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A model linking financial well-being and burnout in a South African engineering organisation

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Orientation: This study investigates a model linking financial well-being (FWB) and burnout of employees in a South African engineering organisation.

Research purpose: To investigate how personal financial resources and burnout are interrelated, focussing on the roles of satisfaction with remuneration (SWR), personal financial efficacy (PFE), and financial interference (FI).

Motivation for the study: This model could help management, human resources, and employees understand the complex dynamics of these phenomena and reduce burnout by implementing targeted interventions.

Research approach/design and method: Purposive sampling (N = 515) was used. Structural equation modelling (SEM) with confirmatory factor analysis (CFA) and structural paths were employed.

Main findings: The study found that SWR positively impacts positive personal financial well-being (PPFW) and negatively impacts negative personal financial well-being (NPFW). Personal financial efficacy positively affects PPFW and negatively affects NPFW. However, SWR did not significantly impact FI. Negative personal financial well-being strongly contributed to FI, which in turn increased burnout. Contrary to expectations, PPFW did not significantly reduce FI. Additionally, SWR indirectly reduced burnout through NPFW and FI in sequence.

Practical/managerial implications: Organisations should ensure competitive and equitable reward and remuneration strategies to enhance employees' financial well-being and reduce burnout. Financial self-efficacy can be improved through interventions focussing on PFE and integrated financial well-being programmes to mitigate the risk of burnout and its demands on human and organisational resources.

Contribution/value-add: This study contributes to the limited research on financial well-being and burnout, highlighting the importance of fair remuneration and personal financial resources in promoting employee well-being and reducing burnout.

Keywords: structural equation modelling; financial well-being; financial interference; financial self-efficacy; remuneration.

Introduction

The novel coronavirus disease 2019 (COVID-19) combined with the invasion of Ukraine in February 2022 has inflated the threat to worldwide socio-economic as well as financial well-being, and may have a more significant impact on the global economy than the global financial crisis (GFC) of 2008 (Izzeldin, 2023). Global economic growth performance is the weakest of any half-decade since the 1990s, leaving one in four people in developing economies poorer than pre-pandemic levels (World Bank Group, 2024). Low economic growth in South Africa is unsurprising given the latter, compounded with load shedding, grey listing, continued social and political uncertainty, employment crisis, weak governance and corruption, and infrastructural problems (Bureau of Market Research, 2023; Ilesanmi & Tewari, 2020). Economists indicated that inflation in 2023 remained 'sufficiently restrictive' and was projected to average 4.6% in 2024, with the currency of the rand and fuel prices posing risks to this expectation (Acharya & Anders, 2023). These factors have impacted the levels of financial distress of the public and, also, employees.

Studies have shown that financial *distress* is a significant predictor of depression, and on the other hand, financial *well-being* is a significant predictor of overall well-being (Brüggen et al., 2017;

Ford et al., 2020; Netemeyer et al., 2018). Prawitz et al. (2006) indicated that the financial distress or financial well-being construct 'represented a continuum extending from negative to positive feelings about and reactions to the financial condition' (p. 36). Previous international research has revealed that over-indebtedness and financial distress substantially negatively impact mental health, absenteeism, and workplace performance (Fitch et al., 2011; Kim & Garman, 2003, 2004). In South Africa, levels of personal financial well-being have corresponding adverse effects on productivity and absenteeism, and employees' over-indebtedness, as well as financial strain, can be a significant source of stress and affect their ability to function optimally in the workplace (Bosman, 2009; Jansen van Vuren et al., 2018). Since this also becomes an organisational problem (Barnard et al., 2010), it is essential to develop a model of financial well-being that can help employers understand and subsequently promote employee financial well-being by preventing the negative impacts of burnout on employees and its effect on organisational outcomes.

The Job Demands-Resources (JD-R) model can help understand financial well-being as a job resource candidate. Job demands can lead to adverse outcomes, such as burnout and decreased job performance, while job resources can buffer burnout and promote positive outcomes, such as engagement and well-being (Bakker & Demerouti, 2017). Researchers agree that financial well-being has both an objective (such as material resources, e.g., income) and a subjective component, which includes an individual's subjective experience of financial condition and how it is evaluated (Sorgente & Lanz, 2017, 2019). Regarding its objective component (financial rewards, i.e., salary, bonuses, and fringe benefits), financial well-being cannot 'buy work engagement' as was recently shown (Kulikowski & Sedlak, 2020). The current study investigated to what degree the subjective component (e.g., not satisfied with financial rewards) could be experienced as a *job demand*, which could contribute to burnout and thus exacerbate harmful outcomes or financial 'un-wellness'. Similarly, given the current financial strain (or uncertainty contributing to the same) on employees in the current South African and global context, the subjective component (satisfaction with remuneration – SWR) was also positioned as a potential *job resource* candidate.

Joo (2008) originally defined 'personal financial wellness' as 'a comprehensive multidimensional concept incorporating financial satisfaction, objective status of financial situation, financial attitudes, and behaviour that cannot be assessed through one measure' (p. 23). In the present study and model, personal financial well-being (PFW) was found to have both a positive and a negative dimension and Afriforte's (2016) definition is used in this study in line with the measuring instrument used: 'Comprehensive evaluation of an individual's financial health, considering both financial strengths (positive aspects) and the financial challenges (negative aspects) they may encounter' (p. 1).

In a recent meta-analytical study, other personal resources such as optimism, hope, resilience, and self-efficacy (a combination of personal characteristics termed psychological capital – PsyCap) have been shown to improve job performance and well-being (Lupșa et al., 2020). The importance of (personal) resources in individuals' lives is emphasised by the conservation of resources (COR) theory as it highlights the negative impact of resource loss on stress and eventual burnout (Hobfoll, 1989). Conservation of resources theory was founded on the notion that individuals strive to attain, nurture, and guard the things (resources) that they attribute great worth to and that the brain has an evolutionary developed bias to underscore resource loss and underweight resource gain (Hobfoll et al., 2018). Bakker et al. (2014) described burnout as 'a state of exhaustion and cynicism toward work' (p. 389). Hobfoll (2011) expanded on COR theory, explaining that resources correlate greatly, even though the constructs such as self-efficacy, optimism, and self-esteem differ theoretically. Newly introduced resources (such as PsyCap and PFW – in the present study) can link to job resources or aspects such as resilience and employees' perceptions of their capability to effectively impact and manage work conditions (Hobfoll & Shirom, 2001).

In a study that investigated how daily fluctuations in job resources (team climate, coaching and autonomy) are related to employees' financial returns in a fast-food company, work engagement and personal resources (optimism, self-efficacy, and self-esteem) had a positive impact on personal resources, which successively predicted their financial returns (Xanthopoulou et al., 2009). Work engagement thus predicted personal resources throughout time as theorised by Hobfoll's (2002) COR, which Schaufeli and Taris (2014) describe as 'a motivational theory that explains how people strive to maintain and accumulate resources of various kinds, including job resources' (p. 49).

An organisation that provides employees physical, cognitive, emotional, and financial resources will see increased work engagement (i.e., dedication, absorption, and high levels of energy) in return (Bakker & De Vries, 2021; Kahn, 1990; Saks, 2006). Schaufeli and Taris (2014) supported the idea that personal resources can be integrated into the JD-R model. Furthermore, they contended that the expenditure of effort relates to job demands and that a lack of resources can be paradoxically construed as a job demand (the absence of an optimal job resource can be experienced as a demand). They proposed that resources and demands constitute separate factors because demands are valued negatively, and resources are valued positively. Schaufeli and Taris (2014) concluded that the latter is thus in line with the COR theory, where resources are defined as something people centrally value (Hobfoll, 2002).

As a result, understanding and promoting personal financial well-being can be seen as providing employees with a crucial personal resource to cope with job demands and promote

overall well-being. In South Africa, no studies have investigated a model to determine the impact of *financial* job resources (personal or otherwise) on burnout.

In this study's financial well-being model, *job resources* (including *personal resources*) and *job demands*, collectively termed *personal financial fitness dimensions* (PFFD), could help to understand and enable the capability to increase personal job resources that could result in organisational commitment through work engagement. In the current study, a new variety of positively valued *job resources* and *personal resources*, as well as a *negatively valued type of demand (namely Financial Interference,* as will be described later), was investigated and measured by the Personal Financial Fitness Index (PFFI) from Afriforte (2016).

Therefore, this study aimed to test a structural model of financial well-being that examines the relationships between factors such as income satisfaction and financial self-efficacy and their impact on financial stress and burnout, as it could provide the organisation with a better understanding of personal financial resources and how this affects financial well-being. The results could inform customised interventions promoting employee engagement by increasing job resources, mitigating burnout, and achieving desired outcomes for individuals and the organisation.

Literature review

Satisfaction with remuneration and personal financial well-being

Initially, financial well-being was measured from an economic perspective, equating it to income (Easterlin, 1974). Economic measurements, however, lack the means to account for quality of life, and psychology accurately allows for the development and improvement of appropriate measures to assess well-being directly and to design interventions to increase it (Diener & Seligman, 2004). Little information in the literature exists on subjective financial well-being, and current research suggests that financial well-being is a multidimensional construct that would be interesting to test different predictions for future positive development (Sorgente & Lanz, 2019).

In a large sample study with South African employees in different sectors, Vosloo et al. (2014) established a strong positive relationship between SWR and subjectively measured financial well-being. Additionally, Grable et al. (2012) found that perceived income adequacy was positively associated with financial satisfaction. Similarly, financial stress negatively correlated with pay satisfaction in a study conducted by Kim and Garman (2004). Our delineation of PFW as a dual measure of an individual's self-perceived satisfaction with financial strengths and difficulties or personal resources and personal demands fits the theoretical approach of the JD-R model and COR theory, and supports the findings from our model. Based on these arguments and in line with Schaufeli and Taris' (2014) proposal that resources and demands could load as separate factors because of demands being valued negatively and resources being valued positively, the researchers hypothesised the relationships with SWR with two measures of PFW, namely positive personal financial well-being (PPFW) and negative personal financial well-being (NPFW) as follows in the proposed study:

H1a: There is a positive relationship between SWR and PPFW.

H1b: There is a negative relationship between SWR and NPFW.

Personal financial efficacy and personal financial well-being

Sense of coherence (SOC), a psychological resource or personal resource is positively related to financial well-being, regardless of the level of income (Barnard, 2016). Antonovsky (1979) described SOC as:

> [*A*] global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that one's internal and external environments are predictable and that there is a high probability that things will work out as well as expected. (p. 123)

Feldt et al. (2011) described SOC as a latent construct facilitating thriving and coping under challenging circumstances. Barnard (2016) found that a stronger SOC positively affects South African employees' financial well-being and is positively associated with managing debt better and planning better for retirement. Antonovsky's (1979) psychological construct definition of the Sense of Coherence (SOC) relates to confidence in the positive outcome and predictability of internal and external environments. This concept is comparable to self-efficacy, which Bandura (1977) defines as the confidence an individual has in their ability to achieve positive outcomes. This comparison will be further explained.

Bandura (1977) initially defined self-efficacy and referred to perceived self-efficacy (also known as efficacy expectations) as 'the conviction that one can successfully execute the behaviour required to produce the outcomes' (p. 193). Sturr et al. (2021) utilised questions from the financial self-efficacy scale (FSES) and measured self-efficacy as a latent variable by incorporating the individual components of self-efficacy identified by Bandura (1977). More recently, Van Diemen et al. (2020) described self-efficacy slightly differently regarding individuals' confidence in their ability to accomplish specific tasks and behaviours within a particular context.

Vosloo et al. (2014) showed a strong positive relationship between personal financial efficacy (PFE) and financial well-being and defined PFE as 'a person's satisfaction with/confidence in his/her level of financial knowledge and his/her ability to meet financial objectives' (p. 1457). More recent research showed that financial self-efficacy was positively related to financial well-being via positive financial behaviours (Dare et al., 2023). In the proposed study, PFE was defined by Afriforte's (2016) corresponding definition as:

'The confidence individuals have in their financial management capability and capacity to achieve financial goals' (p. 1). The researchers' hypothesis indicated a positive relationship between PFE and PPFW and a negative relationship between PFE and NPFW:

H2a: There is a positive relationship between PFE and PPFW.

H2b: There is a negative relationship between PFE and NPFW.

Personal financial well-being and financial interference

Financial stress negatively correlated with workplace performance factors such as pay satisfaction, work time use, and absenteeism in a study by Kim and Garman (2004), where they conceptualised financial stress 'as the subjective perception of one's personal finances' (p. 70). The relationship between financial stress and organisational commitment (negative association) and absenteeism (positively correlated) was also found, and effective workplace financial education programmes were recommended to employers (Kim & Garman, 2003). Financial stress and pressures on personal finances were shown to 'interfere' with employees' work life by negatively influencing performance at work (Vosloo et al., 2014). Jansen van Vuren et al. (2018) found a robust negative relationship between general financial well-being, personal financial interference (FI), and absenteeism. Jansen van Vuren (2015) interpreted interference 'as the prevention; or the level of disruption of a process from flowing fluently' (p. 58). In the current study, FI is 'the extent to which an employee's personal financial situation interferes with their performance and overall functioning at work' (Afriforte, 2016, p. 1).

Financial interference can thus be seen as a 'negative distraction' and exerts a demand on the job where personal money matters affect employees and their ability to perform their job-related duties. A negative relationship was hypothesised between PPFW and FI and, in turn, a positive relationship between NPFW and FI:

H3a: A negative relationship exists between PPFW and FI.

H3b: A positive relationship exists between NPFW and FI.

Satisfaction with remuneration and financial interference

Only one study in the literature reported on FI (Jansen van Vuren, 2018). Results of the study showed that a statistically negative relationship existed between *financial well-being* and FI. Since a strong positive relationship was found between SWR and personal *financial well-being* in the study by Vosloo et al. (2014), a negative relationship was posited between SWR and FI:

H4: There is a negative relationship between SWR and FI.

Personal financial efficacy and financial interference

Cognitive processes and external factors reinforce behaviour (Rotter, 1966). The degree to which people attribute behaviour or 'actions' to external factors is called external locus of control (ELOC). Results from the study of Taylor et al. (2017) demonstrated that the relationship between ELOC and money disorders (e.g., compulsive buying) was stronger than indicated in previous research. Money disorders can reasonably be expected to create FI with an employee at work. Since money disorders, such as compulsive buying, could conceivably cause FI, the difference between ELOC and internal locus of control (ILOC) and the latter's similarity with self-efficacy are considered. If a person perceives that an event is contingent upon the individual's behaviour or dependent on their own relatively stable characteristics, this belief is termed ILOC. Phillips and Gully (1997) found that persons with more ILOC will have higher self-efficacy than those with higher external locus. ILOC is closely associated with self-efficacy. This relationship becomes clear when comparing ILOC with self-efficacy. Bandura (1977) described this as the confidence to produce the required behaviour to achieve desired outcomes within a specific context. In this case, the context is financial, referring to Personal Financial Efficacy (Van Diemen et al., 2020). A negative relationship was therefore hypothesised to exist between PFE and FI:

H5: There is a negative relationship between PFE and FI.

Positive personal financial well-being and financial interference as serial mediators

Positive personal financial well-being and FI were hypothesised to act as serial mediators that explain the relationships between SWR and burnout, and correspondingly with PFE and burnout. Baron and Kenny (1986) indicated that a variable functions as a mediator to the extent that it explains the relationship between the predictor and the criterion. Positive personal financial well-being, and the seemingly opposite side of the same coin financial interference - has an association with financial strain and is considered a threat to resources (COR theory; Hobfoll, 2001), was investigated in relationship with burnout. Job demands are associated with burnout (Demerouti et al., 2001). From the defined and hypothesised variables, it is clear that 'positively valued' resources, such as personal resources (such as perceived SWR, PFE and PPFW), can impact and allow one to manage work conditions effectively (Hobfoll & Shirom, 2001), as well as the opposite impact of 'negatively valued' effect of FI.

Üngüren et al. (2024) also analysed variables in a context based on COR theory (Hobfoll, 2001), where individuals endeavour to protect, develop and accumulate more resources to mitigate work stress. They found employees who have *no* other income apart from their job (i.e., *high* levels of financial dependence) and even where the level of work-related burnout is high, the situation does not cause turnover intention. In the current study, however, the authors analysed which resources could mitigate the threat of burnout as a job demand, more precisely, whether SWR had an indirect relationship to burnout through PPFW (and whether SWR's indirect relationship to burnout through NPFW) and FI in an indirect relationship (as mediators in serial); see Figure 1.

Sabri et al. (2020) used Bandura's self-efficacy theory as one of three to derive their theoretical framework to support their conceptualisation of higher financial well-being being 'one of the major goals of an employee, and increased self-efficacy is [an] important [resource] to achieve the goal' (p. 893). They found a moderate positive correlation between self-efficacy and financial well-being in a sample of 590 employees. Therefore, the authors investigated if PFE could mitigate the threat of burnout to well-being, more specifically, if PFE had an indirect relationship to burnout through both PPFW and FI in serial (see Figure 1):

H6a: FI mediates the relationship(s) between PFFD and burnout.

H6b: SWR indirectly relates to burnout through PPFW and FI *in serial*.

H6c: PFE indirectly relates to burnout through PPFW and FI *in serial*.

H6d: SWR indirectly relates to burnout through NPFW and FI *in serial*.

Research design

Research approach

A quantitative research design was utilised in the study. Struwig et al. (2001) stated that quantitative research involves large samples, and data are collected in a structured manner using several procedures. Additionally, a cross-sectional research approach was implemented to collect the data on the population at a particular moment in time, and this approach is well positioned to inform if variables in which one is interested are related, and it can help to rule out a multitude of potential alternative explanations for why variables are related (Spector, 2019). Finally, this survey design was utilised because of its application regarding instrument validation (De Vos et al., 2011).

Research method

Research participants

The sample included 515 employees from a South African engineering organisation in various functions. The availability of participants required the use of a purposive sampling method because of the nature of the participants (Creswell, 2013). The participants form part of an engineering company-wide climate survey rolled out to all employees as part of the company's employee well-being programme (EWP). An acceptable response rate above 60% was achieved since an acceptable range in the social sciences could range from 30% to 70% (De Vaus, 2013). Group data results are used to determine company-wide wellness and organisational development interventions and include the opportunity for all employees to do physical health screening voluntarily. The participants included in the study provided consent for university researchers to use their data for research purposes. The participants were diverse in terms of their characteristics, ethnicity, and age group but less diverse in gender (Table 1).

The sample consisted of predominantly male (90.49%) participants, with 9.51% female participants. Regarding ethnicity, 73.20% of the participants were African, 23.30% were white employees, 2.91% were Coloured employees, 0.39% indicated 'Other', while only one employee (0.19%) was Indian. From these, almost half of the participants (45.83% or 236) fell in the 30 to 39-year age category, 18.64% in the 20 to 29-year category, 19.22% in the 40 to 49-year group, 10.87% in the 50 to 59-year category and a total of 28 participants (5.44%) were employees in the 60 and older category.

TABLE 1: Characteristics of the participants (N = 515).

Item	Category	f	%
Gender	Male	466	90.49
	Female	49	9.51
Ethnicity	African people	377	73.20
	White people	120	23.30
	Coloured people*	15	2.91
	Other people	2	0.39
	Indian people	1	0.19
Age group (years)	20–29	96	18.64
	30–39	236	45.83
	40–49	99	19.22
	50–59	56	10.87
	60 and older	28	5.44

*, Participants from mixed ethnic origins and an official term in South Africa.

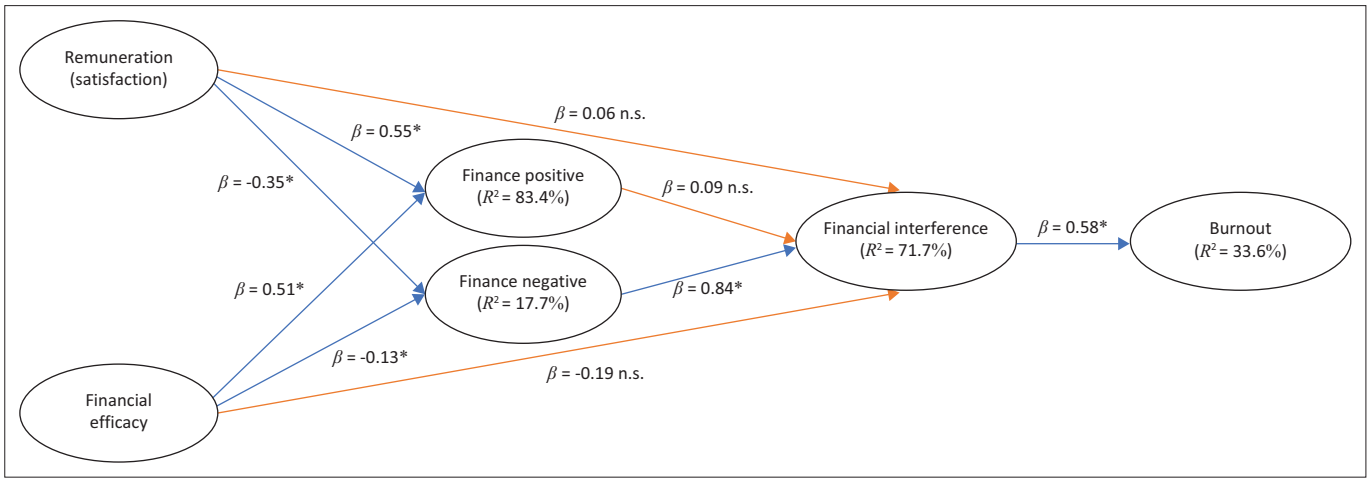

FIGURE 1: The structural model with the results of the direct paths.

Measuring instruments

Financial well-being was measured with *the Personal Financial Fitness Index* (PFFI), a 36-item questionnaire developed to measure financial fitness or well-being (Afriforte, 2016) namely: personal financial well-being (six items, e.g., 'I am satisfied with my personal financial situation'), FI (five items measuring interference of personal financial situation on work, e.g., 'Personal money matters interfere with my ability to perform my job related duties'), financial efficacy (five items measuring confidence in financial management capabilities, e.g., 'I am confident in managing money to achieve my financial goals'), SWR (three items, e.g., 'I am paid enough for the work that I do') and burnout (15 items in total with five items measuring cognitive weariness, e.g., 'I find it difficult to focus while at work', five items measuring exhaustion, e.g., 'After a day at work I feel tired and used up' and five items measuring mental distance, e.g., 'When I get to work, I tend to postpone certain tasks because I just don't feel like doing them'). All the items are measured on a four-point rating scale ranging in frequency as follows: one ('strongly disagree'), two ('disagree'), three ('agree') and four ('strongly agree'). The PFFI reported Cronbach alpha coefficients above 0.70 which provide acceptable internal consistency (reliability) within the South African working context (Afriforte, 2016).

Research procedure

Data for this study were obtained by including the PFFI and consent to use results for research during an approved organisational climate survey conducted in the engineering organisation. Employees were invited to attend information sessions after the survey was made available for voluntary completion in addition to the climate survey. Surveys were made available in both online and pen-and-paper formats. The organisation uses posters, mass mailers and management support to gain maximum survey uptake from all employees to provide valuable information for its organisational development, training, EWP, and strategic interventions. At the end of the project, all the data was collated and secured in a password-protected database and subsequent spreadsheet.

Statistical analysis

The statistical model in this study was investigated with Mplus 8.8 (Muthén & Muthén, 2015). Specifically, structural equation modelling (SEM) methods and confirmatory factor analysis (CFA) were used. According to Appelbaum et al. (2018), SEM is a family of statistical techniques that specify a measurement or structural model, given previous empirical results and relevant theory. Structural equation modelling statistical techniques 'includes a series of analytic steps that estimate effects represented in the model [*parameters*] and evaluate the extent of correspondence between the model and data' (p. 16). The structural model's paths were examined to assess the relationships between predictor and outcome variables. Beta coefficients were employed to measure the strength and direction of these relationships. Statistical significance for parameters was set at the 95% significance level ($p < 0.05$) in this study.

Using Mplus, we first created a measurement model to see how well our data fit our expectations. To do this, we looked at how different latent factors related to their respective items and each other. Instead of measuring something straightforward like weight or height, we measured unseen states such as financial well-being which cannot be directly observed. This required a process called construct validation to ensure our measurements accurately reflected these ideas (Flake et al., 2017).

To verify our model's validity, several statistical tests assisted to determine if the model was a good fit: the Chi-square value (where a lower value indicates a better fit), the Comparative Fit Index (CFI, which should be 0.90 or higher), the Tucker-Lewis Index (TLI, also 0.90 or higher), the Standardised Root Mean Square Residual (SRMR, which should be less than 0.08), and the Root Mean Square Error of Approximation (RMSEA, which should be 0.08 or lower). These tests collectively showed how well our model matched the data (Van de Schoot et al., 2012).

Moreover, correlations were also calculated between the variables introduced. Effect sizes for correlations were considered medium as $r \geq 0.30$ and large as $r \geq 0.50$ (Cohen, 1988). The structural model was specified to test the hypotheses, which included all the proposed structural paths. Here we considered the statistical significance, direction, and size of the standardised beta coefficients. Furthermore, bootstrapping was used to resample from the data to obtain 95% confidence intervals (CIs) at least 5000 times to consider the potential mediation of burnout. If a CI does not change sign (does not cross zero) from the lower to the upper estimate, one can consider the interval meaningful (Hayes & Preacher, 2013).

Ethical considerations

This study received ethics approval from the Economic and Management Sciences Research Ethics Committee of the North-West University (Reference number: NWU-00438-17-A4).

Results

The measurement model

The suggested measurement model was tested and found to fit the data well. Specifically, the fit statistics showed the following: χ^2 = 1450.15; degrees of freedom (*df*) = 585; CFI = 0.924; TLI = 0.918; RMSEA = 0.053; SRMR = 0.064. Therefore, this model was used, and the remaining results from the structural model (see Figure 1) are presented with this model as the foundation. The factor loadings are presented in Table 2.

All factor loadings in the model were significant ($p < 0.001$), and most of the factor loadings were 0.70 or above, with only four factor loadings that were below 0.50 (Hair et al., 2016). The composite reliability estimates showed that all latent factors were acceptable, with FI being borderline but still acceptable (0.69). The Cronbach's alpha coefficients were also generated and given on the diagonal in brackets in Table 3.

As can be seen from Table 3, all correlations were in the expected directions. Notably, PPFW and NPFW were moderately correlated in line with our expectations that these are different concepts (r = –0.37; medium effect). Positive personal financial well-being was strongly correlated with PFE (r = 0.78; large effect) and SWR (r = 0.80; large effect). Interestingly, PPFW only had a small negative correlation with burnout (r = –0.18; small effect), but NPFW had a moderately strong positive correlation with burnout (r = 0.48; medium effect). Financial interference was strongly positively correlated with both NPFW (r = 0.84; large effect) and burnout (r = 0.58; large effect). Satisfaction with remuneration had a strong positive correlation with PPFW (r = 0.80; large effect) and a moderate negative correlation with NPFW (r = –0.40; medium effect). Furthermore, SWR negatively correlated with FI (r = –0.31; medium effect).

TABLE 2: Standardised loadings for the latent factors.

Factor	Item	Loading	SE	*p*	CR
PPFW	FIN_PFWB1	0.76	0.02	0.001	0.87
	FIN_PFWB2	0.73	0.02	0.001	-
	FIN_PFWB3	0.79	0.02	0.001	-
	FIN_PFWB4	0.72	0.02	0.001	-
	FIN_PFWB5	0.64	0.03	0.001	-
	FIN_PFWB6	0.71	0.03	0.001	-
NPFW	FIN_NFWB1N	0.76	0.03	0.001	0.79
	FIN_NFWB2N	0.55	0.04	0.001	-
	FIN_NFWB3N	0.65	0.03	0.001	-
	FIN_NFWB4N	0.61	0.03	0.001	-
	FIN_NFWB5N	0.69	0.03	0.001	-
PFE	FIN_EFFIC1	0.57	0.03	0.001	0.78
	FIN_EFFIC2	0.85	0.02	0.001	-
	FIN_EFFIC3	0.83	0.02	0.001	-
	FIN_EFFIC4	0.29	0.04	0.001	-
	FIN_EFFIC5	0.65	0.03	0.001	-
FI	FIN_INTER1	0.54	0.04	0.001	0.69
	FIN_INTER2	0.63	0.04	0.001	-
	FIN_INTER3	0.72	0.03	0.001	-
	FIN_INTER4	0.46	0.04	0.001	-
	FIN_INTER5	0.35	0.04	0.001	-
Burnout	SAP_CW1	0.62	0.03	0.001	0.85
	SAP_CW2	0.60	0.03	0.001	-
	SAP_CW3	0.65	0.03	0.001	-
	SAP_CW4	0.53	0.03	0.001	-
	SAP_EX1	0.52	0.04	0.001	-
	SAP_EX2	0.50	0.04	0.001	-
	SAP_EX3	0.65	0.03	0.001	-
	SAP_EX5	0.57	0.03	0.001	-
	SAP_MD1	0.64	0.03	0.001	-
	SAP_MD2	0.58	0.04	0.001	-
	SAP_MD4	0.42	0.04	0.001	-
	SAP_MD5	0.59	0.03	0.001	-
SWR	REMUN_1	0.82	0.02	0.001	0.89
	REMUN_2	0.90	0.01	0.001	-
	REMUN_3	0.84	0.02	0.001	-

Note: All p-values < 0.001.

SE, standard error; PPFW, positive personal financial well-being; NPFW, negative personal financial well-being; FI, financial interference; SWR, satisfaction with remuneration; CR, composite reliability.

TABLE 3: Reliabilities and correlation matrix for the latent variables.

Variables	1	2	3	4	5	6
1. PPFW	(0.83)	-	-	-	-	-
2. NPFW	-0.37†	(0.74)	-	-	-	-
3. PFE	0.78‡	-0.30†	(0.68)	-	-	-
4. FI	-0.31†	0.84‡	-0.33†	(0.70)	-	-
5. Burnout	-0.18	0.48†	-0.19	0.58‡	(0.80)	-
6. SWR	0.80‡	-0.40†	0.49†	-0.31†	-0.18	(0.85)

Note: Cronbach's reliability coefficients in brackets on the diagonal. All correlations statistically significant p < 0.01.

PPFW, positive personal financial well-being; NPFW, negative personal financial well-being; FI, financial interference; SWR, satisfaction with remuneration.

†, Medium effect size; ‡, Large effect size.

The structural model

The structural paths were added to the measurement model. Table 4 and Figure 1 present the resulting path estimates.

The structural paths showed that SWR had a positive effect on PPFW (β = 0.55, SE = 0.03, p < 0.001) and a negative effect on NPFW (β = –0.35, SE = 0.05, p < 0.001) – supporting H1. Furthermore, PFE had a positive effect on PPFW (β = 0.51, SE = 0.03, p < 0.001) and a negative effect on NPFW (β = –0.13, SE = 0.05, p < 0.001), as predicted with H2. Personal financial efficacy had no significant effect on FI (β = –0.19, SE = 0.11, p = 0.088, rejecting H5). Positive Personal Financial Well-being did not negatively contribute to FI (β = 0.09, SE = 0.17, p < 0.580) as hypothesised with H3a, but NPFW was a strong contributor to FI (β = 0.84, SE = 0.04, p < 0.001) supporting H3b. Satisfaction with remuneration had no significant effect on FI (β = 0.06, SE = 0.12, p = 0.611, rejecting H4). Similarly, FI positively contributes to burnout (β = 0.58, SE = 0.04, p < 0.001).

Indirect relationships

Table 5 estimates all the indirect effects in the model and the accompanying CIs.

TABLE 4: Regression results for the structural model.

Structural path	β	SE	*P*
SWR → PPFW	0.55*	0.03	0.001
SWR → NPFW	-0.35*	0.05	0.001
PFW: → FI	0.06	0.12	0.611
PFE → PPFW	0.51*	0.03	0.001
PFE → NPFW	-0.13*	0.05	0.009
PFE → FI	-0.19	0.11	0.088
PFW: Positive → FI	0.09	0.17	0.580
NPFW → FI	0.84*	0.04	0.001
FI → Burnout	0.58*	0.04	0.001

PPFW, positive personal financial well-being; NPFW, negative personal financial well-being; FI, financial interference; SWR, satisfaction with remuneration; PFE, personal financial efficacy; β, Standardised beta coefficient.

p, Two-tailed statistical significance; *, Significant.

TABLE 5: Indirect paths for the structural model.

Indirect path	Estimate	L95% CI	U95% CI
SWR → FI → Burnout	0.03	-0.17	0.23
SWR → PPFW → FI → Burnout	0.03	-0.14	0.21
SWR → NPFW → FI → Burnout	-0.17†	-0.27	-0.10
PFE → FI → Burnout	-0.11	-0.32	0.12
PFE → PPFW → FI → Burnout	0.03	-0.14	0.21
PFE → NPFW → FI → Burnout	-0.06	-0.14	0.03

PPFW, positive personal financial well-being; NPFW, negative personal financial well-being; FI, financial interference; SWR, satisfaction with remuneration; PFE, personal financial efficacy; β, Standardised beta coefficient; SE, standard error; L95% CI, lower 95% confidence interval; U95% CI, upper 95% confidence interval.

†, does not include zero.

The indirect relationships from PFE to burnout all included zero – rejecting potential mediation. Even though SWR showed no meaningful effect through PPFW (Estimate = 0.03; 95% CI[–0.14, 0.21]), there was a meaningful effect through NPFW (Estimate = –0.17; 95% CI[–0.27, –0.10]). Therefore, only the serial indirect effect from SWR, through both NPFW and FI to burnout, was found to be meaningful for interpretation, indicating that SWR has a negative effect on burnout through NPFW and FI in serial.

Discussion

Outline of the results

The study aimed to investigate employee financial well-being and burnout among employees in a South African engineering organisation. Various financial variables, collectively termed *personal financial fitness dimensions* and their relationships, were analysed using SEM methods and CFA. The analysis showed that all factor loadings were significant, most being 0.70 or above. Composite reliability estimates demonstrated internal consistency among all latent factors. Furthermore, the correlations among the variables were in the expected direction.

The data corroborated the first hypothesis (H1a). The analysis showed that there was a positive relationship between SWR and PPFW. This suggests that employees who feel adequately compensated or paid for their work and perceive their remuneration as satisfactory report better PPFW, as found in another South African study (Vosloo et al., 2014). They may feel more secure, able to meet their financial obligations, confident in their financial future and have less financial stress, as found by Kim and Garman (2004).

Hypothesis 1b posited a negative relationship between SWR and NPFW. The data also provided support for this hypothesis. The regression analysis revealed a significant negative path, indicating a negative relationship between SWR and NPFW. This suggests that individuals more satisfied with their remuneration tend to have lower levels of NPFW. This is consistent with the premise that remuneration significantly mitigates individuals' financial stress and problems. Employees who feel that they are adequately paid are less likely to experience negative emotions and financial stress related to their financial situation.

It should be noted, however, that while SWR was found to have a significant relationship with both positive and negative aspects of PFW, the effect sizes, as reflected in the standardised beta coefficients, indicate that the effect is more substantial for PPFW compared to NPFW. This suggests that while SWR has a vital role in both PPFW and NPFW, it may substantially foster positive aspects of financial well-being more than mitigating negative ones. This nuance could be significant in remuneration strategies such as compensating employees, considering equity with internal and external remuneration benchmarks and individual equity where good performance is rewarded.

Regarding the hypothesised relationship between PFE and PFW, the results support Hypothesis 2a and Hypothesis 2b. For Hypothesis 2a, the data revealed that there was indeed a positive relationship between PFE and PPFW. The path indicated a substantial and statistically significant positive effect of PFE on PPFW. This finding aligns with Bandura's (1977) self-efficacy theory, suggesting that the conviction to execute the behaviour required to produce outcomes successfully can significantly enhance the positive aspects of the outcome. Moreover, this result confirms the finding by Vosloo et al. (2014), showing a strong positive relationship between PFE and PFW. The data also support Hypothesis 2b. This indicates a statistically significant but less potent negative effect of PFE on NPFW. This suggests that as PFE increases, the negative components of PFW decrease. Given the stronger relationship between PFE and PPFW, organisations can enhance financial well-being by improving financial self-efficacy. This supports recent research showing that financial self-efficacy is positively related to financial well-being through positive financial behaviours (Dare et al., 2023). Organisations could implement interventions such as education, development, and coaching programmes to build financial confidence and management skills. These initiatives can help employees develop positive financial behaviours, leading to better financial decisions and improved financial well-being.

The data offered mixed support for Hypotheses 3a and 3b, which examined the relationships between PPFW, NPFW, and FI. Hypothesis 3a, which proposed a negative relationship between PPFW and FI, was not supported by the data. The regression coefficient was not statistically significant, indicating that the data did not provide evidence of a negative relationship between PPFW and FI. This unexpected result suggests that positive aspects of PFW do not necessarily reduce instances of FI, such as financial stress disrupting work or personal life.

Conversely, the data substantiated Hypothesis 3b, which posited a positive relationship between NPFW and FI. The path indicated that higher levels of NPFW (i.e., financial stress, financial difficulties) strongly contribute to FI. This finding supports previous research suggesting that financial strain can disrupt individuals' work and personal lives (Kim & Garman, 2003). The path suggests that the impact of NPFW on FI is substantial and warrants consideration in interventions aiming to reduce FI. These findings shed light on the complex dynamics between PFW and FI and underscore the need to explore these relationships further. A qualitative approach is suggested, where a more detailed understanding of the problem can be attained instead of the more general understanding that this quantitative approach provides (Creswell & Plano Clark, 2018).

Hypothesis 4 posited a negative relationship between SWR and FI. The underlying assumption is that individuals more satisfied with their earnings would experience less FI because of a reduced likelihood of financial stress. However, the

empirical data did not support this hypothesis. The results indicated that SWR had no significant effect on FI. This surprising result could be interpreted in several ways. Other factors beyond salary satisfaction, such as financial management practices, debt levels, or unexpected expenses, may have a confounding impact on FI, but they are not measured here. Alternatively, it could suggest that SWR is not a sufficiently nuanced measure to capture the complexities of an individual's financial situation and its potential to cause interference in work or other areas of life. Further research could explore these interpretations and examine more granular aspects of an individual's financial situation, such as financial management practices, levels of financial literacy, or psychological variables like attitudes towards money and spending.

Hypothesis 5, which proposed a negative relationship between PFE and FI, was not supported by the data. This path was also not statistically significant, indicating that PFE may not significantly reduce FI. The unexpected finding might be better understood considering the interplay between PFE and ILOC, another psychological construct reflecting the extent to which individuals believe they can control events affecting them. Both involve the belief in one's ability to produce the desired outcomes (Bandura, 1977), with self-efficacy being context-specific (Van Diemen et al., 2020). In this case, the context is financial (such as PFE). Given this connection, PFE alone may not be enough to influence FI. Instead, it may interact with other factors, such as an individual's ILOC. For example, a person with high PFE but low ILOC might still experience high FI because they do not believe they can control their financial outcomes despite their financial skills and knowledge. This could explain why our data did not find a significant effect of PFE on FI. Future research could benefit from including constructs such as ILOC to provide a better understanding of these relationships.

Hypothesis 6a suggested that FI mediates the relationship between PFFD and burnout. The results demonstrated a positive relationship between FI and burnout, which suggests that as FI increases, the levels of burnout also increase. This part of the hypothesis is supported, and this dynamic explains how financial stress disrupts work and could spill over into personal life.

However, the second part of the results indicated that all the 95% CIs of the indirect relationships from SWR and PFE (dimensions of Personal Financial Fitness) to burnout through FI included zero. Hypotheses 6b and 6c propose indirect relationships leading to burnout via a sequence (serial mediation) of PPFW and FI. In other words, when we consider the impact of SWR and PFE on burnout while controlling for FI, there is no meaningful indirect effect on burnout via FI. This finding rejects the proposed mediation of FI in the relationship between SWR and PFE and burnout in series. Hypotheses 6b and 6c are thus not supported by the data.

These results suggest that while FI is associated with burnout, it does not appear to be a significant mediating factor in the relationship between the aspects of Personal Financial Fitness known as PFE and burnout. Therefore, other mechanisms might be at play in the relationship between financial efficacy and burnout, which could be a fruitful direction for future research.

On the other hand, a significant indirect effect was found for SWR through NPFW, supporting Hypothesis 6d. The indirect path implies that being more satisfied with pay indirectly reduces burnout by improving financial well-being and reducing FI, although further research is recommended into SWR as indicated in the discussion in considering the surprising result of Hypothesis 4 (SWR had no significant direct effect on FI).

The present study found both a positive and a negative dimension of financial well-being (FWB), where NPFW includes financial challenges or problems (negative aspects) that employees may encounter (Afriforte, 2016). The finding, along with the definition, could mean that higher satisfaction with pay (SWR) makes it easier to address the financial challenges or problems and negative aspects, such as paying bills on time, which then reduces interference (FI) to performing duties at work, and this ultimately reduces burnout. This sequence is known as serial mediation, where one factor influences another, leading to an outcome. These findings highlight the importance of SWR in influencing an individual's sense of well-being, addressing financial concerns, and experiencing work-related burnout.

In conclusion, this pattern of findings supports the need for companies to ensure fair and satisfactory remuneration, as this could benefit employees' financial well-being, reduce FI, and help mitigate the risk of burnout.

Practical implications

The findings from this study, which investigated employee financial well-being and burnout in a South African engineering organisation, provide valuable insight for practitioners. The results have significant implications for human resources, management, and organisations, suggesting that financial factors substantially influence employee burnout and overall well-being.

The positive relationship between SWR and PPFW suggests that organisations should ensure competitive and equitable compensation packages. Remuneration strategies or interventions focussing on employees' perception of fair compensation should be further investigated and explored quantitatively and qualitatively to attain objective and subjective equity. Satisfactory remuneration can contribute to employees' feelings of financial security and confidence in their financial future, leading to better job satisfaction and performance. Thus, organisations should regularly review and adjust salaries and wages to remain competitive, fair, and aligned with the cost of living.

On the other hand, the negative relationship between SWR and NPFW implies that improving SWR can help reduce employee financial stress. However, the results also suggest that SWR has a more significant impact on fostering positive aspects of financial well-being than mitigating the negative.

In addition, the significant relationships between PFE and both aspects of PFW suggest that increasing PFE can significantly enhance PFW. Given these findings, organisations could consider incorporating financial self-efficacy into employee well-being programmes. This could include interventions to improve financial literacy, foster a culture of financial independence, and provide employees with resources and support to help them make informed financial decisions.

Despite the significant relationship between NPFW and FI, no significant relationship was found between PPFW and FI. This suggests that even if employees experience PPFW, they may still encounter FI, which can lead to burnout. To address this issue, organisations may need to consider additional strategies to mitigate the potential for FI, such as offering training on sound personal financial management practices, flexible work arrangements or providing support for employees dealing with financial emergencies.

The findings also revealed that SWR had no significant effect on FI, suggesting that other factors beyond salary satisfaction, such as financial management practices or unexpected expenses, may have a more powerful impact on FI. Therefore, organisations should consider providing comprehensive financial wellness programmes that include resources on budgeting, saving, and managing debt, as well as support for unexpected financial challenges. Furthermore, the non-significant relationship between PFE and FI suggests that financial self-efficacy alone may not be enough to influence FI. Future employee well-being programmes could, therefore, benefit from including other constructs, such as internal locus of control, to provide a more comprehensive understanding of employees' financial situations and the factors that can lead to FI.

Lastly, the findings concerning the indirect relationships leading to burnout provide insights into the complex interplay between financial factors, PFW, FI, and burnout. The significant indirect effect found for SWR through NPFW suggests that ensuring fair and satisfactory remuneration could benefit employees' PFW, reduce FI, and help mitigate the risk of burnout. This underscores the need for comprehensive compensation and benefits strategies that satisfy employees' financial needs and contribute to their overall well-being.

Limitations and recommendations

While this study provides valuable insights into the complex dynamics between employee financial well-being and burnout in a South African engineering organisation, it also has some limitations that provide avenues for future research. Firstly, the study's cross-sectional nature limits the ability to make causal inferences from the observed relationships. Future studies could adopt a longitudinal design to track these relationships over time, providing a more robust understanding of causality. Secondly, although this study involved a robust sample from a single engineering firm, the results may not be generalisable to other organisations or industries. It is recommended that future research includes participants from different sectors and socio-economic backgrounds to ensure a more diverse and representative sample. Thirdly, the present study relied on self-reported data, which might have introduced response bias. Future research could benefit from including objective measures such as assessing capability in skills or abilities such as financial management practices, looking at ways of assessing actual income data or verifying financial strain indicators to corroborate or provide additional context to the subjective data.

Regarding the constructs examined, the non-significant effect of PFE on FI might be attributed to the exclusion of other relevant psychological variables. We recommend the inclusion of variables such as ILOC in future research, as it might interact with PFE to influence FI. Finally, our data revealed a strong relationship between FI and burnout, yet FI was not a significant mediator between PFE and burnout. This suggests that other mediators might be at play, and we encourage future research to explore other potential mediational mechanisms in this relationship.

Overall, these findings underscore the importance of considering employees' financial well-being in organisational settings and suggest a need for employers to explore interventions that promote financial well-being and mitigate the risk of burnout among employees. Given the potential role of remuneration satisfaction, strategies might include ensuring fair pay and transparent remuneration strategies as well as providing resources to mitigate NPFW, such as financial literacy programmes focussing on avoiding financial pitfalls, facilitating control over month-to-month finances, promoting emergency funds, employee support groups which may assist with sharing goals and ways to achieve financial freedom.

Conclusion

In conclusion, these findings highlight the critical role that financial well-being plays in employee burnout and suggest several areas for intervention. As such, organisations are encouraged to invest in comprehensive financial well-being programmes that include competitive compensation, financial education, and support for managing financial stress. By doing so, organisations can contribute to the financial well-being of their employees through cognisance and focus on SWR and financial self-efficacy, potentially reducing burnout and improving overall job satisfaction and performance.

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Authors' contributions

L.G.B. took the lead in writing the manuscript. This manuscript forms part of the doctoral thesis of L.G.B. J.F. and L.T.d.B. are the promoters of the study and acted as supervisors and editors and critical readers of the manuscript. L.T.d.B. also performed the formal analysis.

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Data availability

The data that support the findings of this study are available from the corresponding author, L.d.B. upon reasonable request.

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