Does Happiness Add to Work Performance?

A Research Synthesis Using an Online Findings Archive

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ABSTRACT

Background: The 'happy productive worker' thesis (HPW) holds that the happiness of workers has a positive impact on their performance at work. As a result, increasing numbers of wellness programs are being implemented in the workplace, with the aim of heightening productivity.

Objectives: We seek to answer the following questions. (1) Does happiness really have a positive impact on work performance? If so, how strong is this impact? And how long does it last for? (2) Do the positive impacts on work performance differ across occupations? If so, which kinds of occupations benefit the most from these impacts? And does happiness produce similar impacts in the public sector as in the private sector? (3) Which component of happiness contributes most to positive impacts in the workplace: how well a worker feels most of the time (the affective component) or the degree to which a worker feels able to get what they want from life (the cognitive component)?

Method: We took stock of the research findings about the impacts of happiness (in the sense of life satisfaction) on the performance of workers that have been gathered in the World Database of Happiness. Three aspects of performance were considered: productivity, absenteeism and quitting the job (turnover). We drew on 33 studies that yielded 196 correlational findings over 26 countries and regions.

Results: Together, the findings provide strong evidence of the positive relationship between happiness and performance at work. (1) Longitudinal studies suggest that happiness has positive impacts on productivity at work, as measured at the micro-level using supervisor ratings of employee productivity and at the macro level as measured with national productivity. The average effect sizes of the longitudinal zero correlations of the productivity indicators that we investigated range from +0.21 to +0.38. The impacts of happiness on productivity at work are permanent. (2) The impacts of happiness on productivity at work differ across occupations and are strongest among people in leadership positions. Although the impacts of happiness on productivity are strong in the public sector, we were not able to compare them with those in the private sector. (3) Positive impacts in the workplace depend more on the affective component of happiness (how well a worker feels most of the time) than on the cognitive component (a worker's perception of getting what they want from life).

Keywords: absenteeism, affect balance, happiness, productivity, research synthesis turnover, work performance

1. INTRODUCTION

1.1 The 'Happy Productive Worker' Thesis

The idea that happy workers perform better in the workplace is known as the 'happy productive worker' (HPW) thesis. This thesis originated from the human relations (HR) movement in the early 1900s (e.g., Hersey 1932), and it is widely accepted today, as manifested in the discussions that are to be found in management books as well as in ongoing HR practices. As a consequence, employers expect happy workers to be (1) absent from work less often, (2) more productive when they are at work, and (3) less inclined to quit.

Current Focus on Job Satisfaction

A worker's 'happiness' is typically understood in terms of their job satisfaction, which is currently also referred to as their 'happiness at work'. Consequently, much research on job satisfaction has been undertaken, focusing not only on the determinants of job satisfaction, but also on the ways in which job satisfaction can be measured. Indeed, in April 2023, a search for 'job satisfaction' on Google Scholar yielded 3.7 million hits.

Alongside this academic work, job satisfaction is also a notable focus of the commercial operations that serve the HR departments of many workplaces. The resulting information is used to identify sources of discontentment as well as to assess whether an organization's performance could be boosted by ensuring that its workers experience job satisfaction. Even so, much of this applied research generally concentrates on the cognitive component. On the website 'businessjargons.com', for instance, 'job satisfaction' is described as 'the difference between employee's expectations and experience he/she derives from the job'.

By contrast, the HPW thesis originated in studies focusing on affective experience, such as Hersey's 1932 study *Worker's Emotions in Shop and Home: A Study of Individual Workers from the Psychological and Physiological Standpoint*. Studies in workplace 'morale' from the following decade also focused on affective experience, with the shift in emphasis from affective experience to cognitive evaluation occurring in the 1950s, as part of the wider 'cognitive revolution' in psychology (Miller 2003)

In this paper, we consider the results of the increased number of studies exploring the impacts of happiness on productivity at work – a shift that is part of the turn to 'happiness research' that has gained in popularity since 2000 (Veenhoven 2017). In this area of research, interest in affective experience revives.

Reasons for Considering Life Satisfaction

One reason to question the sustained focus on job satisfaction is that its impacts on workplace productivity tend to be not only variable, but also modest (e.g., Argyle 1989; Iaffaldano & Muchinsky 1985; Vroom 1964). This realization prompted Fisher (2003) to consider why so many scholars still believe there to be a strong relation between job satisfaction, on the one hand, and job performance, on the other.

Another fundamental reason for questioning the *status quo* is that appraisals of job satisfaction appear to be closely linked to appraisals of life satisfaction.

Longitudinal studies have shown that this so-called 'top-down effect' is much stronger than the contrasting 'bottom-up effect' (Headey et al. 1991; Weziak-Bialowolska et al. 2020). As such, then, the impacts of job satisfaction on workplace productivity appear to a great extent to be bound up with the impacts of life satisfaction on workplace productivity.

Indeed, in this context, it is not surprising that life satisfaction was found to be more strongly linked to productivity than job satisfaction (Jones 2006; Wright et al. 2002; Zelenski et al. 2008).

Similarly, one reason to question cognitive components of job satisfaction is that affective components have been observed as having much larger impacts on performance at work (e.g., Cropanzano & Wright 1999, 2001). Likewise, recent studies in positive psychology that focus on issues of job satisfaction as well as workplace performance—and that are often cited as supporting the HPW thesis—also emphasize the impacts resulting from affective components (e.g., Boehm & Lyubomirsky 2008).

1.2 Research Questions

In this paper, we explore these matters in greater detail by seeking answers to the following questions.

1. Does happiness in the sense of life satisfaction have a positive effect on work performance?

   If so

   - *How strong is this effect?*
   - *Is the effect stronger in the short term or over the long term? How long-lasting is it?*

2. If happiness fosters performance at work, do its effects differ across occupations?

   If so

   - *Which kinds of occupation benefit the most from the positive effects of happiness?*
   - *Do these positive effects differ between the public sector and the private sector?*

3. If happiness fosters performance at work, is there a difference in impact of its affective component (how well one feels most of the time) and the cognitive component (getting what one wants)?

1.3 Approach

For this research synthesis, we considered the available quantitative research findings about the relation between the happiness of employees and their performance in the workplace, by using the World Database of Happiness. We searched this finding archive for studies on the topic, then inspected the results in terms of their

applicability to the questions outlined above. We then sorted the final findings in terms of their indications of causal effects, from (1) same-time (cross-sectional) correlations to over-time (longitudinal) correlations to experimental correlations. We present our results in separate tables relating to these three types of correlations.

1.4 The Structure of This Paper

The remainder of this paper is organized as follows. We describe the key concepts and corresponding measures in Section 2. In Section 3, we explain how we used the World Database of Happiness for our research synthesis, describing its methodology for gathering and describing research findings. We then present our results and propose answers to our research questions in Section 4. We proceed to discuss our findings in Section 5, before finally drawing some conclusions in Section 6.

2. CONCEPTS AND MEASURES

In order to answer our research questions, we must first set out the key concepts. Accordingly, we first define the concept of happiness, then present measures that fit this concept, before defining key aspects of performance at work, then describing appropriate measures for those.

2.1 Happiness

In the widest sense, the word 'happiness' denotes 'a good life'. In this paper, however, we understand happiness in the more limited sense of 'satisfaction with life', following the definition proposed by Veenhoven (1984) that is at the basis of the World Database of Happiness on which we draw for this review.

2.1.1 Definition of Happiness

Veenhoven defined happiness as 'the degree to which an individual judges the overall quality of his/her own life-as-a-whole favorably'. In short, then, it ultimately means how much one likes one's own life. As such, 'life satisfaction' is a synonym for 'happiness', although it is important to distinguish satisfaction with one's life-as-a-whole from satisfaction with specific domains in life, such as satisfaction with one's marriage or satisfaction with one's work. What is more, satisfaction with one's life-as-a-whole must also be distinguished from momentary moods. See Veenhoven (2020) for a more detailed analysis of differences between happiness and wider notions of wellbeing.

In this sense, happiness is a subjective phenomenon that can be experienced only by individuals. An organization cannot be happy in this sense, only their members can.

Components of Happiness

In assessing how much we like the life we live; we draw on two main sources of information: (a) how well we feel most of the time, and (b) the extent to which we perceive to get what we want from life. Veenhoven (1984) discusses these sources of information as fundamental 'components' of happiness: the *hedonic level of affect*, on the one hand, is the affective component of happiness, while *contentment*, on the other hand, is the cognitive component of happiness.

The *hedonic level of affect*, then, is the degree to which positive affective experiences outweigh negative affective experiences, which is also referred to as the 'affect balance'. A person's hedonic level of affect can be assessed over different periods of time – for an hour, a week, or a year, for instance, as well as over a lifetime. In this paper, our focus is on the 'characteristic' hedonic level of affect – this assesses averages over longer periods of time, such as months or years.

By contrast, *contentment* is the degree to which we perceive to get what we want from life. This very concept presupposes that an individual has developed conscious wants, has formed ideas about their realization, and is able to question whether they are living their life in accordance with them. As such, this concept cannot apply to babies.

Although these two components are typically related, they do not always go together: we may feel good most of the time, while being far from getting what we want in life, as is often the case in students. Similarly, even though we have achieved our goals, we may still feel miserable, as has happened in some famous movie stars.

The effects of these two components on an individual's satisfaction with life-as-a-whole can differ, but research has shown that our overall happiness primarily depends on how well we feel most of the time (Kainulainen et al. 2018), as visualized in Figure 1.

2.1.2 Measurement of Happiness

Because happiness is something that most people have on their minds, happiness can be measured by questioning. As such, various modes of questioning have been employed: direct questions and indirect questions, open questions and closed questions, as well as one-time retrospective questions and repeated questions that are posed several times over a certain period. Some examples of commonly used questions follow below.

- Question on overall happiness:

  Taking everything together, how happy would you say you are these days?

- Questions on hedonic level of affect (affect balance):

  Would you say that you are usually cheerful or dejected?

  How is your mood today? (Repeated for several days)

- Questions on contentment:

  How important are each of these goals for you?

  How successful have you been in the pursuit of these goals?

Not all of the questions that are used to gauge an individual's happiness fit the above definition. One example is the question whether you are happier than your peers of the same age, – an item on the much-used 'Subjective Happiness Scale' (Lyubomirsky & Lepper 1999). The main disadvantage to such a question, is that an you can feel happier than your peers, yet still be dissatisfied with your life, because you all are in a miserable situation. An additional point is that we generally do not know just how happy other people are.

The World Database of Happiness, on which we draw, makes use only of measures of happiness that have passed a check for face validity (explained here). In this respect, our research synthesis differs from the recent meta-analysis by Moscoso and Salgado (2022), which includes findings that have been obtained with measures of happiness that we have rejected.

2.2 Work Performance

2.2.1 Definition of Work Performance

Performance at work generally constitutes the successful execution of tasks and the outputs that an employee delivers from the inputs.

Aspects of Work Performance

A main aspect of performance is an individual's *productivity* on the work floor. Related aspects are an individual's *absence* from work, which implies that such an individual is less productive, as well as *quitting* the job (turnover), which typically involves an organization's loss of expertise.

2.2.2 Measurement of Work Performance

The abovementioned aspects of work performance can be measured in the following ways.

Measures of Productivity at Work

Productivity involves not only the quantity of the outputs, but also their quality. As such, some commonly used indicators are as follows.

- *Objective Indicators*

- Production counts: this includes objective quantitative production records, such as number of sales, number of academic publications, or success in sports competitions.
- Customer satisfaction: customers are often asked to rate their levels of satisfaction regarding the services that have been provided by employees. More fundamentally, customer satisfaction is also reflected in numbers of sales.
- Macro productivity estimates, such as Gross Domestic Product (GDP).

- *Subjective Ratings of Productivity at Work*
  - Supervisor ratings of work productivity: typically made in response to a question such as, 'Overall, how would you rate this employee's performance over the past year?' Next to such ratings of overall productivity at work there are also ratings of specific aspects of the employee's productivity, such as their communication with colleagues. Supervisor ratings often form part of periodic assessments.
  - Self-ratings of productivity at work: self-evaluations concern overall productivity as well as functioning on specific activities, such as the various efforts that an individual has made to help their organization be successful.

Measures of Absenteeism from Work

- *Objective Indicators*
  - Recorded absenteeism: weekly or monthly attendance records that are retained by organizations and used to assess whether employees have been absent from work, and, if so, for how long.
- *Subjective Indicators*
  - Self-reported absenteeism: this is typically measured by an employee with a question such as 'How many workdays did you call in sick last year?'

Measures of Leaving the Job **(***Turnover rate in an organization)*

- *Objective Indicators*
  - Actually, leaving one's job: this is measured using administrative data registering the voluntary withdrawals of employees from an organization, as confirmed by administrative personnel as well as the employees themselves.
- *Subjective Indicators*
  - Intention to leave (versus intention to stay): this is typically measured using questions asking whether an employee has been considering leaving their organization, and, if so, how strong their wish to leave is.

- Attempting to leave one's job: this is mainly measured using questions asking whether an employee has been attempting to leave their current job and move to a new job with a new employer.

3. METHOD OF THIS RESEARCH SYNTHESIS

We considered the available research findings about the relations between happiness and performance at work that have been gathered in the World Database of Happiness. Below, we explain not only how we gathered findings from that particular archive, but also how this system facilitated the presentation of these findings.

3.1 World Database of Happiness

The World Database of Happiness is an online 'findings archive', whose structure is presented in Figure 2. The archive holds electronic 'finding pages', which describe research findings in a standard format, using standard terminology. An example of such a finding page is given in Figure 3. Each page has a unique internet address, allowing pages to be presented in review papers, such as this one. The goal of the archive is to facilitate research synthesis. For an explanation of this technique, see Veenhoven et al. (2022).

To date (April 2023), the archive consists of some 30,000 finding pages. These can be sorted in various ways, such as by subject, by research method, and by the people who were studied. In this paper, we used its selection of findings on performance at work. As already intimated, the use of the World Database of Happiness implies that findings fitting the definition of happiness given above will be preselected.

3.2 Gathering Research Findings

Scientific publications on happiness are gathered on a continuous basis so that they can be considered for inclusion in the World Database of Happiness – a process that is described in detail here. We completed the standard search alongside an additional search that focused on the relation between happiness and performance at work. Of the 15,000 publications that have been included in the database to date, we selected those reporting empirical studies in which the relation between happiness and performance at work was assessed.

3.3 Studies Found

To date (April 2023), the World Database of Happiness includes 33 empirical studies exploring the relationship between happiness and performance at work. Together, these studies yielded 196 correlational findings.

People Investigated

Together, the 196 findings cover 26 different countries and regions, with a total number of 226,885 observations. The people who were investigated include the general populations of countries, as well as particular groups, such as students, patients, and employees working in specific occupations. With regard to the occupations, 26% of the findings concern social services professionals, 15% concern directors and managers, and 9% concern academics. The remainder are made up of workers on shop floors, salespeople, telephone operators, athletes, pilots, nurses, and other employees whose occupations were not reported. Of the various kinds of employees investigated, 35% were working in the public sector, while 15% were working in the private sector. The sectors of the other employees were not reported.

Research Methods Used

A total of 68% of the studies are purely cross-sectional, 18% are purely longitudinal, and 15% contain both cross-sectional and longitudinal findings. None of the studies adopted an experimental approach. A total of 47% of the studies generated pure zero-order correlations, 15% generated pure partial correlations, and 38% generated zero-order as well as partial correlations.

We summarize all of the studies that have been incorporated into this research synthesis in Table 1.

3.4 Format of This Research Synthesis

We took advantage of two recent innovations (a) The first is the availability of an online findings archive (the World Database of Happiness), which presents descriptions of research studies and results in a standard format, using standard terminology, on separate finding pages with unique internet addresses. (b) The second is the change in academic publishing that has occurred since the turn of the millennium, with research papers moving from printed paper copy to electronic text that can be read on screen, allowing links to online references to be inserted. This enables us to present research findings with a correlation coefficient or a plus or minus sign, while making the technical details available by means of links to the online finding pages. In this way, large numbers of findings can be presented in tables that are easy to peruse.

3.4.1 Presentation of the Findings in Tables

The structure of the tables in which we summarize the research findings is given in Table 2. All further tables in this paper follow the same format.

Research Design

Horizontally, we distinguished between research methods, including same-time correlations, over-time correlations, and experimental correlations. Vertically, we

distinguished between levels of analysis: at the micro level of individuals, at the top, and at the macro level of nations, at the bottom.

In all cases, the observed degree of association can be expressed by means of a zero-order correlation, such as the often-used Pearson correlation coefficient (r). Alongside such results from bivariate analysis, however, are a large number of results from multivariate analysis, in which the various effects of the possible intervening variables are controlled. These findings are expressed with statistics such as the partial correlation coefficient (rpc), the standardized regression coefficient (Beta), or the unstandardized regression coefficient (b). Some of the findings are based on Instrumental Variable (IV) analysis.

Notation

We reported the *direction* of the observed correlations by means of + and – signs, and we used 0 to denote the absence of a correlation. The strengths of the relationships are expressed by means of correlation coefficients ranging between –1 and +1, such as the above-mentioned r, rpc, and Beta. We do not report unstandardized regression coefficients (b) for strength size, because these differ in range and therefore cannot be compared in terms of their relative strength. The statistical significance ($p<.05$) is indicated by a sign or number **in bold**.

Further methodological differences are indicated in the tables as follows.

- We use '\' to present correlations of different indicators of the same variable in one study.
- We use '/' to present correlations obtained with different sets of control variables in one study.
- We use '|' to present correlations obtained from different lags of time in one study.
- We present a sign or number in shading when happiness was measured *after* indicators of work performance, in order to investigate the effect of earlier work performance on later happiness.
- We present findings in red if overall happiness was used as the happiness measure, in green if the affect balance measure was used, in blue if the contentment measure was used, and in yellow if the mixed effect measure was used (see also Section 2.1, Measurement of Happiness).

Links

A sign or number represents a correlational finding. As noted above, all the signs and numbers in the tables are linked to the corresponding finding pages on the World Database of Happiness. By clicking on them, the reader gets access to the online finding page that presents the full details about a particular research finding.

Empty cells

The reader will be surprised to see many empty cells in the tables and even an empty

column for experimental studies. This is to show blanks in current knowledge. This review serves not only to summarize what we know now, but also to identify what we do not know yet.

The advantages and disadvantages of this approach to research reviewing, as well as its differences from traditional research reviewing and meta-analysis, are discussed more fully in Veenhoven (2021).

3.4.2 Organization of the Findings: Across Tables

The observed correlations between happiness and the three aspects of performance at work are presented in the following tables: Table 2 shows the correlations with objective indicators of productivity, Table 3 shows the correlations with subjective ratings of productivity, Table 4 shows the correlations with absenteeism, and Table 5 shows the correlations with quitting. In the tables 2, 3 and 4 we present all the findings using + and – signs, which indicate the direction of correlation. In the Tables 2a, 3a and 4a we use the same format to present correlation coefficients, which informs the reader about the strength of the relationship. We found less information on strengths of the correlations than on the direction of the relationship, hence the a-variants of the tables 2, 3 and 4 are largely unfilled.

We next explored how these relationships between happiness and performance at work differ across time, occupations and sector in Table 6, Table 7, Table 8, and Table 9. Again these tables present all the findings using + and – signs, while the fewer comparable correlation coefficients are presented in variants of these tables such as on Table 9a., which show the observed effect strengths of zero-order correlations between happiness and each of the aspects of work performance, sorted by occupation and sector.

4. RESULTS

Having taken the preliminary steps above, we can now proceed to answer the research questions raised in Section 1.2.

4.1 Does Happiness Contribute to Work Performance?

We first review the observed relations between happiness and the three aspects of work performance. We then consider the probability that the correlations are driven by a causal effect of happiness on performance at work.

4.1.1 Happiness and Productivity at Work

*Relations with **Objective** Indicators of Productivity*

In Table 2, we present the available results; 24 findings are at the micro level of individuals, while 2 findings are at the macro level of nations.

Micro level. At the micro level, only cross-sectional studies are available. A total of 67% of the signs were positive, with 69% in bold, implying that productivity at work tends to be positively and significantly associated with happiness.

Among the negative associations, however, five of seven were statically significant. Specifically, these negative correlations concerned employees at a private call center, professional soccer players, and members of the British general public, whose productivity was measured by means of the wage they earned In this study, a null relation between the two variables was found.

Nonetheless, the positive correlations do not necessarily imply that happiness causes greater productivity at work, given that productivity at work can also boost happiness, in a synergetic process, which we discuss in greater detail in Section 5.3. An assessment of causality ultimately requires experimental studies, which are lacking as yet, as visualized by the empty columns in Table 2. Even so, the positive partial correlations as well as the IV analysis suggest that a spurious correlation is not likely to be involved.

Macro level. At the macro level, the findings concern the relations between changes in happiness and production efficiency in 20 European countries over a number of years. A positive correlation was observed, as shown in Figure 4. In this case, a causal effect is more likely to be involved, because there is a *correlated change* between the growth in productivity of nations, on the one hand, and a rise in the average person's happiness, on the other. The authors conducted a sophisticated analysis, not only to estimate the positive effects of happiness on productivity, but also to reveal considerable differences in the effects across nations.

In sum: Earlier happiness predicts later productivity at work as measured with objective indicators, both at the micro level of individuals and the macro level of nations.

*Relations with **Subjective** Indicators of Productivity*

Happiness and Supervisor Ratings of Productivity. In Table 3, we present findings relating to the correlation between happiness and subjective ratings of work performance. In the upper section of Table 3, we report 128 findings on the relation between the happiness of employees and the ratings of their productivity by supervisors. Positive signs prevailed, with 96% and 72% of these positive correlations being significant. Nonetheless, there were still some exceptions to this pattern, in the form of four null associations and one undetermined relation; however, these were all insignificant.

A large number of longitudinal findings show that higher ratings of productivity by supervisors tend to be *preceded* by increased happiness. Next to better rating of overall productivity, happiness predicts higher ratings of an employee's attentiveness, focus on achieving goals, facilitation of work, and team-building skills. The happier an employee is to begin with, the better his/her supervisor rates that employee's subsequent productivity. Not only did these positive over-time correlations remain firm

over different periods of time, but they also persisted with different sets of control variables, such as age, gender, and years of education. As well as predicting higher productivity ratings, happiness also prompted *increased* performance ratings over time, as shown in Table 7c.

What is more, three studies investigated the relationship between previous productivity and subsequent happiness, also finding positive correlations (shaded gray in Table 3).

Happiness and Self-ratings of Productivity at work. In the lower section of Table 3, we report 20 findings relating to the correlation between happiness and self-ratings of productivity at work. Eighteen of these were positive, with eight being statistically significant. The two negative correlations were not significant. Self-reported engagement at work was significantly correlated with happiness, while self-ratings of general productivity at work were not. Two longitudinal findings were positive, but the significance of these cases was not assessed.

In sum: The many positive partial correlations suggest that happiness predicts higher subjective ratings of productivity. This correlation is not likely to be spurious, while the many over-time correlations between previous happiness and subsequent productivity at work suggest that the former has a causal effect on the latter. Experimental evidence for such a causal effect is lacking at present.

4.1.2 Happiness and Absenteeism from Work

In Table 4, we present 12 findings on the relation between happiness and absenteeism at the micro level. This relation has yet to be examined at the macro level.

Relations with Objective Indicators of Absenteeism. The few observed same-time correlations between happiness and recorded absenteeism are mixed and largely insignificant. However, a positive and significant correlation with sick leave stands out, suggesting that happy employees are more likely to call in sick. Even so, the longitudinal findings on this relation are equally scarce and mixed.

Relations with Subjective Indicators of Absenteeism. There are two same-time correlations between happiness and self-reported absenteeism, which are both negative and significant.

In sum. The available findings do not show a clear relation between happiness and absenteeism at work.

4.1.3 Happiness and Quitting the Job

In Table 5, we present 10 correlations between happiness and turnover at the micro level; six of these are same-time correlations, while two are over-time correlations. There have yet to be any studies examining the relation between happiness and

turnover at the macro level.

Relations with Objective Indicators of Quitting. The one study of this kind found that happy employees are significantly less likely to have left their workplace one year later. A control for emotional exhaustion reduced this negative effect to insignificance, but, importantly, it did not change the direction of the effect.

Relations with Subjective Indicators of Quitting. The six same-time correlations are negative, suggesting that happy employees are less likely to consider changing jobs.

In sum: These few findings suggest that happiness reduces levels of workplace turnover.

4.2 How Strong are the Effects?

Effect sizes can be compared only for zero-order correlations, because partial correlations involve different controls. The available Pearson correlation coefficients are listed from Table 2a to Table 5a.

Size of Same-time Correlations

In Table 2a, we see only two effect sizes for objective measures of productivity at work, both of which were substantial. In Table 3a, we can see that the same-time correlations between happiness and supervisor ratings of general productivity vary from +0.01 to +0.43, with an average of +0.30. The same-time correlations between happiness and an employee's self-ratings of general productivity range from –0.01 to +0.31, with an average of +0.14. In Table 4a, we can see that an employee's self-reported absenteeism from work is associated with happiness, with an average correlation size of –0.20. Attempting to leave one's job is also negatively associated with happiness, with an average correlation size of –0.59, as shown in Table 5a.

Size of Over-time Correlations

The longitudinal column in Table 2a shows that the gain in efficiency of national production per unit of growth in life satisfaction ranges from 0 to 4%. In France, Germany, Poland, and Hungary, this impact exceeded 3%, but in Ireland, Sweden, Belgium, and Switzerland, it was less than 1%.

As can be seen in Table 3a, longitudinal correlations between happiness and supervisor ratings of general productivity at work range from +0.18 to +0.52, with an average of +0.38. Reversed over-time correlations of the two variables vary from +0.18 to +0.27, with an average of +0.24. The average size of longitudinal correlations between happiness and attentiveness is +0.21. The size increases to +0.34 for emphasis on goals, to +0.33 for the facilitation of work, and to +0.35 for team-building skills. The findings reported in Table 4a show that the over-time correlation between happiness and absenteeism is almost null (+0.01).

In sum: The sizes of the correlations between happiness and performance at work are considerable, both for same-time correlations as well as for over-time correlations.

4.3 Is the Effect Stronger in the Short Term or over the Long Term? How Long-lasting Is It?

On Table 7b we present the findings that distinguished between time lags of different lengths. Such distinctions have been made only for correlations between earlier happiness and later productivity at work as measured using supervisor ratings. The many empty cells in the table illustrate the blanks in current knowledge on this subject.

*Correlation between earlier happiness and later **level** of productivity at work at different time lags*

In the middle column of Table 7b we see that the correlation between earlier happiness and later ratings of the employee's productivity at work by supervisors tend to get stronger over time, most so for rating of general productivity and for social functioning in the job. This rising correlation can be seen as a 'sleeper effect', happiness fostering healthy developments which in interaction cumulatively add to productivity at work.

A slight decrease in strength of the correlation was found for attentiveness to managers suggestions. Possibly, a reversed effect of happiness on non-conformism plays a role here.

Next to these correlations between earlier happiness and later productivity, a correlation was observed between earlier productivity ratings and later happiness. The size of this correlation (r - +.24), presented in shading, which is considerable smaller than most correlations in Table 7b. So, the direction of causation seems to run from happiness to productivity in the first place. Reversed causality will be further discussed in Section 5.3.

*Correlation between earlier happiness and later **change** of productivity at work at different time lags*

The above-mentioned over-time correlations with later *level* of productivity at work can be inflated by intervening variables such as physical health. In that context it is worth noting that happiness also predicts later *change* in productivity at work as can be seen in the right-hand column in table 7b.

In sum: The effect of happiness on later productivity at work is not short-lived.

4.4 Does the Effect of Happiness on Work Performance Differ across Occupations?

In Tables 6–9, we present the relations between happiness and work performance, sorted by occupation and sector. In order to answer this research question, we have

considered the number of significant correlations that were observed in the occupational groups being investigated. The bigger the differences in the sizes of these correlations between occupations, the likelier it is that the effects of happiness on work performance are different between those occupations.

Productivity
As shown in Table 6, positive relations between happiness and objective productivity at work were observed among athletes, salesmen, and scholars. These findings are based on cross-sectional analyses, however, and they do not contain any information about causality. Even so, in Table 7, we find a large number of positive over-time correlations between happiness and subjective ratings of subsequent productivity among directors, mangers, and social services professionals, such as social welfare workers and criminal justice professionals. No other studies have presented potential causal effects for other occupations, but there are statistically significant associations between happiness and subjective ratings of performance among nurses, pathology laboratory personnel, and pilots.

Absenteeism
As shown in Table 8, a longitudinal correlation between happiness and absenteeism was found only among telephone operators, but this relation was statistically insignificant.

Quitting
When it comes to intentions to quit, as shown in Table 9 only social welfare workers were found to have been influenced by their happiness.

In sum: The effect of happiness on work performance appears to differ across occupations, but only with respect to subjective ratings on productivity and tendency to quit.

4.4.1 Which Kinds of Occupation Benefit the Most from Happiness?

Productivity
In Table 7a, we list 53 significant longitudinal correlations between previous happiness and subsequent productivity, with an average effect size of +0.34. We located one significant longitudinal correlation for directors and managers, with an effect size of +0.45. For other occupations, the relations between happiness and performance for pilots had an average cross-sectional correlation size of +0.14, while this was +0.03 for academics and –0.02 for workers on the shop floor; the last two of these relations were statistically insignificant. As such, then, the relations between happiness and productivity tend to be strongest for directors and managers. Happiness facilitates leadership anyway (Lyubomirski et a. 2005). Likewise, happy social services professionals are more likely to do well in their job, especially when their

productivity is measured using subjective ratings. Happiness fosters empathy (Strayer 1980), which is essential in this work.

Absenteeism
On Table 8a we see small and variable correlations between earlier happiness and later absenteeism, which on average result in a slight positive correlation.

Quitting
The quitting of workers on the shop floor was strongly associated with their earlier happiness, at an average level of –0.59, as indicated in Table 9a. Comparison with other groups is not yet possible.

4.4.2 Stronger in the Public Sector than in the Private Sector?

We compare the effect sizes observed among public and private sector workers in Tables 6a to Table 9a. The available findings do not permit us to draw a conclusion; nonetheless, we do know that happiness appears to contribute to positive ratings of productivity at work in the public sector, with an average effect size of +0.34, and that positive ratings of productivity in the public sector may be associated with higher levels of happiness to a greater extent than is the case in the private sector (Table 7a), although we do not have any information about longitudinal or experimental effect sizes in the private sector.

In sum: The effect of happiness on productivity at work appears to be most pronounced among people in leadership positions and among social workers. The effect also appears to be strong in the public sector.

4.5 Which Component of Happiness Adds More to Work Performance – the Affective Component or the Cognitive Component?

In Section 1, we noted that the research on the impacts of job satisfaction on work performance has generally focused on cognitive evaluations. Then, in Section 2.1, we drew a distinction between two separate 'components' of happiness: an affective component (how well we feel most of the time) and a cognitive component (perception of getting from life what you want). The distinction between these separate elements of happiness raises the question as to whether there is a difference in the effects of those components on productivity at work.

In order to explore the impacts of these components, we have indicated the happiness variants in the above-mentioned studies by means of different colors, using **red** for measures of overall happiness, **green** for measures of hedonic levels, and **blue** for measures of cognitive contentment. Findings that are based on mixed measures of happiness have been marked in yellow. We applied these colors in Table 3 and Table 3a.

Among the 196 correlations in this research synthesis, 74% were based on measures of hedonic levels (typically affect balance scores), 15% were assessed using

mixed measures, 11% were assessed by means of a measure of overall happiness, while 1% involved a measure of cognitive contentment.

Among the affective correlations, 71% were statistically significant, while none of the correlations that used cognitive measures of happiness reached statistical significance. Focusing on potential causality, we found that 97% of the positive longitudinal correlations between happiness and work performance were supported by an affective component of happiness, whereas 0% were supported by a cognitive component of happiness. In section 5.1 we will further discuss the relative effect on performance at work of affective experience and cognitive evaluation of life.

In sum: The available findings suggest that the affective component of happiness has a greater impact on work performance than the cognitive component of happiness.

5. DISCUSSION

Our findings reveal that happiness appears to have a considerable positive impact on work performance. This is consistent not only with the broaden-and-build theory of Fredrickson (2004), but also with the views of Wright, Cropanzano, and Bonett (2007), who argue that happiness depends on access to resources that facilitate better job performance. In this context, then, the following questions arise.

5.1 Why Only an Effect of Affective Happiness?

In Section 4.3, we noted that the observed micro-level effects of happiness on later productivity at work were all based on measures of how well an employee feels most of the time. No such effect was found in the studies that used measures of overall happiness or the cognitive component of happiness. Why is that?

One reason appears to be that affective experience is a psychologically stronger force than cognitive evaluation, known as the 'primacy of affect' (Zajonc 1984). This fits the dominance of affective experience in the appraisal of overall satisfaction with life, as illustrated in Figure 1.

A related explanation is that the average level of affect is more indicative of wider flourishing, because it is bound up with stronger predictions of physical health (Veenhoven 2008). Affect, then, acts as our primary bio-psychological compass, while the cognitive evaluation that developed later in evolutions constitutes a secondary orientation mechanism (Veenhoven 2009). On this view, the cognitive shift that occurred in psychology in the 1950s has led us down the wrong track.

One reason specific to the cognitive component is that contentment depends on comparison, meaning that it is a much more relative phenomenon than affective experience. Basically, contentment involves imagining that one is better in some way: better off than other workers, for instance, or better off now than previously. Such understandings, however, do not prompt greater investment in work.

5.2 Why a Stronger Effect of Life Satisfaction than of Job Satisfaction?

In Section 1, we noted that job satisfaction dominated tests of the HPW thesis, also mentioning the evidence that job satisfaction had a smaller effect on performance than life satisfaction. One possible reason for this difference is that job satisfaction is typically measured by means of questions that prompt a cognitive evaluation, as opposed to one in terms of affect. In Section 5.1, we pointed out that cognitive experience is not as strong as affective experience in terms of influencing work performance. As such, we expect affective measures of job satisfaction – that is, how well employees feel when they are at work – to reveal a greater effect on work performance.

Another possible explanation is that life satisfaction is more constitutive than mere job satisfaction, in terms of having a greater impact on an employee's physical as well as mental health, which, in turn, boosts performance at work.

5.3 Reversed Causality: How Does That Work?

Along with the evidence that previous happiness has an effect on subsequent productivity at work, we also found reverse correlations, previous productivity predicting subsequent happiness. These few correlations are presented in shading in the tables – such as the effect of supervisor ratings of productivity on the happiness of employees. See Table 3a. The average longitudinal effect size was +0.24.

At the micro level of individuals, one explanation is that the feelings of accomplishment – and, relatedly, higher self-esteem – that result from good productivity at work, can result in higher levels of individual happiness. On the other hand, though, the reverse is again true: poor performance at work can lead to feelings of frustration, resulting in low morale, which can negatively affect an employee's overall happiness. In addition, productivity at work can generate more social connections and better relationships with others, which may further stimulate greater happiness.

At the macro level, a nation's growth in productivity is likely to provide citizens with more resources, such as higher incomes and better public services, as well as greater job security, all of which are likely to increase their happiness. In this context, then, it is worth pointing out that greater economic growth generally increases a nation's average happiness. As such, the 'Easterlin Paradox', which holds that economic growth does not add to happiness, appears to describe exceptions, rather than being the rule (Veenhoven & Vergunst 2014).

5.4 How Can Organizations Improve Employee Life Satisfaction?

In Section 1, we noted that the HPW thesis has resulted in increased efforts to raise job satisfaction, which is currently referred to as 'happiness at work'. In that section, we also pointed out that the effects of job satisfaction on work performance tend to be modest. In Section 4.1.1, by contrast, we showed that life satisfaction has a strong

effect on performance at work, while we explained in Section 5.2 why life satisfaction has a greater effect on performance at work than job satisfaction. As such, it is clear that boosting the life satisfaction of employees will therefore yield the greatest gains in terms of performance at work.

The question then follows as to how work organizations can improve the life satisfaction of their employees. This is much more difficult than boosting job satisfaction, because it requires work organizations to make interventions in the private lives of their employees, which are, by definition, beyond the work floor. In this respect, the promotion of happiness is comparable to the promotion of health: even though a work organization can create healthy conditions on the work floor, such as by offering access to fresh air and providing healthy food in the canteen, it remains the case that the health of employees is more affected by what they eat at home and whether they smoke or not. The possibilities for the promotion of happiness at work are similarly limited, meaning that it may be best for work organizations to offer sources of guidance and help, such as life coaching and psychotherapy.

Indeed, in this context, it is worth noting that a recent meta-analysis of effect studies concluded that individual-focused psychological interventions proved to be the most effective at raising the happiness of employees – more effective than making direct interventions in the physical and social environments of the work floor (Sakuraya et al. 2020).

Ultimately, then, organizations should attempt to provide their employees with services that have the potential to raise their happiness. A first step in such an approach would be to help employees estimate whether they could become happier than they currently are. In this respect, tools such as the 'Happiness Indicator' can be used, which allow employees to compare their own happiness with that of comparable people (Bakker et al. 2020). Once employees can see that it is possible for them to lead more satisfying lives in their individual circumstances, a next step would be to facilitate further interventions, such as happiness training sessions, either within the organization or outside it, by a third party. A review of effect studies showed that such trainings raise happiness by some 5% (Bergsma et al. 2020).

5.5 Limitations

The studies that we have included in this research synthesis are not without their methodological limitations. The strongest effect of happiness we found related to an employee's work performance as rated by their supervisor. Such subjective ratings can, of course, be biased, plus it is also possible that happier people are simply more pleasant to be around, giving rise to higher ratings of their performance. Likewise, self-ratings of performance can similarly be distorted by self-serving bias, social desirability, lack of introspective ability, and so on. These problems have been acknowledged (Staw & Barsade 1993; Wright & Cropanzano 2000; Wright, Cropanzano & Bonett 2007), but they have yet to solved, owing to their being fundamentally bound up with the human experience.

A second methodological limitation relates to the demonstration of causality, as the relative strengths of the effects of happiness on performance and of the effects

of performance on happiness have similarly yet to be systematically investigated. This is also attributable to the lack of experimental studies. Experimental evidence will come into reach when happiness trainings become more common and observed gains in happiness can be linked to improved performance at work. Experimental evidence can also be derived from effects of externally induced unhappiness of workers on their performance at work, such as the death of a parent.

Though it is clear that happiness typically adds to performance at work, our knowledge on differences in that effect across people and situations is still quite limited, while such knowledge is required for efficient investment in happiness trainings. This lack of knowledge is visualized in the many white spots in the Tables 6, 7, 8 and 9 and serves as an agenda for future research.

6. CONCLUSIONS

Our three research questions can be answered as follows:

- Happiness is strongly related to performance at work. The evidence of a causal effect is the strongest for national productivity, supervisor ratings of productivity at work and tendency to quit the job but it does not appear to exist for absenteeism. What is more, the effect of happiness on productivity at work is permanent.
- The contribution of happiness to productivity at work differs across occupations. The productivity of managers and directors is the most strongly affected by their happiness. The impacts are also strong in the public sector.
- Performance at work depends more on how people feel most of the time (the affective component of happiness) than on the degree to which they feel able to get what they want from life (the cognitive component of happiness).

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Table 1:
33 studies included in this synthesis of research on happiness and performance at work.

People investigated	Place, Time, Number of observations	Type of work performance	Happiness measure	Source
General public				
16+ aged general public	United Kingdom, 1991-2009 N = 171690	Production counts	Overall happiness	Geale (2011)
18+ aged general public	Urban areas of Israel, 1973 N = 1830	Self-rating of work performance	Overall happiness Affect balance	Levy & Guttman (1975)
21-60 aged general public	Urban areas in the USA, 1963- 1964 N = 2787	Self-rating of work performance	Affect balance	Bradburn (1969)
18-65 aged general public	20 European countries, 2004-2010 N = 30000	Change in productivity in nation	Overall happiness	DiMaria et al. (2020)
18-88 aged general public	Denmark, 1993 N = 1494	Absenteeism at work	Overall happiness Affect balance	Ventegodt (1995)

Special groups				
14+ aged patients and students	Hongkong, China, 1995 N = 236	Self-rating of work performance	Mixed measure	Lam et al. (1998)
Evening school students	California, USA; 2006 N = 87	Supervisor rating of work performance	Mixed measure	Jones (2006)
Occupational groups				
Scholars	Germany, 2010 N = 49	Production counts	Mixed measure, Affect balance	Dilger et al. (2013)
Academics	Turkey, 2013 N = 339	Self-rating of work performance	Contentment	Caz & Tanyeri (2018)
Pilots	Europe, 2016 N = 1147	Self-rating of work performance	Overall happiness	Demerouti et al. (2018)
Private pathology laboratory personnel	USA, 1990 N = 198	Supervisor rating of work performance, Turnover	Affect balance	Cropanzano & James (1993)
Sales workers	UK, 2017	Production counts, Customer satisfaction,	Mixed measure	Bellet et al. (2019)

	N = 12549	Absenteeism at work		
Workers	Germany, 2015-2017 N = 439	Self-rating of work performance	Mixed measure	Frone et al. (2018)
Private sector employees	USA, 1990 N = 270	Supervisor rating of work performance	Affect balance	Moorman (1993)
Employees at a private call center	USA, 2017 N = 67	Production counts	Affect balance	Miner & Glomb (2010)
Managers	Spain, 2018 N = 245	Supervisor rating of work performance	Affect balance	Lado et al. (2021)
Managers	USA, 2004 N = 109	Supervisor rating of work performance	Affect balance	Wright et al. (2007)
Public sector managers	USA, 1997-1998 N = 59	Supervisor rating of work performance	Affect balance	Wright et al. (2002)
Directors from private sector and the Canadian federal government	Canada, 2005 N = 715	Self-rating of work performance	Affect balance	Zelenski et al. (2008)
Public sector supervisory personnel	USA, 1999 N = 45	Supervisor rating of work performance	Affect balance	Wright et al. (2004)
Social services	USA, 1994	Supervisor rating of work	Affect balance	Wright & Staw (1999)

personnel	N = 78	performance		
Social welfare counselors	USA, 1998 N = 48	Supervisor rating of work performance	Affect balance	Wright et al. (2004)
Social welfare department employees	USA, 1994-1998 N = 81	Supervisor rating of work performance	Affect balance	Wright & Staw (1999)
Social welfare professionals	USA, 1992-1997 N = 60	Supervisor rating of work performance	Affect balance	Cropanzano & Wright (1999)
Social welfare workers	USA, 1995 N = 52	Supervisor rating of work performance, Turnover	Affect balance	Wright & Cropanzano (1998)
Human services workers	USA, 1997 N = 47	Supervisor rating of work performance	Affect balance	Wright & Cropanzano (2000)
Human services personnel	USA, 1988-1989 N = 33	Supervisor rating of work performance	Affect balance	Wright et al. (1993)
Juvenile probation officers	USA, 1997 N = 37	Supervisor rating of work performance	Affect balance	Wright & Cropanzano (2000)
Criminal justice personnel	USA, 1996-1997 N = 76	Supervisor rating of work performance	Affect balance	Wright & Bonett (1997)
Female nurses	USA, 1990 N = 97	Supervisor rating of work performance, Self-rating of work performance, Turnover	Affect balance	Cropanzano & James (1993)

Female telephone operators	Metropolitan cities in Israel, 1977-1978 N = 131	Absenteeism at work	Mixed measure	Adler & Golan (1981)
Shop-floor workers	Australia, south-eastern metropolitan areas, 1977 N = 1486	Self-rating of work performance, Turnover	Overall happiness	Hedley (1981)
World Cup soccer players	Not reported, 1970-2014 N = 304	Production counts	Affect balance	Hopfensitz & Mantilla (2018)

Table 2:
26 Research findings on correlation between happiness and objective indicators of productivity at work

Aspect of productivity at work	**Research method**							
	Cross-sectional			*Longitudinal*			*Experimental*	
	Zero-order	*Partial*	*IV*	*Zero-order*	*Partial*	*IV*	*Zero-order*	*Partial*
Micro level studies								
Production counts								
• Sales		+ \+ +	+ +					
• Call time (in call center)	–		– –					
• Number of academic publications		+ \+ \+ + \+ \+						
• Success in sports competition		+ \+ \– \+						
• Productivity measured with wage		+/0	–/–/–					

Customer satisfaction		+						
Macro level studies								
Change in productivity in nation				**+/+**				

Signs and colors explained on Appendix. Use control + click to see detail on an online finding page.

Table 2a:
Observed effect strengths of zero-order correlations between happiness and *objective* indicators of productivity at work

Aspect of productivity	**Research method**		
	Cross-sectional	*Longitudinal*	*Experimental*
Micro level studies			
Production counts			
• Sales			
• Call time (at Call Center)	-0.27		
• Number of academic publications			
• Success in sports competition			
• Productivity measured with wage			
Customer satisfaction			
Macro level studies			
Change in productivity in nations		**0 to 4%**	

Table 3:
148 Research findings on correlation between happiness and *subjective* ratings of productivity at work

Aspect of productivity	Observed correlation with happiness					
	Research method					
	Cross-sectional		*Longitudinal*		*Experimental*	
	Zero-order	*Partial*	*Zero-order*	*Partial*	*Zero-order*	*Partial*
Micro level studies						
Supervisor rating of work performance						
General work performance	+ + + + + + + + + + + + + + + + + + 0 +	+/+ + + + + + + + + + ? 0	+ + +|+|+ +|+|+ +|+|+|+|+|+|+|+| + +|+|+|+|+|+ +|+|+|+|+|+|+| +|+|+	+/+ + + + +		
• Attentiveness	+		+ +|+|+ +|+|+ +|+|+			

• Engagement in work	+ +	+				
• Goal emphasis	+		+ +|+|+ +|+|+ +|+|+ +|+|+			
• Organization of work	+		+ +|+|+ +|+|+ +|+|+ +|+|+			
• Social functioning at work	+ 0 0		+ +|+|+ +|+|+ +|+|+ +|+|+			
Self-rating of work performance						
General work performance	+ + + + + + –		+	+		
• Engagement in work	+ + + + + + + –	+ +				
• Social functioning at work	+					
Macro level studies						

Signs and colors explained on Appendix. Use control + click to see detail on an online finding page.

Table 3a:
Observed effect strengths of zero-order correlations between happiness and subjective ratings of work performance.

Aspect of productivity	**Observed correlation with happiness**		
	Research method		
	Cross-sectional	*Longitudinal*	*Experimental*
Micro level studies			
Supervisor ratings of work performance			
General productivity	**+0.26 +0.25 +0.43 +0.32 +0.37 +0.37 +0.40 +0.33 +0.32 +0.29 +0.34 +0.43 +0.32 +0.34** 0 **+0.27 +0.28** +0.01 **Avg. = +0.30**	**+0.27 +0.45 +0.48|+0.40|+0.48 +0.46|+0.48|**+0.18 **+0.36|+0.37|+0.32|+0.37|+0.33|+0.29|**+0.25|+0.38 **+0.36|**+0.27|+0.18|+0.21|+0.17|+0.26 **+0.45|+0.39|+0.47|+0.35|+0.48|+0.38|+0.40|+0.51| +0.42|+0.52** **Avg. (Happiness -> Ratings of G.W.P.) = +0.38** **Avg. (Ratings of G.W.P. -> Happiness) = +0.24**	
• Attentiveness	+0.19	**+0.30 +0.35|+0.30|+0.28** +0.09|+0.03|+0.10 +0.19|+0.23|+0.21 **Avg. = +0.21**	

• Engagement in work	+0.24		
• Goal emphasis	**+0.32**	**+0.46 +0.38**|**+0.37**|**+0.40 +0.41**|**+0.28**|**+0.47 +0.38**|**+0.33**|+0.22 **+0.31**|+0.21|+0.17 **Avg. = +0.34**	
• Organization of work	**+0.31**	**+0.44 +0.45**|**+0.35**|+0.44 **+0.24**|**+0.42**|+0.36 **+0.47**|**+0.34**|+0.16 **+0.38**|+0.17|+0.10 **Avg. = +0.33**	
• Social functioning at work	**+0.32** 0 0 **Avg. = +0.11**	**+0.41 +0.52**|**+0.35**|**+0.47 +0.46**|**+0.32**|+0.17 **+0.42**|**+0.36**|+0.24 **+0.44**|+0.23|+0.18 **Avg. = +0.35**	
Self-rating of productivity at work			
General productivity	+0.01 +0.16 +0.31 +0.29 +0.06 -0.01 **Avg. = +0.14**		
• Engagement in work	+0.20 +0.47 **+0.06 +0.47** +0.05 +0.05 -0.09 **Avg. = +0.17**		

• Social functioning at work	**+0.13**		
Macro level studies			

Table 4:
12 Research findings on correlation between happiness and absenteeism at work

Aspect of absenteeism	**Observed relation with happiness**					
	Research method					
	Cross-sectional		*Longitudinal*		*Experimental*	
	Zero-order	*Partial*	*Zero-order*	*Partial*	*Zero-order*	*Partial*
Micro level studies						
Recorded		+\+\–\–	+\+\+\–\–			
Self-reported	–:–:–					
Macro level studies						

Signs and colors explained on Appendix. Use control + click to see detail on an online finding page.

Table 4a:
Observed effect strengths of zero-order correlations between happiness and absenteeism at work.

Aspect of absenteeism	**Observed relation with happiness**		
	Research method		
	Cross-sectional	*Longitudinal*	*Experimental*
Micro level studies			
Recorded		+0.03\+0.07\+0.07\-0.07\-0.06 **Avg. = +-0.008**	
Self-reported	**-0.20 -0.16 -0.23** **Avg. = -0.20**		
Macro level studies			

Table 5:
10 Research findings on correlation between happiness and quitting the job

Aspect of quitting	**Observed relation with happiness**					
	Research method					
	Cross-sectional		*Longitudinal*		*Experimental*	
	Zero-order	*Partial*	*Zero-order*	*Partial*	*Zero-order*	*Partial*
Micro level studies						
Actually left job			–	–		
Intention to leave job (vs stay)	– –	– –				
Tried to leave job	–:–					
Macro level studies						

Signs and colors explained on Appendix. Use control + click to see detail on an online finding page.

Table 5a:
Strengths of zero-order correlations between happiness and quitting the job (turnover)

Aspect of quitting	**Observed relation with happiness**		
	Research method		
	Cross-sectional	*Longitudinal*	*Experimental*
Micro level studies			
Actually left job			
Intention to leave (vs stay)			
Tried to leave job	**-0.72 -0.45** **Avg. = -0.59**		
Macro level studies			

Table 6:
30 Research findings on the correlation between happiness and *objective* indicators of productivity at work
Split by occupation and sector.

Productivity at work	**Observed relation with happiness**					
	Research method					
	Cross-sectional		*Longitudinal*		*Experimental*	
	Zero-order	*Partial*	*Zero-order*	*Partial*	*Zero-order*	*Partial*
Split by occupation						
Salesmen	–	+\+ + +/+ +\– – +				
Scholars		+\+\+ +\+\+				
Athletes		+\+\–\+				
Split by sector						
Public sector						
Private sector	–	+\+ +/+ + +\– – +				

Signs and colors explained on Appendix. Use control + click to see detail on an online finding page.

Table 6a:
Observed effect strengths of zero-order correlations between happiness and objective indicators of productivity at work.
Split by occupation and sector.

Productivity at work	**Observed relation with happiness**		
	Research method		
	Cross-sectional	*Longitudinal*	*Experimental*
Split by occupation			
Salesmen	-0.27		
Scholars			
Athletes			
Split by sector			
Public sector			
Private sector	-0.27		

Table 7:
257 Research findings on the correlation between happiness and subjective ratings of productivity at work; by supervisors and self.
Split by occupation and sector

<table>
<tr><th rowspan="4">Productivity at work</th><th colspan="6">Observed relation with happiness</th></tr>
<tr><th colspan="6">Research method</th></tr>
<tr><th colspan="2">Cross-sectional</th><th colspan="2">Longitudinal</th><th colspan="2">Experimental</th></tr>
<tr><th>Zero-order</th><th>Partial</th><th>Zero-order</th><th>Partial</th><th>Zero-order</th><th>Partial</th></tr>
<tr><td colspan="7">Split by occupation</td></tr>
<tr><td>Social services workers/ Social welfare workers/ Human services personnel/ Criminal justice personnel/ Juvenile probation officers</td><td>+ + + + + +
+ + + + + +
+ 0</td><td>+ + + +</td><td>+ + + + +
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</table>

			+ | + | + + | + | + + | + | + + | + | + + | + | + + | + | + + | + | + + | + | +			
Shop–floor workers	+ –					
Managers/Directors	+ + + +	+/+ + +	+ +	+ +		
Academics/Laboratory personnel/Pilots	+ + –	+ ?				
Pilots	+ + + + +	0				
Nurses	+ +	+ + +				
Split by sector						
Public sector	+ + + + + + + + + + + + + + 0 + –	+ + + + + + + +	+ + + + + + + | + | + + | + | + + | + | + + | + | + + | + | + + | + | + + | + | + + | + | + + | + | +	+/+ + + + +		

			+|+|+ +|+|+ +|+|+ +|+|+ +|+|+|+|+|+|+|+|+ + +|+|+|+|+|+ +|+|+ +|+|+ +|+|+ +|+|+ +|+|+			
Private sector	+ + + 0 0	+/+ + ?				

Signs and colors explained on Appendix. Use control + click to see detail on an online finding page.

Table 7a:
Strengths of zero-order correlations between happiness and subjective ratings of productivity at work
Split by occupation and sector.

Productivity at work	**Observed correlation with happiness**		
	Research method		
	Cross-sectional	*Longitudinal*	*Experimental*
Split by occupation			
Managers/Directors	**+0.26 +0.37 +0.37 +0.43** **Avg. = +0.36**	**+0.45** **Avg. = +0.45**	
Social services workers/ Social welfare workers/ Human services personnel/ Criminal justice personnel/ Juvenile probation officers	**+0.25 +0.32 +0.40 +0.33 +0.32 +0.29 +0.34 +0.31 +0.32 +0.32 +0.32 +0.34** +0.19 0 **Avg. = +0.29**	**+0.27 +0.46 +0.41 +0.44 +0.30 +0.48|+0.40|+0.48 +0.52|+0.35|+0.47 +0.35|+0.30|+0.28 +0.41|+0.28|+0.47 +0.38|+0.37|+0.40 +0.45|+0.39|+0.47|+0.35|+0.48|+0.38|+0.40|+0.51|+0.42|+0.52 +0.36|+0.37|+0.32|+0.37|+0.33|+0.29**|+0.25|+0.38 **+0.36**|+0.27|+0.18|+0.21|+0.17|+0.26 **+0.38|+0.33**|+0.22 **+0.45|+0.35**|+0.44 **+0.46|+0.32**|+0.17 **+0.24|+0.42**|+0.36 **+0.47|+0.34**|+0.16 **+0.42|+0.36**|+0.24 **+0.46|+0.48**|+0.18 **+0.44**|+0.23|+0.18 **+0.31**|+0.21|+0.17 **+0.38**|+0.17|+0.10 +0.09|+0.03|+0.10 +0.19|+0.23|+0.21 **Avg. (Happiness -> Ratings of W.P.) = +0.34** **Avg. (Ratings of W.P. -> Happiness) = +0.24**	

Pilots	**+0.13 +0.06 +0.47** +0.01 +0.05 **Avg. = +0.14**		
Academics	+0.06 -0.01 **Avg. = +0.03**		
Shop–floor workers	+0.05 -0.09 **Avg. = -0.02**		
Split by sector			
Public sector	**+0.25 +0.32 +0.40 +0.33 +0.32 +0.29 +0.34 +0.31 +0.32 +0.32 +0.32 +0.34 +0.37 +0.37** +0.19 0 +0.06 -0.01 **Avg. = +0.27**	**+0.27 +0.46 +0.41 +0.44 +0.30 +0.45 +0.48|+0.40|+0.48 +0.52|+0.35|+0.47 +0.35|+0.30|+0.28 +0.41|+0.28|+0.47 +0.38|+0.37|+0.40 +0.45|+0.39|+0.47|+0.35|+0.48|+0.38|+0.40|+0.51|+0.42|+0.52 +0.36|+0.37|+0.32|+0.37|+0.33|+0.29**|+0.25|+0.38 **+0.36**|+0.27|+0.18|+0.21|+0.17|+0.26 **+0.38|+0.33**|+0.22 **+0.45|+0.35**|+0.44 **+0.46|+0.32**|+0.17 **+0.24|+0.42**|+0.36 **+0.47|+0.34**|+0.16 **+0.42|+0.36**|+0.24 **+0.46|+0.48**|+0.18 **+0.44**|+0.23|+0.18 **+0.31**|+0.21|+0.17 **+0.38**|+0.17|+0.10 +0.09|+0.03|+0.10 +0.19|+0.23|+0.21 **Avg. (Happiness -> Ratings of W.P.) = +0.34** **Avg. (Ratings of W.P -> Happiness) = +0.24**	
Private sector	**+0.43** 0 0 **Avg. = +0.14**		

Table 7b
Strengths of zero-order correlations between happiness and later subjective ratings of productivity at work
Split by length of time lag

Aspect of later productivity	**Correlation with earlier happiness**	
	Correlation with later LEVEL of productivity	Correlation with later CHANGE in productivity
Micro level studies		
Supervisor ratings of productivity		
General productivity	1-year later: r = **+.40** 2-years later: r = **+.48** Same time: r = **+.33** 1-year later: r = **+.35** 2-years later: r = **+.40** 3-years later: r = **+.45** 4- years later: r = **+.39** 4,5 years later: r = **+.47** Same time: r = **+.25** 1-year later: r = **+.48**	2-years later: Beta = **+.49**
• Attentiveness	1,5 years later: r = **+.35** 2-years later: r = **+.30** 3-years later r = **+.28**	

• Engagement in work		
• Goal emphasis	1,5 years later: r = **+.40** 2-years later: r = **+.37** 3-years later r = +**.38**	
• Organization of work	1,5 years later: r = +**.40** 2-years later: r = **+.37** 3-years later r = **+.38**	
• Social functioning at work	1,5 years later: r = +**.47** 2-years later: r = **+.35** 3-years later r = **+.52**	
Self-rating of productivity at work		
General productivity		
• Engagement in work		
• Social functioning at work		
Macro level studies		

Table 8:
18 Research findings on the correlation between happiness and absenteeism
Split by occupation and sector.

Absenteeism	**Observed relation with happiness**					
	Research Method					
	Cross-sectional		*Longitudinal*		*Experimental*	
	Zero-order	*Partial*	*Zero-order*	*Partial*	*Zero-order*	*Partial*
Split by occupation						
Salesmen		+\+\–\–				
Telephone operators			+\+\+\–\–			
Split by sector						
Public sector			+\+\+\–\–			
Private sector		+\+\–\–				

Signs and colors explained on Appendix. Use control + click to see detail on an online finding page.

Table 8a:
Observed effect strengths of zero-order correlations between happiness and absenteeism.
Split by occupation and sector.

Absenteeism	**Observed correlation with happiness**		
	Research Method		
	Cross-sectional	*Longitudinal*	*Experimental*
Split by occupation			
Salesmen			
Telephone operators		+0.03\+0.07\+0.07\-0.07\-0.06 **Avg. = +0.008**	
Split by sector			
Public sector		+0.03\+0.07\+0.07\-0.07\-0.06 **Avg. = +0.008**	
Private sector			

Table 9:
13 Research findings on the correlation between happiness and quitting the job (turnover)
Split by occupation and sector.

Quitting the job	**Observed relation with happiness**					
	Research Method					
	Cross-sectional		*Longitudinal*		*Experimental*	
	Zero-order	*Partial*	*Zero-order*	*Partial*	*Zero-order*	*Partial*
Split by occupation						
Social welfare workers			–			
Shop-floor workers	– –					
Laboratory personnel	–	– +				
Nurses	–	– +				
Split by sector						
Public sector			–			
Private sector	–	– +				

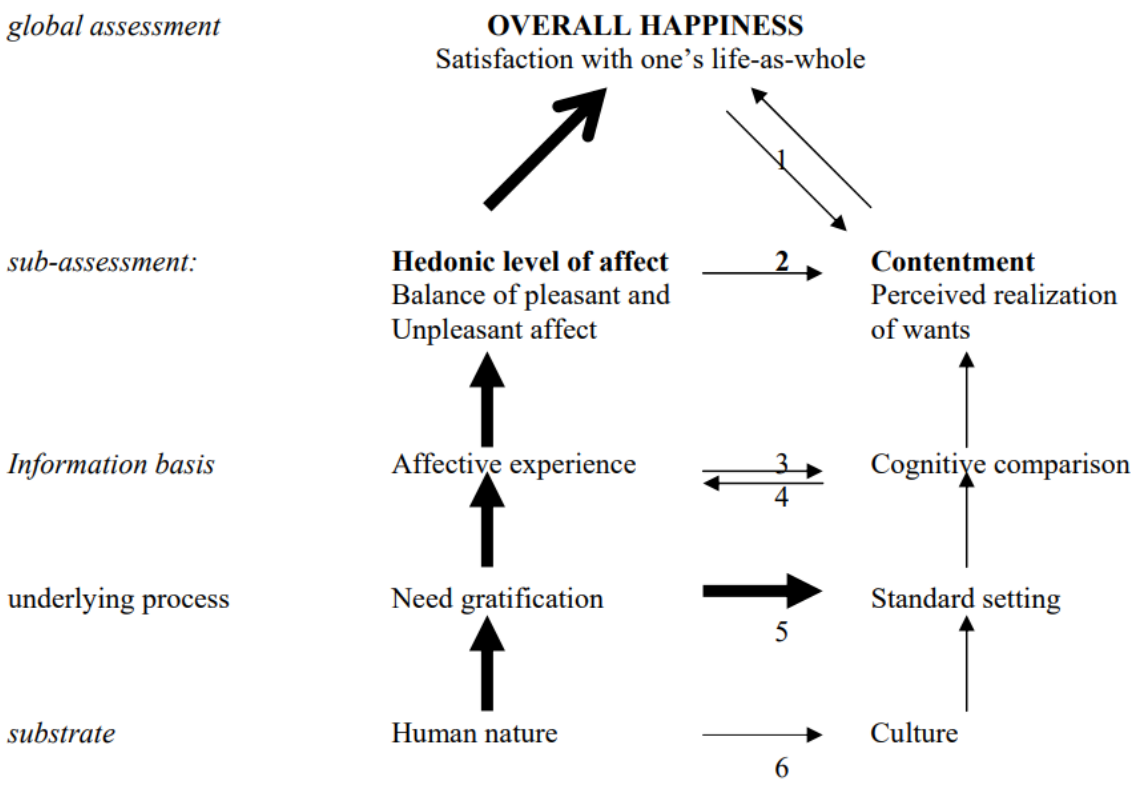
Signs and colors explained on Appendix. Use control + click to see detail on an online finding page.

Table 9a:
Observed effect strengths of zero-order correlations between happiness and quitting the job (turnover)
Split by occupation and sector.

Quitting the job	**Observed correlation with happiness**		
	Research Method		
	Cross-sectional	*Longitudinal*	*Experimental*
Split by occupation			
Social welfare workers			
Shop-floor workers	**-0.72 -0.45** **Avg. = -0.59**		
Laboratory personnel			
Nurses			
Split by sector			
Public sector			

Private sector			

Figure 1:
How we assess how happy we are.



Source: Veenhoven (2009)

Figure 2:
Start page of the World Database of Happiness

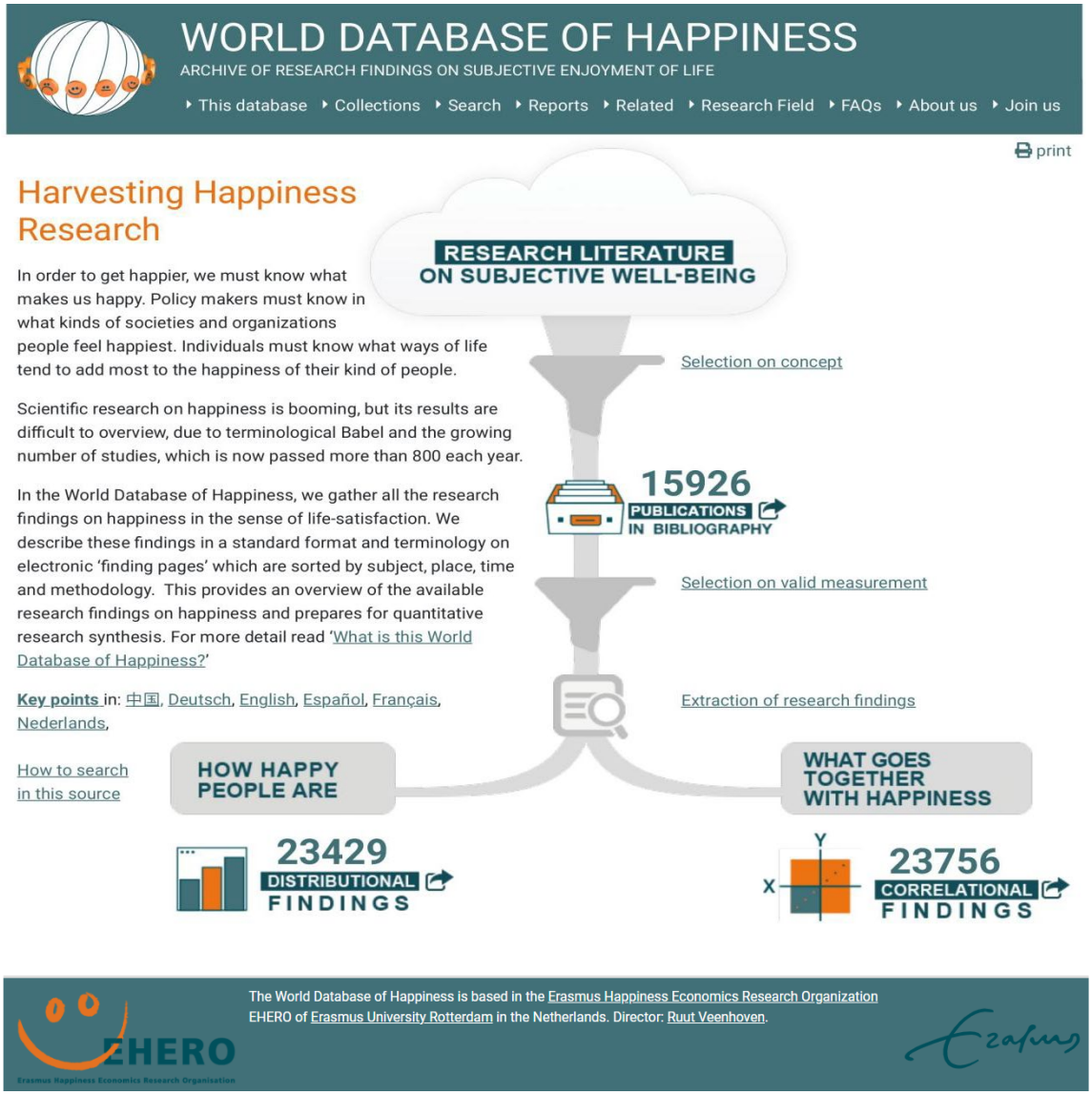


Figure 3:
Example of a finding page in the World Database of Happiness

WORLD DATABASE OF HAPPINESS
ARCHIVE OF RESEARCH FINDINGS ON SUBJECTIVE ENJOYMENT OF LIFE
This database · Collections · Search · Reports · Related · Research Field · FAQs · About us · Join us

print

Study Bellet et al. (2019): study GB 2017

Public	Sales workers, UK, followed 6 month 2017
Survey name	Unnamed study
Sample	
Respondents	N = 12549
Non Response	63%
Assessment	Questionnaire: Conputer Assisted Web Interview (CAWI)

Correlate

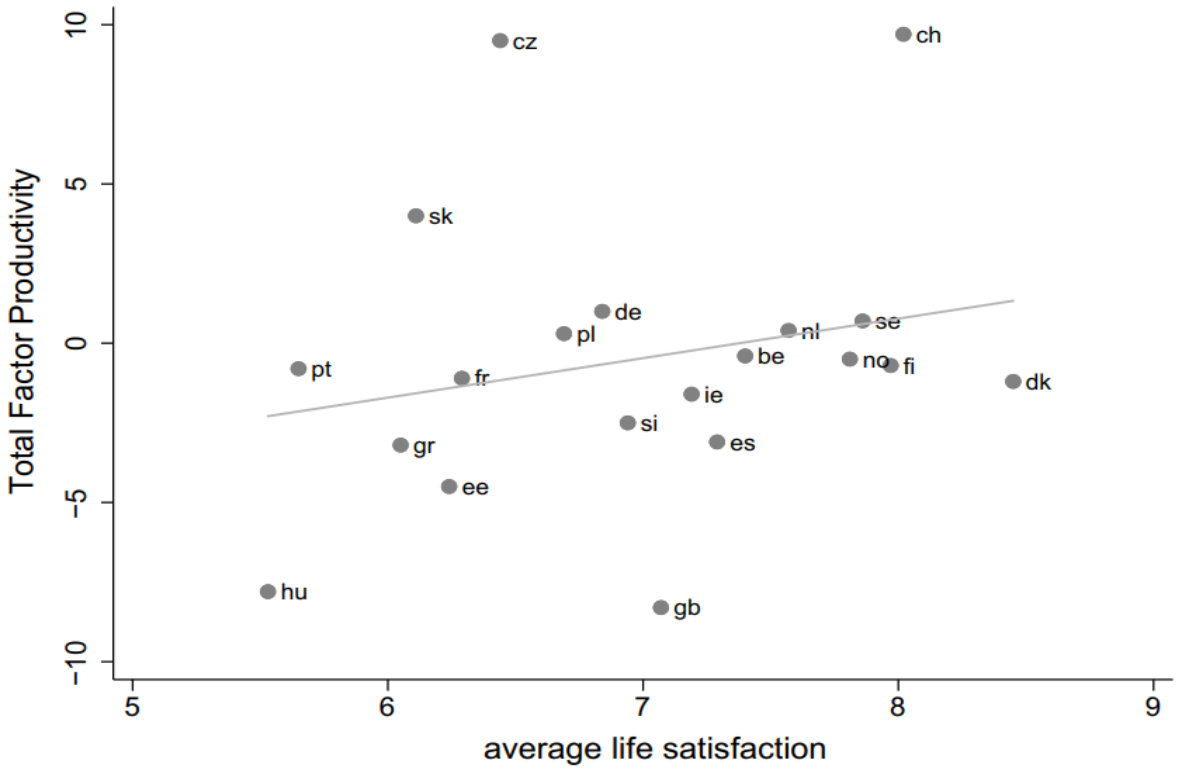
Authors's Label	Sales performance
Our Classification	WORK: PERFORMANCE » Current work-performance WORK: PERFORMANCE » ••• » Production counts
Remarks	Detailed individual-level administrative data from the firm.
Distribution	Mean = 25.57; SD = 19.55
Related specification variables	work task
Operationalization	The number of weekly sales, which including new sales to a new or existing customer and re-contracting sales.

Observed Relation with Happiness

Happiness Measure	Statistics	Elaboration / Remarks
M-FH-cw-sqr-f-5-a	b-fix = +.04 p < .01	Weekly happiness (1-5) by weekly sales - very happy +6% (01) - happy +4% (01) - neutral (reference) - unhappy -5% (01) - very unhappy -6% (01) 13% difference in productivity between very happy and very unhappy weeks

The World Database of Happiness is based in the Erasmus Happiness Economics Research Organization EHERO of Erasmus University Rotterdam in the Netherlands. Director: Ruut Veenhoven.

Figure 4:
Correlation between gain in productivity and average happiness in 20 European nations



Source : Di Maria et al. (2020)

Appendix :

Meaning of signs and colors used in the finding tables.

+ = positive correlation, significant
+ = positive correlation, not significant
– = negative correlation, significant
– = negative correlation, not significant
+/+ = negative correlations obtained with different sets of control variables
+\– = positive on one indicator of this variable, negative on another
+|+ = positive significant and positive insignificant on different lags of time
+:– = positive on one measure of happiness, negative on another
0 = absence of correlation
? = undetermined relation
sign in shading = happiness was measured after indicators of rating of work performance
= overall happiness, = affect balance, = contentment, = mixed happiness measure

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Detail: All these signs involve a link to an online finding page with full detail in the World Database of Happiness. Use control + click to view the page.