

THE RELATIONSHIP BETWEEN HOPE OPTIMISM PHYSICAL ACTIVITY AND INVOLUNTARY ABSENTEEISM

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ABSTRACT

This study examined the relationship between hope, optimism, physical activity and involuntary absenteeism. White-collar employees from various South African organisations completed an electronic questionnaire comprised of Likert-type scale items relating to Psychological Capital (PsyCap), as measured by the constructs of hope and optimism; participation in physical activity, either that resulting from engaging in physical exercise or household chores; and absenteeism from the workplace. The sample of 163 comprised males and females, ranging from 18 to 68 years old, and represented all ethnic groups. The results demonstrated a positive relationship between hope and participation in physical activity and between participation in chores and involuntary absenteeism. The findings of this study, supported by strong consensus in the literature, demonstrate the active role played by physical activity in increasing the physical and mental well-being of employees. Through providing health and wellness programmes that stimulate positive psychology and exercise, organisations are able to benefit from healthier employees and reduce the chances of employees becoming ill and staying away from work.

INTRODUCTION

In a rapidly changing and challenging global corporate environment, it is becoming more difficult, yet increasingly imperative, for organisations to deliver consistently high performance in order to remain competitive, efficient and profitable. At the same time a negative trend has emerged. Employees are taking additional sick leave, over and above that which is permitted, resulting in increasingly high global absenteeism rates (Johnson, 2013; Pickworth, 2013). It is essential that organisations strategise and make the necessary changes to ensure higher annual employee attendance levels to maintain efficiency levels and preserve competitive advantage. Globalisation, technological advancements and the fluctuations in the global economy have contributed to the current market volatility in which organisations operate. This places greater demands and stressors on 21st century employees (Bresnahan, Brynjolfsson, and Hitt, 2002; Sparks, Faragher, and Cooper, 2001) which results in employees having less time to participate in health-promoting activities such as exercise. This compromises the immune systems of employees and, as a result, they are often unable to attend work due to illness (Business Partners Limited, 2013). Although many reasons are provided as to why employees may be absent from work, illness remains the largest contributor to the South African absenteeism rate (Johnson, 2013).

LITERATURE REVIEW

Two forms of absenteeism are recognised, these are classified as either voluntary or involuntary (Avey, Patera, and West, 2006). Voluntary absenteeism, is defined as “a reasonably avoidable absence from the workplace for reasons such as vacation or an unnecessary personal reason such as simply wanting to take the day off to relax” (Avey *et al.*, 2006, p. 44). Involuntary absenteeism is defined as “absence from the workplace that, under normal circumstances, is unavoidable by the employee, such as physical illness” (Avey *et al.*, 2006, p. 44). Voluntary absenteeism may be controlled through the use of incentives and enforcement of policy and is thus easier to manage than involuntary absenteeism (Larson, Norman, Hughes, and Avey, 2013).

Poor physical and mental health has been shown to have a negative impact on both the employee and the organisation (Avey *et al.*, 2006; Business Partners Limited, 2013). In addition, studies have found that employees who miss work will anticipate large amounts of work on their return (Avey *et al.*, 2006). This, together with possible feelings of guilt for letting a work team down while absent, could increase the employee's fear of job loss (Larson *et al.*, 2013; Avey *et al.*, 2006). The pressure of increased workloads and job insecurity increase the stress levels of absent employees (Johnson, 2013). Increased stressed levels, in an already ill employee, contribute to an employee's suffering and ultimately prolong their recovery time, thus keeping them away from work for longer (Daley and Parfitt, 1996). For the organisation absenteeism results in an interruption of production, decreased productivity and, ultimately, reduced profits and increased costs in the form of temporary labour fees and sick leave salaries (Armstrong, 2006; Sparks *et al.*, 2001). Absenteeism, the effects of which are more significant in smaller organisations, is not limited to a specific category of employee, organisation or sector. Absenteeism remains an organisational problem prevalent in several countries, including South Africa (Adcorp, 2013).

According to Business Partners Limited (2013), absenteeism is costing South African businesses R12 billion per annum. It is cited as a major reason for the decline in South Africa's global competitiveness rating, with a 500 per cent increase in sick leave calculated since 2001 (Johnson, 2013; Pickworth, 2013). Over this period South Africa's economy has cumulatively lost R55.2 billion in real terms as a result of decreased productivity and absenteeism (Adcorp, 2013; Johnson, 2013; Pickworth, 2013). Adcorp (2013) attributes 1.5 per cent of working days lost to illness amongst employees. This equates to 3.75 days off due to illness for every 250 annual working days for the average employee. However, in light of the many epidemics and viruses, such as influenza, which are prevalent amongst the South African workforce, it is not surprising that current absenteeism rates are much higher than the expected 3.7 per cent. The 2013 Adcorp Index revealed that 3.96 million workers (3.7%) were legitimately absent due to illness over the annual period. Involuntary absenteeism is highly likely to be negatively affecting production and efficiency (Pickworth, 2013).

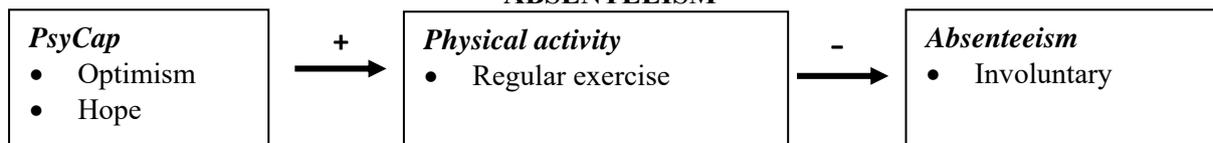
Studies have shown that involuntary absenteeism can be reduced by organisations adopting proactive strategies, such as wellness programmes, to boost employees' immune systems, decrease employees' willingness to miss work due to minor illnesses and promote speedy recoveries (Avey *et al.*, 2006). Voluntary absenteeism has been widely researched (Johnson, 2013; Pickworth, 2013), however very few studies have investigated involuntary absenteeism, and even fewer have investigated this within the South African context. It is for this reason that this study will focus on involuntary absenteeism in the South African workplace, more particularly on strategies to reduce the incidence of involuntary absenteeism.

Studies have shown that organisations need to address absenteeism by considering the cognitive capacity of employees in addition to their physical and emotional well-being (Loehr and Schwartz, 2001; Luthans, Norman, Avolio, and Avey, 2008). As such, recent management focus on positive organisational behaviour has led to psychological capital (PsyCap) constructs being used to reduce the negative impacts of involuntary absenteeism (Larson *et al.*, 2013; Avey *et al.*, 2006; Scheier and Carver, 1987). PsyCap (Luthans, Avolio, Avey, and Norman, 2007) refers to a person's positive psychological state of development. It encompasses four components: *self-efficacy*, which is defined as having the confidence to take on a challenge and put in the required effort to achieve challenging outcomes; *optimism*, which refers to a positive attribution about success now and in the future; *hope*, which entails having goals and ensuring that there are several paths to achieve them and, lastly, *resilience*, which is the ability to bounce back from failure (Avey *et al.*, 2006; Larson *et al.*, 2013).

PsyCap is important to consider when investigating involuntary absenteeism, with hope and optimism having been found to be specifically linked to lower levels of involuntary absenteeism (Kivimaki, Elovainio, Singh-Manoux, Vahtera, Helenius and Pentti 2005). Studies have shown that in order to improve overall health and well-being, regular exercise boosts ones' immune system and reduces the risk factors associated with illness and absenteeism (Johnson, 2013; Luthans *et al.*, 2008). The negative impact of involuntary absenteeism on organisations, combined with insufficient research on involuntary absenteeism, PsyCap and exercise in South Africa led to the development of this study which focused broadly on the effect of regular reported physical activity and its relationship with

PsyCap and involuntary absenteeism. More specifically and due to the high correlation between optimism and hope and engagement in health promoting behaviour, as demonstrated by existing research, this study focused on these components of PsyCap. Thus, the specific research question is: What is the relationship between optimism and hope in employees, their participation in physical activities and involuntary absenteeism? The main components of the study are indicated in the conceptual model outlined in Figure 1.

FIGURE 1
A CONCEPTUAL DIAGRAM SHOWING THE HYPOTHESED RELATIONSHIP BETWEEN OPTIMISM AND HOPE; PHYSICAL ACTIVITY AND INVOLUNTARY ABSENTEEISM



Avey *et al.*,(2006) and Kavussanu and McAuley (1995).

Physical activity

Physical activity is largely viewed as referring to exercise. Exercise, as defined by the World Health Organisation (2014), is any activity that enhances or maintains one's physical fitness and overall health and wellness. It can be undertaken for various reasons, including weight loss, muscle strengthening and enjoyment. Typically, exercise is associated with sporting activities and fitness workouts (Bennett, Wolin, Avrunin, Stoddard, Sorensen, Barbeau, and Emmons 2006). However, research shows that a considerable amount of energy is expended participating in household chores, which includes cooking, cleaning and caring for children (Blanchard, Kupperman, Sparling, Nehl, Rhodes, Courneya, and Rupp 2008). Household chores are thus also considered a form of exercise and are included in the conceptual definition of exercise for this study. Exercise can therefore be viewed as two-dimensional: physical activity, which will refer to traditional forms of exercise, and chore participation. This definition is appropriate in a South African context where several stigmas and stereotypes still exist around gender-specific exercise participation (Bourne, Lambert and Steyn, 2002).

Literature also suggests that certain demographic groups are more inclined to participate in regular physical activity than other groups (Pentecost and Taket, 2011). Pentecost and Taket (2011) reported several factors that influence and motivate one to participate in exercise, including gender, age, and ethnicity. More specifically, it was reported that males participate in exercise because it is seen as competitive, masculine and improves mood, and females participate in exercise for weight loss purposes.

In a two-month wave study of college students using the TPB baseline questionnaire, different racial groups were tested over three time frames. Results indicated that cultural differences and limited access to recreational facilities, led previous studies to report the highest levels of inactivity amongst Black people (Blanchard *et al.*, 2008). Exercise studies also found that those most active were between 20 and 29 years of age. This age group reported that they were still young enough to be active, that body-image was important to them and that they regarded exercise as a social activity (Kiovula, 1999). To investigate the differences in physical activity and chore participation between genders, ages, and ethnic groups, the following hypotheses were examined:

Hypothesis 1: There is a difference between male and female participation in (a) physical activity and (b) physical activity and chores

Hypothesis 2: There will be a differences in participation in physical activity between ethnic groups

Hope and Regular Physical Activity

According to Snyder, Irving, and Anderson (1991, as cited in Avey *et al.*, 2006), hope refers to an individual's goals, will-power, and way-power. When individuals have high hope research indicates that they will be determined to achieve specific goals. In doing so they will generate multiple routes to achieve these goals. At the same time, they will identify, anticipate and prepare for any difficulties that may arise (Avey *et al.*, 2006). Snyder *et al.* (1991) found that, as was the case with highly optimistic individuals, hopeful individuals were likely to engage in health-promoting behaviours as they considered these behaviours as proactively preventing obstacles that may arise from ill-health. Hopeful individuals are able to elicit a stronger ability to cope with and manage high levels of stress and pain by focusing on physical and mental fitness (Larson *et al.*, 2013; Luthans *et al.*, 2008). Therefore, the following hypotheses were examined:

Hypothesis 4: There is a positive relationship between hope and participation in physical activity

Hypothesis 5: There is a positive relationship between hope and participation in physical activity

Optimism and Regular Physical Activity

Whilst the literature describes optimism as a general expectancy that good things will happen, it is argued that such a definition refers specifically to dispositional optimism (Hamid, 1990; Scheier and Carver, 1987). This study considers Hamid's (1990) definition of optimism which entails the belief that outcomes are attainable and that, while achieving these outcomes may be difficult, continuing to strive for success will eventually lead to the attainment of these outcomes (Kivimaki *et al.*, 2005; Hamid, 1990). Individuals who have higher levels of optimism are focused on attaining the outcomes they believe they can achieve. Personal illness may act as a barrier to achievement, leading to a concern more with physical and mental health as opposed to striving to achieve success (Kavussanu and McAuley, 1995). Optimistic people are more likely to make voluntary changes to their behaviour, such as increased participation in regular exercise, to reduce their health and injury risks (Daley and Parfitt, 1996). Larson *et al.* (2013) found that those participants who were classified as optimists considered exercise to be a health improvement strategy that would aid in improving overall productivity and well-being. As such, optimists viewed exercise as a health-promoting activity to prevent and treat personal illness. Therefore, the following hypotheses were examined:

Hypothesis 6: There is a positive relationship between optimism and participation in physical activity

Hypothesis 7: There is a positive relationship between optimism and chore participation

Regular Physical Activity and Involuntary Absenteeism

Regular physical activity is defined by several measures, from hours active per day, to workouts completed per week (Daley and Parfitt, 1996;). There is overwhelming support in the literature for the mental, physical and emotional benefits of regular participation in physical activity (Daley and Parfitt, 1996; Loehr and Schwartz, 2001). Regular physical activity stimulates one's endorphins, aids in stress relief and increases energy levels, all of which contribute to a healthier employee (Cain and Martinez, 2012). Adequate and regular exercise also has a positive effect on weight management, tobacco use, nutritional habits, back pain, stress management, and blood pressure and cholesterol levels (Cain and Martinez, 2012). These benefits result in employees that are more likely to have stronger immune systems and more effective coping mechanisms to recover faster from illness (Johnson, 2013). A study conducted by Tucker (1990, as cited in Avey *et al.*, 2006) established a positive link between regular exercise and both cardiovascular and coronary fitness. When individuals

with cardiovascular problems increased their daily physical activity their risk factor indicators, such as resting heart rate, blood pressure and body fat, decreased significantly. Those individuals who went on to require cardiovascular-related surgery reported shorter recovery times.

Literature provides compelling evidence that a sedentary lifestyle exposes one to a higher risk of ill-health, whereas regular physical activity has a positive influence on several components of one's health (Kavussanu and McAuley, 1995). According to Zholdak, Vasilyeva, and Malova (1971, as cited in Donoghue, 1977), individuals who are physically inactive fall ill five to eight times more often than those who engage in regular exercise. Other studies indicate that participation in regular physical activity strengthens the mental and physical state of an employee (Daley and Parfitt, 1996). For an organisation this means that physically active and healthy employees are less likely to fall ill and more likely to experience shorter recovery times. They are therefore likely to be absent from work less frequently. Based on the reviewed literature, the following hypotheses were tested:

Hypothesis 8a: There is a positive relationship between participation in chores and involuntary absenteeism

Hypothesis 8b: There is a positive relationship between participation in physical activity and involuntary absenteeism

Hypothesis 9: Optimism, hope and participation in exercise predict involuntary absenteeism

Several studies have been conducted on PsyCap, exercise and absenteeism as single constructs. However, it remains imperative to investigate the relationships between all three variables. It is hoped that South Africa's productivity, efficiency and competitiveness can increase by strengthening the mental and physical health of the workforce and reducing the current crippling involuntary absenteeism rates. The following hypotheses were tested:

Hypothesis 10: Involuntary absenteeism contributes more to current absenteeism rates than voluntary absenteeism

Hypothesis 11a: Optimism and involuntary absenteeism are negatively related

Hypothesis 11b: Hope and involuntary absenteeism are negatively related

Having reviewed the literature on PsyCap, exercise and involuntary absenteeism, the following section presents the method and analytical techniques used in undertaking the empirical component of the study.

METHOD

Research Design

This study employed a cross-sectional correlational research design, which allowed for the identification of relationships between variables (Burns and Burns, 2008). Quantitative data was collected using a self-report questionnaire. The self-report questionnaire was made available online, through Qualtrics, as well as in a pen-and-paper format.

Sampling and Participants

A combination of convenience and snowball sampling methods were used to gather data from participants. The study used a convenience sampling technique to collect data from participants using electronic questionnaires. The participants were also asked to forward the electronic questionnaire to

other white-collar employees within their organisation or social groups. The use of participants forwarding and asking colleagues and social network contacts to participate in the study resulted in a snowball approach (Pallant, 2007). By using a combination of convenience and snowball sampling, the risk of obtaining a homogenous sample was reduced and participants were quickly and easily reached (Burns and Burns, 2008; Pallant, 2007). These two sampling techniques are non-probability techniques and thus have no element of randomness. However, these techniques were deemed appropriate for the purpose of this study as the data that was collected was intended for investigating the relationships between variables rather than to accurately estimate population parameters (Burns and Burns, 2008; Cozby, 2009).

A total of 175 participants responded to the questionnaire. Nine participants did not complete more than 75 per cent of any of the scales and their responses were thus omitted from the data (Pallant, 2007). Due to the study's focus on employees' absenteeism rates, a further three respondents were omitted from further analysis as they were unemployed.

The sample consisted of 163 participants from 44 companies. The participant age range extended from 18 to 25 years old (category 1) to over 60 years old (category 6), with most of the respondents falling into category 26 – 48 years. Of these participants, 100 were female (61.35%) and 63 were male (38.65%). The sample consisted of employees of various ethnicities: White (56.44%), Coloured (18.40%), Indian (15.34%), Black (4.29%), Chinese (0.61%), other (0.61%) and 4.29 per cent preferred not to indicate their ethnicity. The majority of participants (67.49%) were individuals who did not belong to either of the fitness programmes considered in this study, but still engaged in exercise, 21.47 per cent were actively involved in the KwaZulu Natal GETFIT exercise regime and 11.04 per cent were members of the Itheko Athletics Club in Rondebosch, Western Cape.

Procedure

Ethics clearance was obtained for conducting the study from the Ethics in Research Committee of the Faculty of Commerce of the University of Cape Town. As indicated above, the questionnaires were distributed both electronically and manually. A Qualtrics questionnaire link was sent via email to HR Directors at various South African companies. The Directors were asked to forward the link to appropriate white-collar employees in their organisation and via their social networks. A hard copy questionnaire was also administered to white-collar employees at various South African firms and to members of the Itheko running club.

Measures

The first section of the questionnaire, which is obtainable from the author upon request, pertained to demographics, employment-related information and exercise programme involvement. The remainder of the questionnaire consisted of 53 items divided into four subscales, namely hope, optimism, physical activity and involuntary absenteeism.

Optimism and hope

Levels of optimism and hope were measured using subscales taken from Gorgens-Ekermans and Herbert's (2013) 24-item PsyCap Questionnaire. This scale is made up of four subscales (optimism, hope, self-efficacy and resilience) and showed good internal consistency with a Cronbach's alpha reliability of $\alpha = .75$. Items measuring both hope and optimism were used and these were ranked on a five point Likert-type scale, ranging from strongly disagree (1) to strongly agree (5). High score on these subscales indicates high levels of optimism or hope. A sample item from the optimism sub-scale is "I believe that success in my current work will occur in the future". A sample item from the hope sub-scale is "I have several ways to accomplish a work goal".

Exercise

Employees' participation in exercise was measured using an adapted version of Luthans, Avolio, and Avey's International Physical Activity frequency Questionnaire (IPAQ) (2007). The original version was shortened to include six of the original items which were considered to pertain to a South African context and showed good face validity. The original 27-item scale showed good internal consistency ($\alpha = .73$) (Luthans *et al.*, 2007). Following the recommendations of Luthans *et al.* (2007), and for ease of comparison, participants reported their level of participation in exercise using an eight point frequency scale, ranging from none (1) to six times a week or more (8). A high score on this scale indicated a high engagement in exercise. A sample item from the scale is "Indicate the average number of times you spent jogging in the last 12 months".

Absenteeism

The Absenteeism scale from Mc Clenney (1992), which consisted of six items, was adapted from a frequency scale to a six-point Likert-type scale. This was considered necessary as no internal consistency or Cronbach's alpha was reported in the previous study. Participants were asked to indicate the number of days leave they had taken in the past 12 months for various reasons using a rating scale ranging from zero (1) to seven or more days being rated the highest (6). A high score on this scale indicated a high absenteeism rate. Of particular interest in relation to involuntary absenteeism was item 3 which asked participants to respond to the statement: "Indicate the amount of leave you have taken in the past 12 months for personal illness (this includes leave for surgery, treatment, rehabilitation, doctors' appointments and illness)". A high score on this item indicates higher involuntary absenteeism.

Statistical Analysis

All statistical analyses were conducted using the Software Package for the Social Sciences (SPSS), version 22. Reliability was measured using Cronbach's alpha and corrected item-total correlation, and validity was measured using principal component analysis (PCA). Hypotheses were tested using Pearson Product-Moment correlations (Bivariate correlations), independent samples t-test and multiple regression analysis. Descriptive statistics, reliability and validity, plus correlational and regression analyses were used to test the hypothesised relationships.

RESULTS

Reliability Analysis

The reliability of each scale was evaluated due to fact that adapted scales were used to suit the South African workplace. Computing reliability for the adapted exercise scale was, however, not appropriate, as responses were in frequency form rather than a scale. Internal consistency and construct validity were measured using Cronbach's alpha and principal component analysis (PCA) respectively. Scales were considered reliable if their Cronbach's alpha was above the recommended 0.70 (Burns and Burns, 2008).

Optimism

The Optimism scale reported low internal consistency of $\alpha = .66$ (corrected item-total correlations: $.04 < r < .61$). However, one item (OP6) had a corrected item-total correlation lower than $.3$ ($r = .04$). It was thus decided to omit this item from the scale to improve the internal reliability of the optimism scale and repeat the Cronbach's Alpha test. The new five item optimism scale achieved a higher Cronbach's α of $.77$ and was thus regarded as reliable (corrected item-total correlations: $.46 < r < .63$).

Hope

The Hope scale showed good internal consistency (Cronbach's $\alpha = .77$) and was thus regarded as reliable (corrected item-total correlations: $.39 < r < .68$).

Absenteeism

The Absenteeism scale reported low internal consistency of $\alpha = .394$ (corrected item-total correlations: $.05 < r < .36$) Items 1, 5 and 6 had corrected item-total correlations lower than 0.3 ($r = .20$, $r = .19$, $r = .05$ respectively) and thus, to improve the internal reliability of the scale, it was decided to omit these items. The Cronbach Alpha test was repeated and the new three item absenteeism scale obtained a higher Cronbach's α of $.41$ (corrected item-total correlations: $.34 < r < .39$). The low internal consistency was acceptance because the scale had been adapted from a frequency to a Likert scale,

Validity Analysis

The construct validity of the Optimism and Hope scales was assessed through principal component analysis (PCA). For all scales the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (Kaiser, 1974) was above the recommended value of 0.6 (Pallant, 2007) and the Bartlett's (1954) test for Sphericity was significant ($p < .001$), hence the application of PCA was supported. Factors with Eigenvalues greater than 1 were considered important, as per the Kaiser criterion (Kaiser, 1965) and factor loadings greater than 0.3 were considered significant (Pallant, 2007).

The KMO of sampling adequacy for both the optimism and hope scale was 0.77 and the Bartlett's test of Sphericity was significant ($\chi^2_{10} = 210.39$, $p < .001$ and $\chi^2_{15} = 272.29$, $p < .001$ respectively). Both PCA and a scree plot revealed that all five optimism items load significantly onto one factor as expected (eigenvalue: 2.64, explained variance: 52.82 per cent, factor loadings: $.64 < r < .79$) and thus the five item optimism scale was regarded as one-dimensional and the factor assumed to indicate employees' levels of optimism.

PCA revealed that the six hope items loaded onto two factors. These items investigate both trait and dispositional hope. However, this study considered hope in its conceptual form as defined earlier. All items loaded significantly onto the first component; however only some items loaded onto the second component. As such, through forced extraction of one factor, both PCA and a scree plot revealed that all six hope items load significantly onto one factor (eigenvalue: 2.88, explained variance: 48.05 percent, factor loadings: $.55 < r < .82$). By forcing this factor loading, the variance reported was higher and previous studies' methods could be followed. The six item hope scale was thus regarded as one-dimensional and the single factor was assumed to indicate employees' hope.

The exercise and absenteeism scales were both adapted from frequency to Likert scales. Reported internal consistencies were weak and therefore it was considered not appropriate to assess the construct validity of these scales (Burns and Burns, 2008).

Descriptive Statistics

Means, standard deviations, maximums and minimums among the variables optimism and hope were calculated (Table 1). The participants revealed a high level of optimism ($M = 3.84$, $SD = .57$) and a higher level of hope ($M = 4.12$, $SD = .49$). The mean score for the physical activity scale indicated that the participants' exercise participation was negligible.

TABLE 1
DESCRIPTIVE STATISTICS FOR SCALES: OPTIMISM AND HOPE

Scale	N	Mean	Standard Deviation	Minimum	Maximum
M_Optimism	163	3.84	0.57	2.40	5.00
M_Hope	163	4.12	0.49	2.83	5.00
Valid N (listwise)	163				

Analysis of Variance

It was hypothesized that there is a difference in variables, such as physical activity participation, between demographic groups. To assess hypothesis 1, which proposed that there will be differences between male and female participation in physical activity and physical activity and chores (N = 163). A Levene's test indicated that the variances for engagement in exercise for males and females were not equal ($F = 8.73, p < .05$). The t-test revealed that the difference in exercise and chore engagement between males and females respectively was significant ($t_{107.71} = 2.53, p < .05$; $t_{161} = -3.43, p < .05$). Two separate analysis of variance were conducted for the gender split one for physical activity and another for chores. The findings in the current study show that males ($M = 53.37, n=63$) engaged in more physical activity than females ($M = 47.24, n=100$). Females ($M = 19.09, n=100$) engaged frequently in more chores than males ($M = 16.11, n=63$). Hypothesis 1 was thus supported.

There was no significant finding from the ANOVA test for the hypothesis that physical activity was related to age and ethnicity, therefore the hypotheses 2 and 3 were not supported.

A Levene's test indicated that the variance of physical activity ($F_{5, 157} = 2.01, p = .08, n.s.$) and chore participation rates ($F_{5, 157} = 1.53, p = .072, n.s.$) were equal in the six age groups. It was thus appropriate to conduct an ANOVA to establish if any differences would be revealed which showed that employees of different age groups did not differ in their level of physical exercise ($F_{5, 157} = 1.44, p = .212, n.s.$) or chore participation ($F_{5, 157} = 1.53, p = .185, n.s.$). Similarly, a Levene's test indicated that the variance of physical exercise ($F_{4, 156} = 2.76, p = .30, n.s.$) and chore participation rates ($F_{4, 156} = 1.99, p = .098, n.s.$) was equal for the seven ethnic groups. It was thus appropriate to conduct an ANOVA, which showed that employees of different ethnic groups did not differ in their level of physical exercise ($F_{4, 156} = 1.47, p = .218, n.s.$) or chore participation ($F_{4, 156} = 1.99, p = .098, n.s.$).

It was hypothesized that involuntary absenteeism contributes more to current absenteeism rates than voluntary absenteeism. A paired t-test indicated that employees' average rate of involuntary absenteeism ($M = 3.10, SD = 1.57$) was significantly higher than their rate of voluntary absenteeism ($M = 2.10, SD = .70$), the reported SF indicates that the SD indicates variance of responses for involuntary absenteeism. Hypothesis 10 was thus supported.

Correlation Analysis

To assess the correlational hypotheses in this study (hypotheses 4-7, 8, and 11), a two-tailed Pearson product-moment correlation coefficient was conducted. Pallant's (2007) criteria was adopted to interpret the strengths of the correlations and these results are presented in Table 3. In determining whether there was a positive relationship between optimism and physical activity and between hope and physical activity (hypotheses 4-7), both dimensions of physical activity were considered.

No significant relationship was found between optimism and engagement in physical exercise ($r = 0.13, p = 0.104, n.s., N = 163$) or chores ($r = -0.02, p = 0.782, n.s., N = 163$). Hypotheses 4 and 5, which hypothesise that high levels of optimism are positively related to physical activity and chore participation, were not supported.

A small significant, positive relationship was found between hope and engagement in physical exercise ($r = 0.23$, $p < 0.01$, $N = 163$) but no significant relationship was found between hope and chore participation ($r = 0.14$, $p = 0.083$, n.s., $N = 163$). Hypothesis 6 which proposed that there is a positive relationship between optimism and physical activity participation was not supported. Hypothesis 7 which proposed that there is a positive relationship between optimism and chore participation was supported.

A small significant, positive relationship was found between participation in chores and involuntary absenteeism ($r = 0.18$, $p < 0.05$, $N = 163$), supporting hypothesis 8a. No significant relationship between participation in physical exercise and involuntary absenteeism was found ($r = 0.03$, $p = 0.718$, n.s., $N=163$) and thus hypothesis 8b is not supported.

No significant relationship between optimism and involuntary absenteeism ($r = 0.14$, $p = 0.083$, n.s., $N = 163$) or between hope and involuntary absenteeism ($r = 0.02$, $p = 0.760$, n.s., $N= 163$) was found. Hypothesis 11a and 11b were thus not supported.

TABLE 3
CORRELATIONS BETWEEN CHORES, HOPE, OPTIMISM, INVOLUNTARY ABSENTEEISM AND PHYSICAL ACTIVITY

		Optimism	Hope	Involuntary Absenteeism	Physical Activity	Chores
Optimism	r	1.00	0.63**	0.02	0.13	-0.02
	p		0.000	0.760	0.104	0.782
	n	163	163	163	163	163
Hope	r	0.63**	1.00	0.07	0.23**	0.14
	p	0.000		0.347	0.004	0.083
	n	163	163	163	163	163
Involuntary Absenteeism	r	0.02	0.07	1.00	0.03	0.18*
	p	0.760	0.347		0.718	0.026
	n	163	163	163	163	163
Physical Activity	r	0.13	0.23**	0.03	1.00	-0.11
	p	0.104	0.004	0.718		0.157
	n	163	163	163	163	163
Chores	r	-0.02	0.14	0.18*	-0.11	1.00
	p	0.782	0.083	0.026	0.157	
	n	163	163	163	163	163

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Multiple Regression Analysis

A standard multiple regression analysis was used to test the hypothesis that involuntary absenteeism rates can be predicted by levels of hope, optimism, and participation in physical exercise will predict absenteeism. A test for multicollinearity was conducted, using a Pearson Product-Moment correlation, to assess if there was any inter-correlation between the independent variables, namely hope, optimism, and exercise engagement. The correlation coefficients ranged from .09 to .60, which are all below the .8 cut-off (Burns and Burns, 2008). This implied that the independent variables were not

strongly correlated with each other and that there was no violation of assumption. The standard multiple regression analysis showed that hope, optimism, and exercise engagement explained only 1.1 per cent of variance in involuntary absenteeism (adjusted $R^2 = .011$). Results show that the multiple regression correlation was not statistically significant, indicating that none of the variables significantly predicted involuntary absenteeism ($F_{3, 152} = 0.58, p = .628, n.s.$) and thus hypothesis 9 was not supported.

DISCUSSION

The aim of this study was to examine the relationship between employees' exercise participation, psychological capital and involuntary absenteeism rates in the South African context. The relationship between two dimensions of psychological capital, optimism and hope was investigated. Significant results were recorded on the positive relationship between hope and physical activity participation. However, no significant prediction of involuntary absenteeism from hope, optimism and exercise levels was found.

The findings of this study are consistent with findings from recent studies that showed that South Africans fear job loss due to the saturated labour pool. South African employees feel that taking leave for vacation or other voluntary reasons may jeopardise their job security (Fin24, 2014).

Previous studies have reported strong consensus regarding the well-established benefits of regular participation in physical activity in reducing sick leave (Avey *et al.*, 2006; Bennet *et al.*, 2006;). A possible explanation for this inconsistency in findings could be that participants found the questionnaire items pertaining to physical activity difficult to interpret thus yielding responses not consistent with previous studies. While studies reviewed in this study included large corporate employees in their sample, this study only included employees from medium-sized corporates, this shows there are several factors that influence and motivate the uptake of physical activity. Pentecost and Taket (2011) study found that males viewed sport as an opportunity for competition, excitement, stress and mood management and to enhance competence. Females, however, regarded exercise as a means to control weight and appearance. As such, the social aspect of physical activity tends to attract more males and is, to some degree, still regarded as a male-dominated domain today (Kiovula, 1999). Due to the traditional role of the woman in a household, chores are still considered to be the domain of females.

Similarly, a recent focus on exercise education and the creation of age-specific exercise groups has led to older individuals becoming more physically active (Rhodes, Martin, Taunton, Rhodes, Donnelly and Elliot (*et al.*, 1999). Previous studies have reported a higher prevalence of inactivity amongst Black individuals. However, this can be intuitively justified when one considers the historical South African context of recreational facility provision skewed towards the white population (Blanchard *et al.*, 2008; Rhodes *et al.*, 1999.)

Whilst Hamid (1990) reported a positive relationship between exercise and optimism, such results were not found in this study. This inconsistency could be as a result of the differences in samples used. Hamid (1990) used students as the sample, while this study used employed adults over 18 years.

In contrast to previous findings, this study found support for hypothesis 7, but not for hypothesis 6. In agreement with Snyder (1995), employees who scored highly on the hope scale reported higher physical activity participation but not higher chore participation. Snyder (1995) did not include chores in the physical activity definition and thus inconsistency in hypothesis 6 in this study can be justified. Literature shows hopeful individuals focus on the future and goal achievement and as such, these individuals are likely to engage in exercise to proactively prevent the obstacle of ill-health (Larson *et al.*, 2013; Luthans *et al.*, 2008). Some researchers say that it is the hope in an individual that leads to their exercise participation (Luthans *et al.*, 2008). Other studies have found that it is the physical and psychological benefits gained through exercise that make one more hopeful.

Findings from the current study do not support hypothesis 11a or 11b and are inconsistent with Kivimaki (2005). These authors found that optimism and hope were negatively related to involuntary absenteeism. This inconsistency is considered to be due to the narrower definition used in studies from Kavussanu and McAuley (1995) and Kivimaki (2005). Another possible explanation for the inconsistency in findings could be that some studies report participants as either optimists or pessimists, forcing participants into one of the two categories. Avey *et al.* (2006) warns against this approach as this suggests an individual has to be either an optimist or a pessimist and that there are no other possibilities in between.

This study employed a cross-sectional descriptive design due to academic timelines. Such a design does not allow for longitudinal data collection from the sample and thus one cannot establish exercise trends over an extended timeframe. Future researchers should consider a longitudinal design, which will allow one to track the variables over time. The use of a pre-validated absenteeism scale should be considered to improve the findings in future studies.

Practical Implications

In this study a positive relationship between hope and exercise was established. Despite the unknown directionality of this relationship this finding may be used to develop holistic wellness programmes which focus on exercise as a component of wellbeing. The benefits of regular exercise include reduced absenteeism, which is likely to lead to organisations experiencing a reduction in the costs associated with absenteeism. By acknowledging the positive health benefits of non-sport related tasks, such as engaging in household chores, “non-sporting” employees can be encouraged to see the benefit derived from participating in activities such as these.

Organisations should also consider implementing practices which elicit hope. As reported by Loehr and Schwartz (2001), when a trainer is in the process of ‘building’ an athlete such as a golfer, they do not train the individual in primary skills such as hitting the golf ball. Instead, they focus on enhancing competencies that will give the athlete a competitive edge. Similarly, in a corporate environment, an employer should not only aim to address primary competencies such as negotiating or balance sheet analysis. Efforts should rather be aimed at ensuring the employee has supportive competencies such as energy, endurance, focus and motivation. Such competencies aid in sustaining high performance, allowing these ‘corporate athletes’ (high achieving employees) to thrive in difficult circumstances and to emerge stronger from stressful situations. In this way, organisations are likely to enhance overall well-being and fitness of the white-collar workforce, thus counteracting the negative effects of unhealthy employees (Bennett *et al.*, 2006). This study has made contributions to existing absenteeism, exercise participation and psychological capital literature by examining the relationships between these constructs in the context of employed, white-collar South Africans. This study focused on an under-researched area of absenteeism, namely involuntary absenteeism, in an attempt to further knowledge on how to counteract this phenomenon.

Conclusion

This study contributes knowledge which, if findings are implemented as interventions could assist in reducing involuntary absenteeism rates by increasing physical activity. In line with past literature, this study confirmed a positive relationship between hope and participation in physical activity. With South African organisations operating in a dynamic and increasingly people-focused competitive environment, it is essential that the workplace focus is on reducing those factors that negatively affect productivity and performance. From this study, it is evident that the inclusion of employee-focused health-related practices, policies and procedures that enhance hope and health-promoting activities will be beneficial for South African organisations and their employees. This will have a knock-on effect for the South African economy as a whole, by increasing overall employee productivity.

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