustion and cyni-
639 cism) was best predicted by stress because of job
640 demands and a lack of resources, low emotional
641 stability, and low conscientiousness. Work engagement
642 was best predicted by conscientiousness, emotional
643 stability, and low stress because of job demands.

644 Regarding the negative aspects of work-related well-
645 being, the multiple regression analyses showed that job

t6.1 Table 6
t6.2 Multiple regression analyses with engagement as dependent variable

t6.3		Unstandardized coefficients		Standardized coefficients	<i>T</i>	<i>p</i>	<i>F</i>	<i>R</i>	<i>R</i> ²	ΔR^2
		B	SE	Beta						
t6.4										
t6.5	Model 1									
t6.6	Constant	33.26	1.59		20.89	.00	12.25 *	0.18	0.03	0.03 *
t6.7	Age	0.12	0.05	.06	2.62	.01				
t6.8	Gender	0.31	0.70	.01	0.44	.66				
t6.9	Race (Black)	3.59	0.61	.15	5.85	.00				
t6.10	Race (Colored)	4.37	0.79	.14	5.50	.00				
t6.11	Race (Indian)	4.29	1.42	.07	3.02	.00				
t6.12	Model 2									
t6.13	Constant	38.51	1.83		21.10	.00	21.39 *	0.28	0.08	0.05 *
t6.14	Age	0.13	0.04	.07	3.01	.00				
t6.15	Gender	0.75	0.69	.03	1.09	.28				
t6.16	Race (Black)	3.96	0.62	.17	6.42	.00				
t6.17	Race (Colored)	4.48	0.79	.14	5.66	.00				
t6.18	Race (Indian)	4.63	1.39	.08	3.33	.00				
t6.19	Stress: job demands	-0.15	0.02	-.25	-8.02	.00				
t6.20	Stress: lack of resources	0.04	0.02	.06	1.94	.05				
t6.21	Model 3									
t6.22	Constant	-5.80	2.81		-2.06	.04	53.25 *	0.50	0.25	0.17 *
t6.23	Age	0.08	0.04	.04	1.97	.05				
t6.24	Gender	-0.10	0.63	-.00	-0.15	.88				
t6.25	Race (Black)	2.04	0.60	.09	3.40	.00				
t6.26	Race (Colored)	3.54	0.72	.11	4.93	.00				
t6.27	Race (Indian)	2.53	1.26	.04	2.00	.05				
t6.28	Stress: job demands	-0.04	0.02	-.06	-2.05	.04				
t6.29	Stress: lack of resources	-0.04	0.02	-.06	-2.15	.03				
t6.30	Conscientiousness	0.42	0.04	.27	9.43	.00				
t6.31	Emotional stability	0.31	0.04	.19	8.67	.00				
t6.32	Agreeableness	0.05	0.04	.03	1.05	.30				
t6.33	Extraversion	0.29	0.07	.12	4.36	.00				
t6.34	* <i>p</i> < .01.									

646 stress (because of job demands and a lack of job
647 resources) indeed contributed strongly to burnout (20
648 percent and 10 percent of the variance in exhaustion and
649 cynicism respectively explained). This finding con-
650 firmed the results of previous studies (e.g., Rothmann
651 et al., 2005). Police members in South Africa are subject
652 to a highly stressful work environment, not only because
653 of the effects of apartheid in South Africa, but also
654 because of a high crime rate as well as the need to
655 transform the SAPS from a “force” to a “service,” which
656 the organization has to manage with limited resources.
657 Furthermore, the SAPS is conflict-prone, not only
658 because of organizational transformation, but also
659 because of the inherent nature of the tasks of police
660 members in a high-crime environment.

661 The results showed that two personality traits (namely
662 emotional stability and low conscientiousness) contributed
663 to burnout. These results confirmed the findings of Mills
664 and Huebner (1998), Schaufeli and Enzmann (1998), and
665 Zellars et al. (2000). A low emotional stability score

666 indicates that a person is prone to having irrational ideas,
667 being less able to control impulses, and coping poorly with
668 stress. Low conscientiousness indicates low dependability,
669 achievement–orientation, and perseverance. It seems that
670 if these personality traits are considered in addition to job
671 stress, a better explanation of burnout (exhaustion and
672 mental distance) is given, compared to when only job
673 stress is considered. It is also possible that low levels of
674 emotional stability and conscientiousness make police
675 members vulnerable to burnout.

676 Regarding the positive aspects of work-related well-
677 being, the results showed that low job stress predicted 5
678 percent of the variance in work engagement. Conscien-
679 tiousness, emotional stability, and extraversion predicted 17
680 percent of the variance, however, in work engagement. A
681 person who is emotionally stable is usually calm, even-
682 tempered, relaxed and able to face stressful situations
683 without becoming upset. Keyes et al. (2002) also found that
684 low neuroticism (i.e., high emotional stability) is related to
685 work engagement. Furthermore, a conscientious person is

686 purposeful, strong-willed, and determined. In addition, an
687 extravert tends to experience positive affect. Brief and
688 Weiss (2002) and Langelaan et al. (2006) also found that
689 extraversion is related to ~~work engagement~~. Therefore, it
690 seems that traits such as emotional stability, conscientious-
691 ness, and extraversion promote engagement inclinations.

692 The present study had certain limitations. The
693 research design was a cross-sectional survey design,
694 which makes it difficult to prove causal relationships.
695 The use of other designs, such as longitudinal designs,
696 can aid in establishing causality. A further limitation was
697 the fact that the research exclusively relied on self-
698 reporting. This could lead to “method variance” or
699 “nuisance” (Schaufeli, Enzmann, & Girault, 1993).

700 Recommendations

701 Given the pervasive nature of burnout, the police
702 organization should design and implement planned inter-
703 ventions. Although it is important to assist individual police
704 officers whose psychological well-being is affected by their
705 work, an organizational rather than an individual approach
706 is more likely to be effective, as most stressors were found
707 to be at an organizational level. Furthermore, it is important
708 to focus on police officers’ coping strategies. The
709 assessments of personality traits might be efficaciously
710 incorporated into personnel selection procedures. A more
711 desirable strategy, however, is to make the organization
712 inherently less stressful. Since stressful job demands plays a
713 central role in burnout, it is necessary to implement
714 preventive organizationally based strategies to tackle high
715 job demands.

716 Future studies need to explore the underlying
717 mechanisms of personality that produce different coping
718 patterns and preferences. Future research should also use
719 large samples and adequate statistical techniques (e.g.,
720 structural equation modeling). Large sample sizes might
721 provide increased confidence that study findings would
722 be consistent across other similar groups.

723 According to Hart, Wearing, and Heady (1993),
724 positive and negative work experiences must be taken
725 into account when trying to establish the determinants of
726 police officers’ psychological well-being. It is therefore
727 important for future research to also include positive
728 constructs (e.g., work engagement) when the well-being
729 of police officers is studied.

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