

WHITE PAPER

The Science Behind Winningtemp's Survey





Background

In the spring of 2017 Winningtemp undertook the work to identify the factors that most strongly predict two outcome variables: employee turnover and sickness absence. With the help of P.h.D and researcher Leif Denti, an extensive search of the research literature was carried out to find studies that provide support for the predictive ability of certain factors.



What is predictive validity?

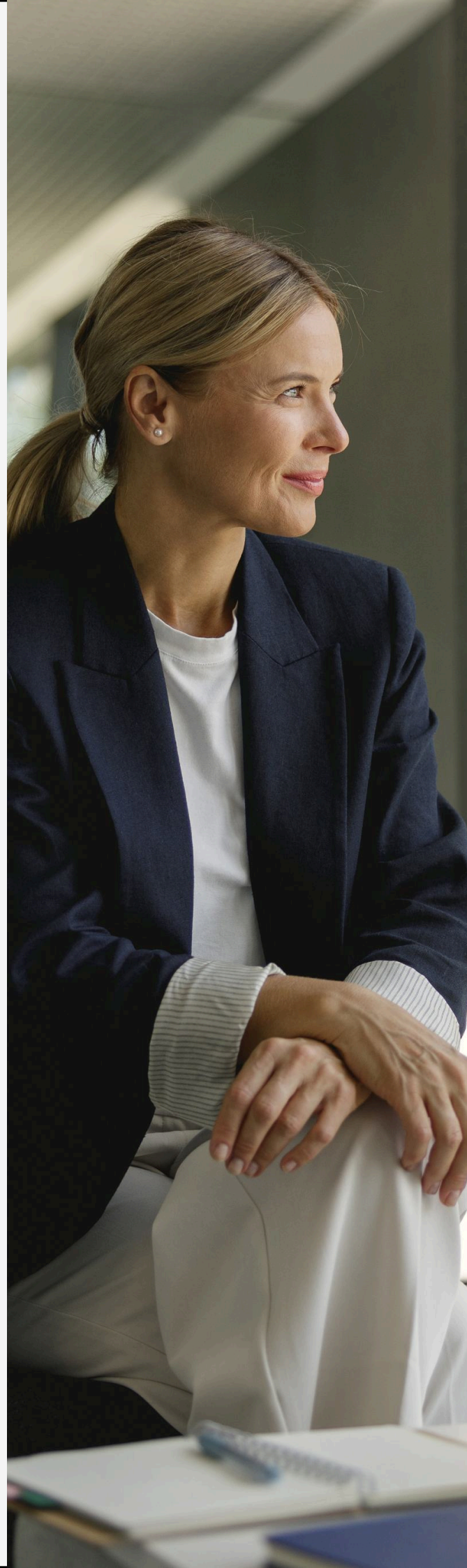
The concept of validity in science can be broadly described as an estimate of whether a certain method of measurement (e.g., questions in a survey) is actually measuring what it is intended to measure (e.g., peoples' workplace stress experiences).

There are different types of validity. The two most relevant for scientific measurements within human resources management, such as employee surveys, are content validity and predictive validity.

Content validity is normally used when designing tests or question scales. As the phenomenon you want to measure (e.g. a person's job satisfaction) could be captured by thousands of variants of questions, here you are interested in understanding whether the limited question scale at your disposal is good enough to capture the phenomenon in question.

Predictive validity is the ability of the phenomenon (and question scale) to predict future outcomes. A person who scores highly on a university entrance exam should reasonably be better able to complete their higher education than someone who scores lower on the test – if this is not the case, we should not be using university entrance exam tests as selection tests.

Predictive validity was the main focus when selecting the question areas for Winningtemp's model. Leif Denti also reviewed Winningtemp's questionnaire batteries to ensure that these measure the factors with sufficient content validity. Where necessary, he suggested validated scales from the research literature.





Method

Leif Denti conducted a comprehensive literature search to identify research on factors proven to affect employee turnover and sickness absence. The **Web of Science**, **Business Source Premier** and **PsycInfo databases** were used for the search. The search was carried out at abstract level (within the article summaries). At the time Winningtemp had a tentative model and each factor in this was considered separately.

In order to identify new factors that affect employee turnover and sickness absence, meta-analyses in the field were sought. A meta-analysis is a study that compiles and weights a large number of extant studies. The results of such an analysis are considered to outweigh the results of any single research study. The search terms for employee turnover were: **'turnover'**, **'employee turnover'**. The search terms for sickness absence were: **'sickness absence'**, **'sick leave'**, **'sickness absenteeism'**, **'absenteeism'**.

Based on the literature search several meta-analyses were identified for both employee turnover and sickness absence. These were scrutinized and the predictive relevance for each potential factor (e.g., job satisfaction) for each outcome (turnover and sickness absence) were ranked and collated.

- The following meta-analyses are relevant to employee turnover: Griffeth et al. 2000 (approximately 67 studies), Heavey et al. 2013 (82 studies), and Hancock et al. 2017 (159 studies).
- The following meta-analyses are relevant to sickness absence: Miraglia & Johns, 2016 (109 studies), Duijts et al., 2007 (20 studies), Darr & Johns, 2008 (153 studies), Kuoppala et al., 2008 (46 studies).

Not all factors are created equal: distal and proximal factors

It is important to keep in mind which variables are distal and proximal in relation to an outcome, so that the model uses variables with the strongest predictive ability. A distal factor is an underlying factor (distal roughly means "far"), which in itself

may correlate with the outcome, but above all the distal factor affects an intervening factor called a mediator. The mediating factor is thus proximal in its relation to the outcome (proximal roughly means "close").

In figure 1, which comes from a recently published meta-analysis (Miraglia & Johns, 2016), we can see, for example, that job satisfaction is a mediator in the relationship between distal variables, such as supportive leadership (supervisor support), autonomy 3 (job control) and collegial support, and their effects on sickness absence (absenteeism). The researchers divided the distal and proximal variables along two mechanisms that affect sickness absence. The first mechanism is the effect of health – such as exhaustion, stress, depression, or physical ailments. The second mechanism consists of motivational factors. Here, the researchers used job satisfaction as a proximal factor: satisfaction with work, engagement and a sense of commitment.

Of course, distal variables can have their own, unique effects on sickness absence, but by employing this type of mediation analysis one can get one step closer to a adequate model of which factors that are playing a role in predicting sickness absence.

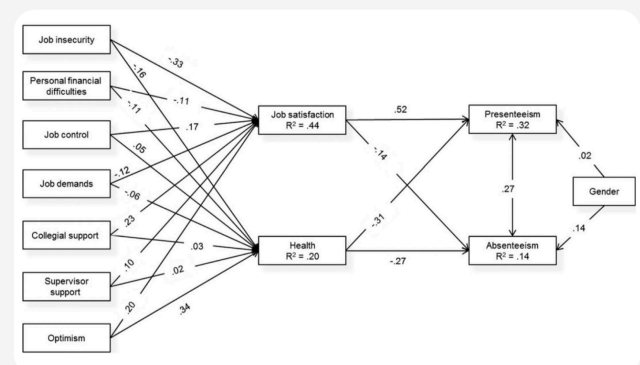


Figure 1

Miraglia & Johns, 2016. Mediation analysis of distal factors, mediated by job satisfaction and health, on the outcome variables of absenteeism and presenteeism. In this study, absenteeism is sickness absence. Presenteeism is presence at work even though the employee is sick. The numbers along the arrows are parameter estimates (similar to

standardized regression coefficients). They are interpreted as follows: +1 and -1 are the strongest possible correlations (positive and negative); 0 means no correlation. All correlations are statistically significant.

As so few studies have carried out mediation analyses, it is difficult to say which variables are distal and which are proximal in the process until an individual is affected by sickness absence, but a compilation can be seen in figure 2. Regarding the effects of psychosocial factors on sickness absence, many of these variables seem to be distal (e.g. leadership). Factors that are more individual-related (mental health/physical problems such as exhaustion, stress, depression) seem to be more proximal and thus have a greater predictive ability than psychosocial factors. It can generally be said that the accuracy of predictions (of an outcome) will increase when measuring proximal rather than distal factors.

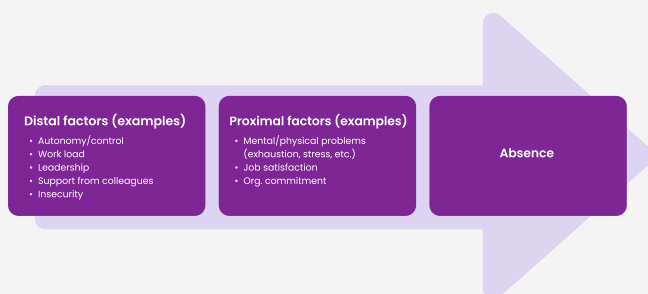


Figure 2

Distal and proximal factors in sickness absence. Proximal factors that are closely associated with long-term sickness absence are symptoms of exhaustion, fatigue, or other psychological problems (e.g. problems is sleeping).

Employee turnover. When it comes to employee turnover, the research has identified a relatively predictable termination process for individuals who resign from their job. Note that we are here discussing voluntary termination, known as voluntary turnover. Different factors are placed at different stages throughout the process. Distal factors such as the individual's job satisfaction,

commitment, satisfaction with leadership, the work situation, alternative job opportunities, etc. constitute an influence on proximal factors: consideration of resigning (turnover intentions) and search behaviors for new job opportunities. It is impossible to say precisely when the distal factors constitute this influence and precisely how strong or weak they need to be for an individual to start thinking about whether to resign.

Furthermore, on a factor-per-factor comparison, some specific factors are not necessarily strong enough to be distal factors in relation to turnover. An example of the latter point is the factor and phenomenon of meaningfulness. Meaningfulness is related to individuals' job satisfaction (a proximal factor for turnover), but is not intrinsically strong enough to predict turnover itself.

It is therefore relevant to measure job satisfaction, as job satisfaction is a more proximal factor than meaningfulness. The same applies to pay. Too low pay contributes to increased job dissatisfaction. However, it is primarily the feeling of dissatisfaction that leads to individuals making the decision to resign. Pay affects dissatisfaction, but is only one of many factors that exert this influence on dissatisfaction. Poor pay, for instance, can be offset by good relations with colleagues or the manager. It is therefore worth repeating that measuring proximal factors and not distal factors will generally increase the predictive power of the model (consisting of several measured factors) as a whole.

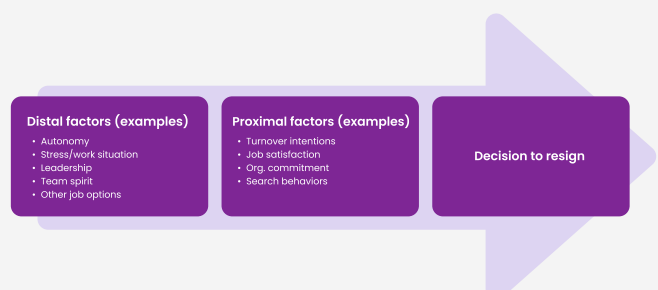


Figure 3

Employee turnover, the individual termination process and the constituent distal and proximal factors (Griffeth et al., 2000).

Contextual factors

Contextual factors may play a role in the predictive ability of various factors for sickness absence (compare, for example, occupations that are physically stressful vs. office occupations), but it is also very difficult to detect them, because a large variation of studies are required. Consequently, only a small number of analyses has been carried out.

- **Occupational status.** Darr & Johns (2008) investigated whether the relationship between work load and sickness absence differed between different types of occupations, sorted by status (workers, lower level professionals, higher level professionals). The hypothesis was that higher status occupations would be associated with a pressure to be present at work despite being ill. They found no such differences.
- **Different occupational domains.** Christensen et al. (2005) investigated the relationship between a number of predictors and sickness absence in various occupational domains: social services, a technology company and a pharmaceutical company. In general, the differences between the occupational domains were weak. In terms of employee turnover, there is evidence that job satisfaction is a stronger factor within the healthcare sector for a person's intention to resign their job compared with other workplaces.
- **Private vs. public sector.** Miraglia & Johns (2016) found no differences in their meta-analysis between the private and public sectors regarding sickness absence.
- **Organization size.** Duijts et al. (2007) found in their meta-analysis that larger companies (>100 vs. <10) had a larger proportion of employees with sickness absence lasting more than three days, while Miraglia & Johns (2016) did not find any differences between organizations of varying sizes.
- **Reorganization.** Duijts et al. (2007) found that organizations that were in the midst of a reorganization experienced higher levels of sickness absence.

Demographic factors

Generally speaking, demographic factors are very weak in their predictive abilities compared to psychological and psychosocial factors. The four most common demographic factors are gender, age, level of education, and marital status.

- **Gender.** Darr & Johns investigated whether the relationship between work load and sickness absence differed between men and women. They found no such differences. Nor did Duijts et al. (2007) find any differences between the genders. Griffeth et al. (2000) found gender had no effect on employee turnover, while Heavey et al. (2013) found a slight predominance for women.
- **Age.** No effect on sickness absence was found (Darr & Johns, 2008; Duijts et al., 2007). Heavey et al. (2013) found a slight negative correlation between age and employee turnover, with young people leaving their jobs more frequently.
- **Level of education.** A moderate effect was found on general absence. Graduates tend to be absent from work more often (Duijts et al., 2007). The same effect (but weak) was found on employee turnover (Griffeth et al., 2000).
- **Marital status.** A weak effect was found on general absence. Married employees tend to be absent from work more often (Duijts et al., 2007).

Demographic factors

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Interaction effects – the effect of several factors at the same time

An interaction effect is when two factors interact with a reinforcing effect (in synergy) or inhibitory effect (cancelling each other out) for a particular outcome. It is interesting to consider possible interaction effects, as they can be particularly important for predicting sickness absence and employee turnover. For example, it is well established that the combination of high job demands and low autonomy is the perfect cocktail for creating mental health issues and, by extension, sickness absence (Karasek & Theorell, 1990). However, research on interaction effects is an ongoing area. The following are possible interaction effects in relation to sickness absence:

- High job demands and low autonomy/participation
- High job demands and low collegial support or low support from the manager
- Low autonomy or participation and an ongoing reorganization⁵
- Negative life events (e.g. divorce) and job insecurity



Autonomy

Corresponding concepts in the research literature

Job autonomy, job control, work time control, decision latitude.

Definition and background

Autonomy is the ability to act with a sense of control, perceiving choices and having decision latitude. In organizational psychology, autonomy is usually measured as various ways an individual can control aspects of their work, such as their time and the way in which they approach their duties.

Researchers have measured autonomy in relation to a variety of outcomes, such as stress, health, motivation, creativity, and innovation.

The relevance of the factor for predicting sickness absence

Autonomy is a strong factor in predicting sickness absence. Presumably, a high degree of autonomy will impart a sense of control under great stress. In the meta-analysis by Duijts et al. (2007) the operationalization decision latitude – the extent to which employees can approach their tasks as they see fit, use their skills as they think best, etc. – has a strong effect on sickness absence. Both Duijts et al. (2007) and Miraglia et al. (2016) use the operationalization job control. Employees with a high degree of control over their work are able to handle stress and work load by, for instance, opting out of or postponing tasks. Control is a well-known predictor of various types of illness, such as stress and exhaustion (Karasek & Theorell, 1990). High levels of perceived control correlated with reduced sickness absence according to a meta-analysis by Spector (1986), and autonomy in specific tasks continued to correlate with both the frequency and length of sickness absence (Farrell & Stamm, 1988).

The relevance of the factor for predicting employee turnover

Autonomy is not listed as a significant factor in the meta-analyses in the field for predicting turnover. However, a longitudinal study showed a link between autonomy and turnover (Liu et al., 2011), and similarly, a meta-analysis by Spector (1986) showed how high levels of perceived control correlate with a decrease in employee turnover. However, most studies in this field examine the relationship between autonomy and turnover intentions – a person's intention to leave their job – a variable that in turn is strongly associated with turnover. Autonomy, for example, has been shown to correlate with affective well-being, which in turn includes turnover intentions. This is demonstrated in a review of the research field by Shvets (2018).

Compared to a factor such as job satisfaction, however, autonomy seems to have a relatively low unique predictive ability on turnover intentions. Autonomy also interacts with the design of the work according to studies involving other outcome

variables. When the work is complex and stressful, autonomy has a strong predictive ability, for example, for job satisfaction, motivation and creativity. When the work is routine and standardized, autonomy does not have the same predictive strength. Nei et al. (2015) show in their meta-analysis that autonomy (operationalized with the term “job control”) has an effect on employee turnover among nurses, but the effect is not as significant as leadership and commitment (operationalized with the term “organizational commitment”).

Other factors predicted by autonomy

Burnout. Several meta-analyses have investigated the relationship between autonomy and burnout, or “emotional exhaustion” as it is sometimes also called. Kim & Stoner (2008) point out that autonomy has a direct reducing link on employee turnover, but found no effects on burnout. However Lee et al. (2013) did. They found a negative correlation between autonomy and emotional burnout, with emotional burnout decreasing with increasing autonomy. Shirom et al. (2010) were able to show in a study of 890 specialist doctors how autonomy affects (mediates) the effect of work load on emotional burnout.

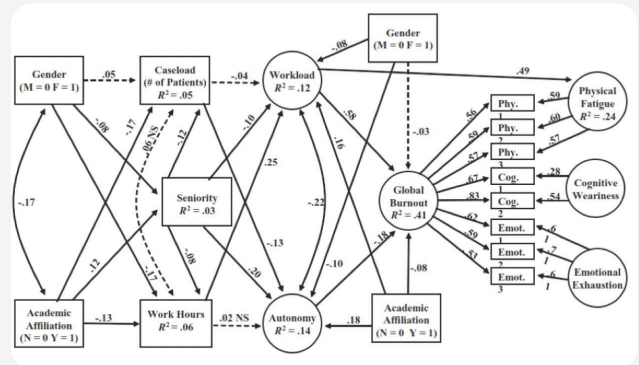


Figure 4

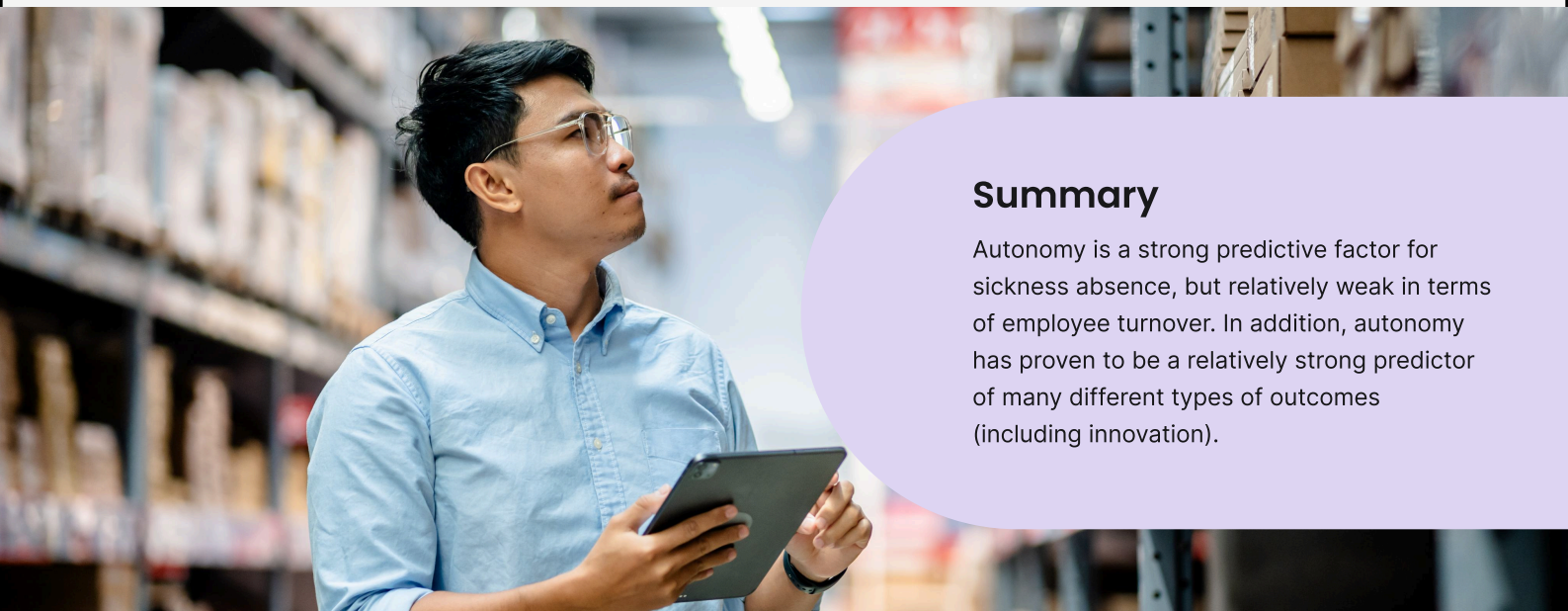
Shirom et al., 2010. Autonomy acts as a mediating factor. When the number of patients increases, autonomy decreases (-.13). Autonomy is also negatively related to emotional burnout – when autonomy decreases, emotional burnout increases (-.18). In total the predictors autonomy and work load explain 41% of the measured variance in emotional burnout ($R^2 = .41$).

Innovation behaviors. Hammond et al. (2011) show in their meta-analysis that there is a strong link between autonomy and individuals’ innovation behaviors. This is probably because employees have a greater degree of freedom to choose what is best or most interesting for the situation. Autonomy has been linked both to the creation and testing of new ideas (Krause, 2004) and to the realization of innovations (Axtell et al, 2000).

Other. In the meta-analysis carried out by Spector (1986) autonomy has also been shown to have a positive link to job satisfaction, work performance, dedication and motivation. It reduces emotional stress, role stress and physical symptoms.

Summary

Autonomy is a strong predictive factor for sickness absence, but relatively weak in terms of employee turnover. In addition, autonomy has proven to be a relatively strong predictor of many different types of outcomes (including innovation).





Personal development

Corresponding concepts in the research literature

Skill discretion, learning, personal development, human development, organizational learning culture.

Definition

Personal development is usually defined as the opportunities available within the organization in terms of development of expertise of work-related knowledge, skills and ability, but also personal efficiency, teamwork, and leadership. In some cases, personal development at organizations can concern work-life balance, time management, stress management, and psychological counseling. Another definition of personal development in the workplace is personal learning, i.e. that the tasks themselves stimulate the development of workers' expertise.

The relevance of the factor for predicting sickness absence

Overall, the research literature is too weak to draw any conclusions. Personal development is not mentioned in meta-analyses, neither in relation to the outcome sickness absence or any other type of voluntary absence. Few studies have looked at this factor independently, but have often included it along with autonomy.

Two studies found a correlation between skill discretion (being able to use expertise freely in the performance of duties; this also includes being able to learn new things) and sickness absence (Christensen et al., 2005; Labriola et al., 2006), but skill discretion is conceptually close to autonomy. One study found no correlations (Eriksen et al., 2006).

Presumably, personal development is too narrow a factor in itself to serve as a predictor of sickness absence. The evidence is also relatively weak, as there are only individual studies that also tend to contradict one another.

The relevance of the factor for predicting employee turnover

Even here the state of the research is too weak to draw any conclusions about the factor's relevance for employee turnover. Personal development is not found in any of the meta-analyses in the field. Nor did the literature search find any studies linking the factor with turnover. However, a so-called "organizational learning culture" has been shown to decrease turnover intentions (Egan et al., 2004).

Other factors predicted by personal development

Depressive symptoms. Theorell et al. show in a review article on the research field from 2015 that there is evidence, but in a limited literature, for limits on skill discretion possibly leading to depressive symptoms. However, it is possible to argue that precisely the term skill discretion mainly involves a person's autonomy, and it is known that autonomy correlates with emotional stress. Whether personal development as an individual factor is related to depressive symptoms remains unknown.

Job satisfaction and knowledge sharing. According to Egan et al. (2004) organizational learning culture as a factor has a relationship with job satisfaction, which is the specific term they use. According to the same study, an organizational learning culture was related to employees' motivation to spread knowledge within the organization.

Summary

A person's expertise has proven to be an important factor for creativity and innovation (e.g. Mumford et al., 2002). Opportunities to develop expertise, however, are probably a phenomenon that is already captured by autonomy, job satisfaction and supportive leadership. Development opportunities is not described as a unique concept in the key meta-analyses in the areas of sickness absence and employee turnover, and barely appear in other meta-analyses or summary articles.



Leadership

Corresponding concepts in the research literature

Leadership, Leader-Member Exchange, Formative or Transformational Leadership.

Definition

Leadership is a very broad concept with many definitions, theories and measurement scales. Classic leadership models such as situational leadership (Hersey & Blanchard) and path-goal theory of leadership emphasize the combination of controlling and supportive leadership, while more modern models such as transformational leadership theory (Bass, 1999) describe the charismatic and motivating role of leaders. A recently published meta-meta-analysis of around 3,300 leadership studies has shown that the leadership theory LMX plays a central role in leaders' impact on performance and motivation/engagement (Gottfredson & Aguinis, 2016). LMX, or Leader-Member-Exchange, is a model that describes the work relationship between the leader and the employee. If this is of high quality, commitment, loyalty and work performance is built up over time.

The relevance of the factor for predicting sickness absence

The types of leadership that have been evaluated in the research literature in relation to sickness absence are:

- **Considerate leadership.** Considerate leadership is a dimension in a classic (and simple) leadership theory – situational leadership theory – that identifies two dimensions of leadership: task-oriented and relationship-oriented (considerate) leadership. A considerate leader is “people-oriented”: they care about their employees’ well-being and are available and emphatic.
- **Supportive leadership.** Supportive leaders help and coach employees in their duties. Supportive leadership is similar to considerate leadership, but more focused on the work itself and less focused on employee well-being. Coaching leadership is a modern form of supportive leadership. However, overall, leadership has a weak effect on sickness absence. Miraglia & Johns’ (2016) meta-analysis showed leadership to be a distal factor for sickness absence without its own direct effect. Leadership was mediated instead by job satisfaction and health. Kuoppala et al. (2008) argue in their meta-analysis that the effect is moderate, but the quality of their data (correlation studies) is too weak to be able to draw such a conclusion. Supportive leadership had a stronger effect on sickness absence compared with considerate leadership according to Kuoppala et al. (2008).



The relevance of the factor for predicting employee turnover

Leadership has a significant but weak predictive relevance for turnover according to a meta-analysis by Griffeth et al. (2000). Putting aside anecdotes about “quitting because of the manager”, other factors seem to be stronger in comparison, for example organizational commitment, according to the meta-analysis. The manager can obviously have an indirect impact on these factors, but is strictly speaking still a distal factor. Furthermore Griffeth et al. (2000) demonstrated that measuring general satisfaction with leadership has a lower predictive validity compared to measuring the work relationship between the employee and leader, that is, using the measurement scales that measure LMX theory. Research over the past five to seven years has also shifted towards measuring considerate leadership rather than general perceptions of the manager’s behaviors. Nei et al. (2015) showed in a meta-analysis that supportive, communicative leadership has a significant effect on employee turnover among nurses.

Other factors predicted by leadership

Innovation. In a meta-analysis of different factors that predict employees’ innovation behaviors, Hammond et al. (2011) point to three aspects of leadership that strongly affect the ability of employees to be innovative. (1) The degree of support from managers/leaders, which increases employees’ commitment to their tasks, and in turn their willingness to try new ideas to solve them. Support from the leader is also assumed to increase the employee’s internal motivation, which itself has been linked to creative behaviors (e.g. Amabile et al., 2004). (2) Trusting and supportive work relationships between leaders and employees (LMX theory) are also positive for innovation behaviors, partly because the employees are given greater autonomy under such conditions. Finally, transformational leadership is linked to innovation behaviors among employees in the organization.

The results produced by Hammond et. al. are also supported in a similar meta-analysis by Rosing et al. (2011). The latter paper weighted 31 studies that together were able to demonstrate positive links between transformational leadership and employees’ innovative behaviors and their creativity. Trusting and supportive work relationships (LMX) were also positively related to employees’ innovation behaviors.

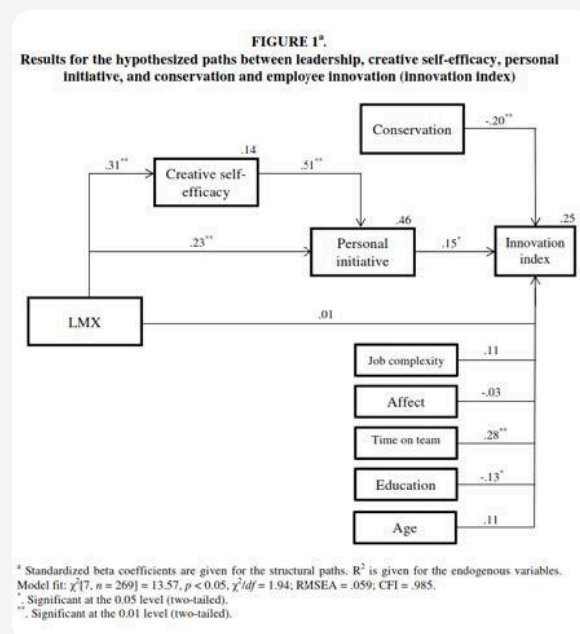


Figure 5

Denti (2013). A structural equation model that describes the relationship between a leadership based on trusting work relationships (LMX), individuals’ initiative and their innovation index (the number of new products, product improvements, patents, patent applications, research papers, white papers). Employees who take initiative to a higher degree have a higher innovation index (.15). Trusting work relationships with the leader covary positively with higher personal initiative (.23). Leadership is indirectly related to the innovation index, via personal initiative, which acts as what is known as a mediator variable. Furthermore, even if there is a direct relationship between leadership and personal initiative (.23), leadership is also indirectly related, through creative self-efficacy. Trusting work relationships covary positively with employees’ belief in their creative ability (.31), which in turn is positively related to personal initiative (.51).



Commitment. Leader-member exchange (LMX) is linked in a meta-analysis of about 50 studies undertaken by Ilies et al. (2007) to increased commitment among employees. This relationship is described as moderate in strength. In the meta-analysis, organizational citizenship behaviors (OCB) were used to conceptualize commitment. The same relationship was found in a meta-analysis by Gerstner and Day (1997), but these researchers used organizational commitment as their conceptualization.

Other. According to a meta-analysis by Gerstner and Day (1997) that assembled 164 studies, leadership (LMX) has positive effects on individuals' job performance, satisfaction with leadership, job satisfaction and commitment. Employees with good work relationships with their managers also reported less role conflict and role ambiguity, and had less intention to resign (turnover intentions). LMX alone was not strong enough to predict actual employee turnover in this meta-analysis. Leadership is probably a distal factor in the causal chain leading to the decision to leave a job, with, for instance, job satisfaction taking the prominent role.

Summary

Although other factors may be stronger than leadership, the factor has still proven to be viable for a meta-analysis. It is predictive for many outcome variables, such as motivation, commitment and innovation.



Meaningfulness

Corresponding concepts in the research literature

Meaningful work, meaning at work, sense of coherence.

Definition

Meaningful work is work that has a strong and positive meaning for individuals. This meaning has both hedonistic and eudaimonic aspects, or put another way, meaningful work is both pleasurable (hedonism) and contributes to a sense of purpose and development (eudaimonism). In the research literature, meaningful work has not been particularly central as a factor, because it is a relatively narrow and distal factor whose predictions of outcomes such as performance, sickness absence, and turnover intentions are dominated by the proximal factors of job satisfaction and commitment.

The relevance of the factor for predicting sickness absence

Meaningfulness at work does not appear as a predictor in the meta-analyses available in the field. However, there is a large, well-organized study that links 61,302 participants' experiences of meaningfulness with long-term sickness absence lasting more than three weeks (Clausen et al., 2014). Rugulies et al. also found a higher level of sickness absence among 890 social workers who experienced low meaning in their work. However, Kivimäki et al. (2000) found in a longitudinal study that low meaningfulness at work was only related to self-reported absence among women, not men. Meaningfulness probably has a medium-high contribution in predicting sickness absence. The evidence, however, is weak compared to the other predictors because the concept is not picked up and analyzed systematically in meta-analyses.

The relevance of the factor for predicting employee turnover

There is little research to show that meaningfulness predicts turnover through a direct correlation. Nor is the concept mentioned in the heavy meta-analyses in the field. One study has been able to link employees' perceptions of meaningfulness with their intentions to leave their job and the number of days of absence, which in themselves are predictors of turnover.

Other factors predicted by meaningfulness

Commitment. In a separate study of Chinese employees in the telecommunications field undertaken by Albrecht & Su (2012), meaningfulness was placed as a factor that mediates managers' feedback on the employees' performance (distal factor) in terms of their mood and feelings of loyalty to the organization. Mood, feelings of loyalty and autonomy then had direct correlations with commitment. Meaningfulness had no direct correlation with commitment in.

Meaningfulness is
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proximal factors.

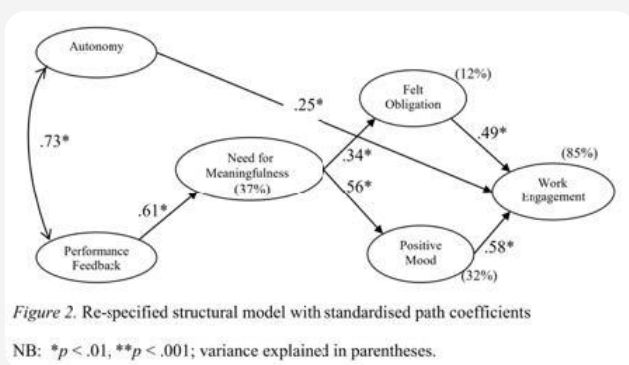


Figure 6

Albrecht & Su, 2012. Meaningfulness proved to be a mediating factor between the manager's feedback on work performance and the employee's mood and feelings of loyalty. Together with autonomy, mood, and feelings of loyalty explain 85% of the variation in commitment in this sample.

Adaptability at work. A separate study by Harry & Coetzee (2013) investigated how the experience of meaningfulness at work (conceptualized as sense of coherence) covaries with employees' adaptability. Adaptability was defined as the ability to adapt to career change. The sample consisted of 409 employees at a call center, mainly in South Africa.

Summary

Overall, meaningfulness is a factor that covaries as an intermediate step with many other relevant factors that predict relevant outcomes such as employee turnover and sickness absence, commitment, and job satisfaction, but probably has a weak effect on its own.



Participation

Corresponding concepts in the research literature

Participative decision making, shared decision making, participation enhancing work design, organizational citizenship behavior.

Definition

Participation is a very broad concept in the research literature. Two definitions dominate the research field:

- **Organizational Citizenship Behavior (OCB).** OCB measures the individual's participation in the organization by assessing whether the individual is a helpful citizen within the organization and a loyal ambassador outside the organization.
- **Participative decision making.** This measures the individual's degree of participation and influence on decision-making processes (may participate in decisions, receives relevant information, etc.).

In general OCB is a more widely used concept in organizational research. It is possible to find meta-analyses showing OCB's effects on a number of different outcomes: financial results, individual performance, etc.

The relevance of the factor for predicting sickness absence

Participative decision making had a strong correlation with sickness absence in the Duijts et al. (2007) meta-analysis. They examined the concept of decision authority, which describes the extent to which decision making within an organization is distributed among employees, known as decentralized decision making. OCB has a moderate correlation with the broader operationalization of absence, absenteeism. Spector's meta-analysis (1988) looks at the relationship between participative decision-making and absenteeism. The meta-analysis finds no link, but is also only based on a single study.

The relevance of the factor for predicting employee turnover

Both participative decision making and OCB are related to employee turnover (Heavey et al., 2013). As predictors, they are roughly equally as strong according to the meta-analyses in the field.

Other factors predicted by participation

Performance at work. There are a number of meta-analyses that examine the role of participation for employees' work performance. Nielsen et al. (2009) show in their meta-analysis of a total of 39 studies how participation is strongly linked to performance at work. Participation was defined as organizational citizenship behaviors in this compilation study. Performance was defined as employees' goal achievement. It is thought that employees can more easily achieve their goals if they have involved (and therefore helpful) colleagues around them. Helping behaviors also increase the number of contacts and therefore the exchange of information more generally, which in turn is critical for team performance.

Counterproductive work behaviors. A meta-analysis by Dalal (2005) showed that participation (organizational citizenship behavior) is negatively related to employees' counterproductive work behaviors. When OCB increases, counterproductive work behaviors decrease.

Summary

Participation is a moderate predictor of employee turnover and a strong predictor of sickness absence. Participation is also linked to job performance in many studies. The research support is strong, as participation is included in the majority of meta-analyses in the field.



Work situation

Corresponding concepts in the research literature

Work strain, work load, job demand, role clarity, role overload, role conflict, job scope, justice/fairness, role stress.

Definition

The work situation describes the work itself, from the nature of the tasks and their psychological and physical demands, the degree of work load, the perception of justice, to the structures that exist around the work (e.g. reward systems). Other aspects included in the work situation are more problem- or illness-oriented factors, such as the degree of role conflict and work-related stress. These aspects are described in more detail below.

The relevance of the factor for predicting sickness absence

Depending on what one chooses to focus on, the factor may have a high relevance for sickness absence.

- **Work load.** Work load, in the form of a high burden of work, overtime or pressure of time, has a moderate correlation with sickness absence in two separate meta-analyses. It is probably a strong but distal factor (Miraglia & Johns, 2016). A high work load leads to psychological illnesses such as stress and exhaustion, which in turn lead to sickness absence.
- **Job insecurity.** A high level of job insecurity is characterized by unstable employment conditions (e.g. employment on an hourly basis, probationary employment) or where there are cuts or restructuring. This has a strong correlation with sickness absence in the meta-analysis by Miraglia & Johns (2016).

- **Justice.** The perception of justice is the extent to which an organization rewards and involves its employees in accordance with fair procedures (procedural justice). Justice has a weak correlation with sickness absence according to Duijts et al. (2007).

- **Psychological stress.** This is a more general term for stress in the workplace, which has been proved to have a correlation with both (1) the amount of time people are absent when sick and (2) the frequency of commenced sickness absences (Farrell & Stamm, 1988).

The relevance of the factor for employee turnover

Depending on what one chooses to focus on, the factor may have a high relevance for employee turnover.

- **Work load and stress.** Work-related stress derives from a feeling of being overloaded that affects mental and physical well-being. This factor is linked to turnover, but more weakly than role clarity and role conflict (Griffeth et al., 2000). A meta-analysis of the factors affecting the turnover intentions of American child welfare workers demonstrated a strong relationship between stress/symptoms of exhaustion and turnover intentions (Kim & Kao, 2014).
- **Justice.** In recent meta-analyses, justice has a robust (in other words frequent) but relatively weak correlation with turnover. It is about half as strong as job satisfaction, a third as strong as organizational commitment, and a quarter as strong as turnover intentions. However, perceived justice was found to have a strong effect size on turnover intentions in the meta-analysis of what affects turnover intentions among child welfare workers (Kim & Kao, 2014).

- **Role clarity and role conflict.** Role clarity describes the clarity of the role, tasks, expectations from management, customers and coworkers, and overall mandate and responsibilities. The factor has a link to employee turnover in the meta-analysis carried out by Griffeth et al., 2000. Role conflict can be described as the conflict that arises when an individual is given different and contradictory roles simultaneously, or when the responsibilities of the role overlap with other work roles or groups. This leads to loyalty and priority problems and by extension stress. The factor has a link to turnover in the meta-analysis carried out by Griffeth et al., 2000. Nei et al. (2015) show in their meta-analysis that “role tension”, “job complexity” and “job strain” all have an effect on employee turnover among nurses, but are not as significant as leadership and commitment (they used organizational commitment as a conceptualization of commitment). A strong direct effect of “role stress” on turnover intentions has also been demonstrated (Kim & Stoner, 2008).

Organizational citizenship. Chang et al. (2007) show in their meta-analysis that there is a link between employees’ experiences of emotional strain and their participation in the organization. Emotional strain is negative feelings and reactions, such as frustration, anger and anxiety, originating from work stress. Organizational citizenship behaviors were used to measure participation. Increased emotional strain reduces participation in the organization.

Justice. Cohen-Charash & Spector examined the link between perceived justice and various factors in a meta-analysis of 190 studies. Employees’ performance at work and counterproductive behaviors are most strongly linked to so-called procedural justice (the extent to which an organization rewards and involves its employees according to procedures that are in themselves perceived as fair). Employees’ participation is most strongly linked to distributive justice (the extent to which rewards are perceived to be fairly distributed), while job satisfaction is linked to all perceived justice.

Other factors predicted by the work situation

Burnout. A study by Shirom et al. (2010) shows how work load and autonomy work together to predict burnout among doctors. This is also described in figure 4 in this paper. Another study examined stress in the professional role, together with autonomy, and its impact on burnout. Stress in the professional role had a strong direct effect on burnout. Stress in the professional role also had an indirect effect on people’s intentions to resign from their jobs (Kim & Stoner, 2008).

Depressive symptoms. There is some, but limited, evidence that a lack of work justice leads to depressive symptoms. This is according to a literature review by Theorell et al. (2015).

Individual innovation . A positive working environment in general terms was shown in a meta-analysis to be strongly linked to increases in individuals’ innovative behaviors (Hammond et al. 2011).

Summary

There is widespread support for various aspects of the work situation being correlated with a number of different factors, such as sickness absence and employee turnover, stress and symptoms of exhaustion, as well as other outcomes such as stress.

**Work situation is linked
to sickness absence
and turnover through
stress and workload.**



Job satisfaction

Corresponding concepts in the research literature

Job satisfaction, work satisfaction.

Definition

Job satisfaction is a classic, well-researched concept that has been defined in various ways by researchers in the literature. In addition to the employees' feelings towards their job, one can choose to also include employees' thoughts and attitudes. There has also been the issue of whether job satisfaction should measure the employee's overall appreciation of their work (general satisfaction, generally positive feelings, etc.) or whether various contributory factors that may predict job satisfaction should be measured: appreciation, communication, employee relationships, work tasks, development opportunities, the organization's policies and processes, leadership, opportunities for promotion.

The relevance of the factor for predicting sickness absence

Job satisfaction (if measured as such) has a strong predictive relevance for sickness absence. It seems to be a proximal variable, i.e. a variable that is closely linked to sickness absence in a supposed causal chain of factors (Miraglia & Johns, 2016). The factor has a strong position in other meta-analyses, such as Duijts et al. in 2007. Farrell & Stamm (1988) have also demonstrated correlations between job satisfaction and sickness absence, both in terms of frequency (the number of new sickness notifications) and the amount of time absent. work tasks, development opportunities, the organization's policies and processes, leadership, opportunities for promotion.



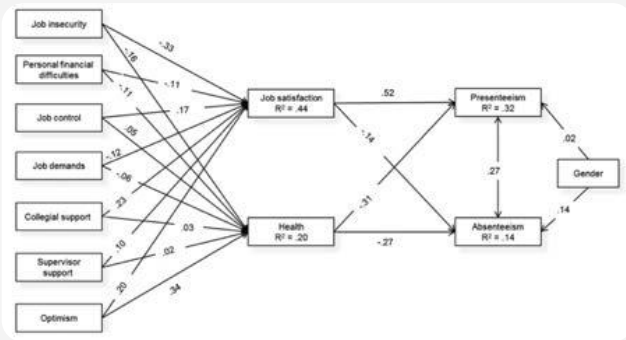


Figure 7

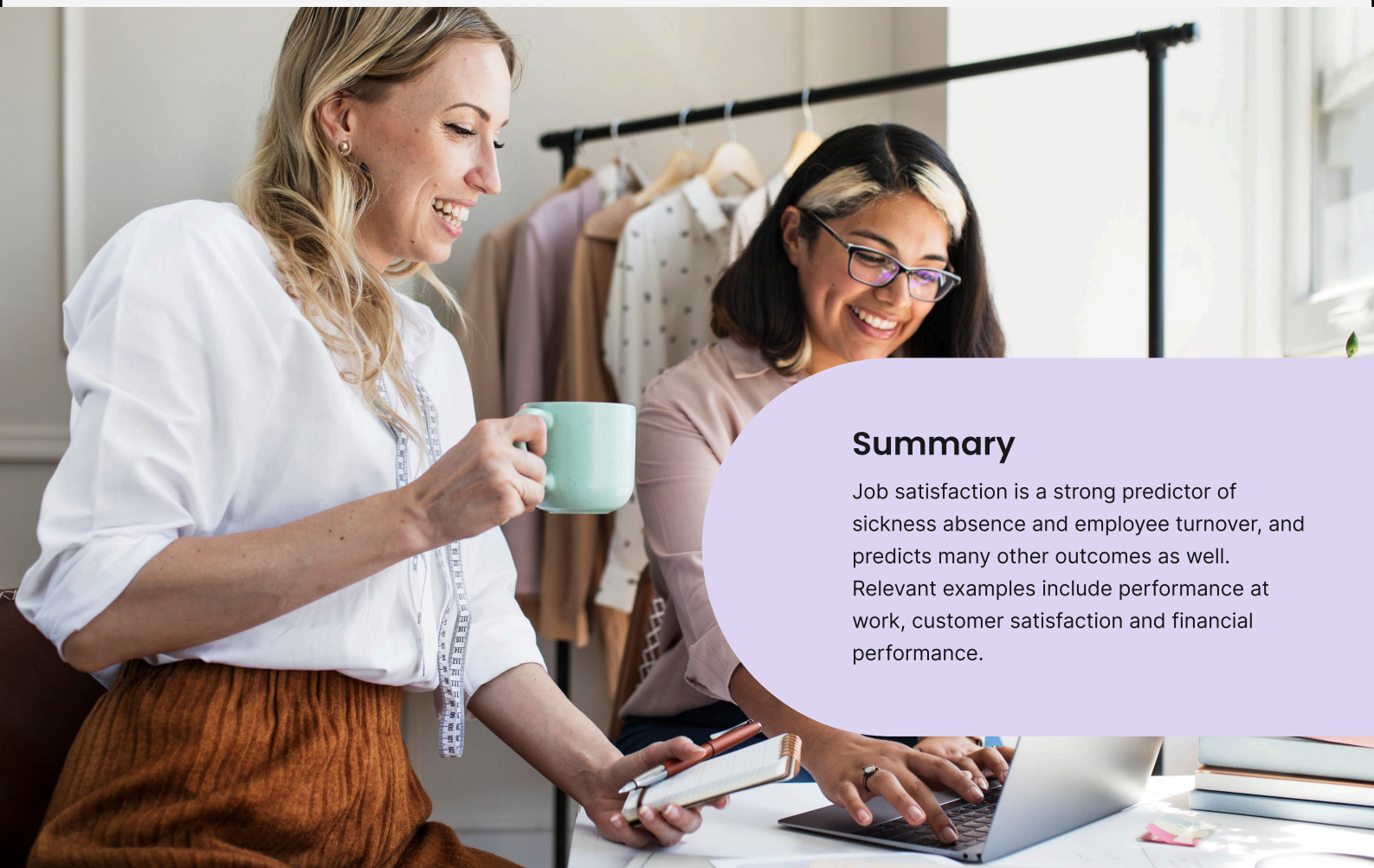
Miraglia & Johns (2016). A structural equation model that describes the measured relationships between predicting factors on the far left, mediating factors (including job satisfaction) and outcome factors on the right. Gender was used in the model as a control variable. Job satisfaction is not as strong a predictor of sickness absence as the general state of health (in the model: Health) but it is a stronger predictor than, for example, work load, control at work, collegial support and support from the manager or leader.

Other factors predicted by job satisfaction

Performance at work generally. Harter et al. (2009) compiled 199 studies on job satisfaction in their meta-analysis. This large amount of data spanned over 44 types of industries in 25 countries. Job satisfaction could be linked to productivity, customer satisfaction, quality and safety (e.g. patient safety). Two financial measures were considered and these also appeared to be related to job satisfaction: sales and profitability.

Williams et al. (2006) examined 203 studies of pay level satisfaction in a meta-analysis. This satisfaction is strongly positively related to performance at work, and negatively related to various forms of negative outcomes, such as absence from work, turnover intentions and actual termination.

Emotional exhaustion/burnout. A study by Lee et al. (2013) demonstrated a negative association between job satisfaction (conceptualized as positive work attitudes) and burnout.



Summary

Job satisfaction is a strong predictor of sickness absence and employee turnover, and predicts many other outcomes as well. Relevant examples include performance at work, customer satisfaction and financial performance.



Engagement

(Organizational commitment)

Corresponding concepts in the research literature

Employee engagement, organizational commitment, job embeddedness, job involvement

Definition

Organizational commitment is the psychological link an employee feels with their organization. Employees with high commitment accept the organization's vision and goals and strive to achieve them. Over the years, researchers have examined different facets of organizational commitment, but the consensus is that the strongest component of commitment is the emotional aspect, i.e. affective commitment: the feeling of dedication and caring.

The relevance of the factor for predicting sickness absence

Organizational commitment is a moderate but robust (well-tested) predictor of both sickness absence and absence from work, as it has occurred in several meta-analyses (Cohen, 1991; King, 2002) and heavy prospective studies (Clausen, 2014: 2015). Clausen et al. (2015), for instance, were able to demonstrate an effect from organizational commitment and long-term sickness absence over three weeks in a large sample of 61,302 observations. Cohen showed that employees who are uninvolved are not as loyal to their employers (Cohen, 1991), which may explain the link. Both job involvement and commitment were shown to strongly discourage sickness absence in a meta-analysis by Farrell & Stamm (1988). Harter et al. (2009) also see a strong connection between employee engagement and both sickness absence and employee turnover in their meta-analysis.

The relevance of the factor for predicting employee turnover

Jiang et al. (2012) took a different approach to commitment and described the term job embeddedness. This term attempts to capture how strong a connection a person has to their work, both during working hours and outside, through various links to colleagues, how well the employee feels that they fit in at work, and how much they think they would sacrifice if they were to leave. People with high job embeddedness have significantly lower turnover intentions as well as actual turnover. It is worth pointing out that the effect of job embeddedness on these result variables goes beyond the effect you might expect from job satisfaction, as Jiang et al. introduced job satisfaction as the control variable in their meta-analysis.

Other factors predicted by commitment

Productivity. Harter et al. (2009) in their meta-analysis link employee engagement (which overlaps in a number of ways with job satisfaction) to a number of different factors related to productivity. Here, employee engagement could be related to increased customer loyalty, quality, safety and general productivity. There continued to be a weak but positive relationship with profitability. However, the weakness of this relationship may be linked to the fact that profitability is affected by a variety of other factors, and not simply employee engagement.

Organizational commitment. In a meta-analysis by Christian & Slaughter (2007) commitment (work engagement) was defined as follows: a positive, self-reinforcing work-related state of mind characterized by energy, dedication and absorption in the work. Commitment is thus described in this way of defining the concept as a state of mind characterized by flow. The researchers also found evidence that energy, dedication and absorption are strongly correlated with each other, and that the three factors work together to predict a person's organizational commitment.

Physical well-being and health.

Christian & Slaughter (2007) also show a link between engagement (a state of mind characterized by energy, dedication and absorption) and an employees' physical well-being and health.

Meaningfulness. According to a single study by Coetzee & Oosthuizen (2012) that uses a sample of university students, commitment to studies predicts both meaningfulness and general satisfaction among a sample of university students.

Summary

Commitment is a key factor in organizational research in general with a strong predictive ability for many types of outcome measures. But commitment is also somewhat difficult to define, as there are multiple definitions available. Job embeddedness, as an example, is a complex factor that also contains elements of the other factors. But even here the link to outcomes is strongly predictive, particularly for employee turnover.





Team Spirit

– Collegial support

Corresponding concepts in the research literature

Cohesion, cohesiveness, social integration, teamwork processes.

Definition

Team spirit, cohesion, is the “glue” that holds a group of people together in the workplace. It is the feeling of being together as a team: pride, mutual appreciation, and commitment. Another aspect of team spirit is the experience of support from colleagues, known as collegial support.

The relevance of the factor for predicting sickness Absence

Collegial support is an important component of team spirit and is a moderate predictor of sickness absence according to Miraglia & Johns (2016). However, this meta-analysis showed that collegial support acts as a distal predictor and is mediated by a person's job satisfaction for sickness absence.

The relevance of the factor for predicting employee Turnover

Team spirit has a strong predictive ability for turnover. It appears in four key meta-analyses in the field and is approximately as strong as participation and job satisfaction (e.g. Hancock et al., 2017; Heavey et al., 2013; Griffeth et al., 2000). Nei et al. (2015) describe team cohesion in their meta-analysis as an important factor for turnover, but the factor is not as central as, for example, leadership and organizational commitment. Kim & Stoner (2008) also show how social support has a direct reductive effect on employee turnover.

Other factors predicted by team spirit – collegial support

Burnout. There is no evidence of social support having an effect on emotional exhaustion (Kim & Stoner, 2008). On the other hand, there is some, if limited, evidence that a poor social climate may increase depressive symptoms (Theorell et al. 2015).

Work performance. Evans et al. (1991) show in their meta-analysis that work groups with a “strong” team spirit perform on average 18% better. As further support for this tendency Hoigaard et al. (2006) demonstrate how athletes in groups with a stronger team spirit less often fall victim to so-called social loafing, a phenomenon in which people perform less well in a group than they would otherwise have done individually.

Processes in work groups/teams. LePine et al., in their meta-analysis from 2008, discuss team process factors, which they call teamwork processes. These processes may include exchanges between team members, the degree of cooperation, the sharing of the burden of work and coordination within a team. Such team processes lead, among other things, to improved productivity from the team and increased job satisfaction among team members.

Innovation in work groups/teams. A meta-analysis by Hülshager et al. (2009) collected 104 studies of groups' overall ability to innovate and the factors that predict such ability. Team spirit was shown to have a moderate to strong effect on teams' ability to innovate. Team spirit may create psychological safety, where individuals may question the way you do things, or find new ways to solve problems. Group members are also more willing to take risks when they know they will be supported by their colleagues.

Summary

Cohesion is a well-researched factor that has been associated with many different types of outcome measures, such as productivity, innovation, etc. The factor is represented in the key meta-analyses in the field in terms of sickness absence and employee turnover.

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