Instruments of Human Resource Management under particular consideration of coping strategies in the context of in-service development measures

THESES BOOK

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1. Introduction

1.1 Illustration of problem and relevance of topic

Today, a once completed vocational training is often not enough to survive one's entire professional career.\(^1\) Lifelong learning has become an obligation under the prevailing circumstances in global competition.\(^2\) This is often compounded by the fact that the employee does not remain at the same company from training to retirement. Advanced education is frequently mandatory to maintain one's place of employment in a globalised and constantly faster acting world and/or achieve a better position.\(^3\) Furthermore, professional life is sometimes characterised by great changes and discontinuities\(^4\).

A further aspect is the mechanisation in the professional as well as private environment. On a perfunctory aspect, people have more time on their hands due to the technological progress. For example, email has largely replaced the comparatively slow communication channel of the letter in the occupational routine and the telephone or Skype conferences render personal meetings superfluous.\(^5\) However, this development is paradox. Due to these changed conditions, people have less time. They do not work more productive because, for example, they are constantly interrupted in their current activities due to constant availability and the receipt of emails.\(^6\)

These changed conditions demand a high personal commitment from employees, which often extends beyond the actual working hours and can thus also lead to individual risks, such as excessive demands, fatigue etc. In order to counteract these potential risks, various strategies to combat stress, so-called coping strategies, were developed during the past decades. Some of these are introduced in the context of this dissertation.

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1. Introduction

1.2 Objective and research demand

In the context of this scientific work, students who study for dual degrees or while employed are the focus of the observations. As this target group is exposed to particular pressures, the current stress level and the current coping behaviour of these feature carriers is to be examined in the context of this dissertation.\(^7\)

The in-service and dual degree studies are analysed in detail as two of several development measures. Among other, the question will be whether the students who decided on this path of personal competency expansion can withstand this stress or whether they recognise that they are overtaxed. In this case, it has to be checked whether and to which extent the afflicted persons handle this situation and/or how they can protect themselves against stress in the future.

Equally, the illustration of various theories and models of stress research is to exemplify the current research status in the field of physical stress factors and coping strategies.

Furthermore, there are no comparable analyses and studies in the field of research examined here. Also, the combined usage of the questionnaires AVEM-44\(^8\) and SCI\(^9\) represent a novelty. They may assist in finding significant coherences between these two research instruments.

In view of the above-mentioned changed social conditions, this dissertation is intended to answer the following research questions:

1. How high is the current stress level of avocational and dual students in North Rhine-Westphalia? (Main research question)
2. What are the influential factors of the degree of the personal stress level? (Main research question)
3. Are the students capable of assessing their own health status?
4. What are the coping strategies of avocational students to combat stress?

\(^7\) It is pointed out that a series of seminar works to various topics were submitted successfully to the West-Hungarian University Sopron prior to the commencement of this dissertation. For this reason, the István Széchenyi Doctorate School of economic and organisational sciences shall limit the maximum number of pages of this dissertation to 160.

\(^8\) See Schaarschmidt, U., Fischer, A. (2008), o. S.

1. Introduction

(5) Which measures - in the context of Human Resource Management - can contribute to have a personal impact on the health of avocational and dual students?

Are these students, within themselves, immune against the plethora of stress factors to be managed in the everyday professional life and studies or are there external circumstances and conditions which can have a positive impact, such as corporate health management?

At the end of the dissertation, the results of the study are to be used to establish action recommendations for the employers and employees in order to ensure effective protection against stress and excessive demands in the future and support the management of stressful situation.

1.3 Progress of work

Chapter 1 of the dissertation introduces the problems as well as the objectives under examination.

In order to determine the origin of the above-mentioned problems, we shall initially focus on the external and internal impact factors influencing the employers and employees, such as the lack of specialists in Germany or the increasing digitalisation.

Following chapter 1, chapter 2 explains the theoretical basics of Human Resource Management relevant for the subjects to be examined before chapter 3 deals with the basics of stress and various stress theories.

Chapter 4 addresses coping strategies, which are crucial for the raised subject.

Chapter 5 presents the study of in-service education. Following in-depth research, the author decided on qualitative research. For this process, questionnaires SCI and AVEM-44 were used, as they were developed based on the theories introduced in chapters 3.2.2 and 3.2.3 and seemed to be most appropriate for the topic in question.

Chapter 6 focuses on the achievement of the objectives and future perspectives. Here, the research issues raised initially were once again answered conclusively and an outlook to future fields of research and developments in the Human Resource and Health Management sector is provided.
Illustration 1: Progress of work

Source: Own illustration.
2. Quantitative research to stress levels and coping behaviour of in-service students in North Rhine-Westphalia

2.1 Methodology and general conditions

The following figure is designed to illustrate that the amount as well as the level of scientific results is to be increased continuously in the course of the learning process.\(^\text{10}\)

![Diagram of the learning process]

**Illustration 2: Specificity and quality of the scientific learning process**


\(^{10}\) See Töpfer, A. (2012), page 24.
Due to the usage of the selected questionnaires, the status quo of the stress levels of avocational students in North Rhine-Westphalia is to be established. For this purpose, the work-related behavioural and experience pattern (AVEM-44)\textsuperscript{11} as well as the stress and coping inventory (SCI)\textsuperscript{12} was selected as scientific questionnaire instruments. In order to create the study more significant on a scientific level, democratic and general questions were raised at the end of the questionnaire.

In this task, AVEM-44 is mainly used to illustrate the sector of work / work environment (e.g. "Work is the most important purpose in life for me") and its stress factors for the affected people. SCI does not place emphasis on the occupation, but considers general living conditions (e.g. uncertainties, fears or financial issues. Both analysis instruments are jointly intended to provide a comprehensive verdict regarding the situation of people with dual loads and are therefore well-suited to answer the research questions for the target group of the avocational and/or dual students in North Rhine-Westphalia.

The evaluation of the questionnaire should primarily provide clarification as to whether and/or to which extent avocational students are affected by stress. In addition, it is to be determined whether the measurable stress load is also perceived subjectively by the interviewed persons and how they handle it now and/or intend to handle the stress-related loads in future.

\textsuperscript{11} See Annexure 3 of the dissertation.
\textsuperscript{12} See Annexure 3 of the dissertation.
\textsuperscript{13} Questionnaire, AVEM-44, page 3.
2. Quantitative research

2.2 Design of examination
The establishment of the research design should occur together with the structure at the beginning of the dissertation, as the author is determining a framework for the future process at this stage, establishes milestones and specifies the sequence of the steps to be accomplished.

Accordingly, the research design is the figuratively presented conceptualisation of the entire scientific work.\textsuperscript{14}

Illustration 3: Study design
Source: Own illustration.

2. Quantitative research

2.3 Research design

The research design of this dissertation is demonstrated in the following illustration:

Illustration 4: Own research design

Source: Own illustration in accordance with: Töpf er, A. (2012), page 162.
2. Quantitative research

In order to verify the theoretic findings regarding stress research with practice-relevant contents, a personal survey was conducted among the avocational students in North Rhine-Westphalia. This target group is represented by 497 students of FOM University for economy and management, who participated in the study during the survey period September and October 2015. The survey was largely accompanied by the author of this dissertation herself as well as a few professors of the FOM University on site, who conducted the survey in the context of their lectures. The personal presence of contact persons during the processing of the study hereby guaranteed a controllable survey situation\textsuperscript{15} and a near one hundred percent return rate of completed questionnaires.

Based on the basic population, the elementary objective of the empiric study, which is introduced in this dissertation, is to choose a representative random test to verify the validity of the posed hypotheses in reality. Due to the size of the basic population, a full census is not feasible, as it is not possible to reach all feature carriers\textsuperscript{16} – among other due to a lack of detail information. Thus, a partial census and/or random test was used. In this case, a basic population of 28,427 students was determined in North Rhine-Westphalia, who have occupied part-time or dual studies during the winter semester 2015/2016.\textsuperscript{17}

The representative random sample size for this partial census was calculated based on the following parameters:\textsuperscript{18}

\begin{align*}
\text{Permitted random sample error:} & \quad 5 \% \\
\text{Confidence interval:} & \quad 97 \% \\
\text{Basic population:} & \quad 28,427 \text{ persons} \\
\text{Distribution of answers:} & \quad 50 \% \\
\textbf{Required sample size:} & \quad 464 \text{ Persons}
\end{align*}

\textsuperscript{15}See Berger, D. (2010), page 156.
\textsuperscript{16}For example, units, cases or objects which are subject of an empiric analysis are specified as feature carriers. See Töpfer, A. (2012), page 229.
\textsuperscript{17}See Annexure 2 of the dissertation.
2. Quantitative research

2.4 Establishment of hypotheses

Hypotheses are assumptions regarding the reality, which are checked with respect to their correctness. In the process, no less than two facts should be related to each other. In the course of this learning process, explanation and prognosis samples can be changed and expanded. With the aid of empiric analyses which could confirm hypotheses it is possible to derive clear indications for practice and to establish recommendations for action.

The following 16 scientific hypotheses were established:

1) Distribution hypothesis: Sample G (AVEM) is the most frequent personal evaluation of the interviewed persons.

2) Relationship hypothesis: The personal evaluation (AVEM) of the interviewed persons applies in more than 85% of the cases.

3) Explorative: A positive relationship exists between the individual dimensions / scales of questions 1-5 of the SCI and the actually determined samples of AVEM.

4) Distribution hypothesis: Women are present in samples G and S (Avem) in significantly greater quantity than men.

5) Relationship hypothesis: The older the interviewed persons, the more frequent they are present in the samples A and B (AVEM) after the evaluation.

6) Distribution hypothesis: Interviewed persons, who are in a relationship (married, relationship) are more frequently in samples G and S (AVEM) after the evaluation.

7) Distribution hypothesis: Full-time employees are present in samples A and B (Avem) in significantly greater quantity.

8) Relationship hypothesis: The greater the number of employees in the company, the greater the number of interviewed persons in samples G and S (AVEM) after evaluation.

9) Relationship hypothesis: The higher the net income, the greater the number of interviewed persons in samples A and B (AVEM) after evaluation.

10) Explorative: A positive relationship exists between the individual items of question 1 of the "General additional questions" and the actually determined samples of AVEM.

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2. Quantitative research

11) Relationship hypothesis: If the employer participates in the study, the number of interviewed persons in sample G is significantly greater.

12) Relationship hypothesis: The higher the number of hours spent studying per week, the greater the number of interviewed persons in samples A and B.

13) Relationship hypothesis: The higher the number of hours spent at work per week, the greater the number of interviewed persons in samples A and B.

14) Explorative: A positive relationship exists between the individual items of question 5 of the "General additional questions" and the actually determined samples of AVEM.

15) Explorative: A positive relationship exists between the individual items of question 6 of the "General additional questions" and the actually determined samples of AVEM.

16) Explorative: A positive relationship exists between the individual items of question 7 of the "General additional questions" and the actually determined samples of AVEM.

2.5 Verification design

The following methods were used in the context of the data analysis:

- Cronbach’s Alpha (from 0.7 satisfactory, from 0.8 good) was applied to determine reliability.
- In the context of the descriptive analysis, the calculation of location values, scatter values and mean values, median, standard deviations, minimum and maximum were applied for metric data and Likert Data.
- The descriptive analysis for categorical data occurred with the application of frequency tables, whereby the illustration occurred absolute and relative in percentages.
- Cross tables were applied in the descriptive analysis for two categorical data.
- The illustration for categorical variables were documented with bar charts.
- The illustration for metric/Likert variables occurred with box plots.
- The Spearman-correlation was used in the analysis of relationships between metric and ordinal variables.
- The analysis of relationships between categorical variables was executed with the Chi-square test in large cross tables and with Fisher's exact test in 2x2 cross tables.
2. Quantitative research

- A 95% confidence interval was determined for the share value (for the share of correctly allocated in question 2)
- The entire data analysis was executed with the software: SPSS 22 (IBM).

Table 1 provides insights as to which hypothesis could be confirmed or falsified.

<table>
<thead>
<tr>
<th>No.</th>
<th>Hypotheses</th>
<th>significant</th>
<th>significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sample G (Avem) is the most frequent personal evaluation of the interviewed persons.</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>The personal evaluation (Avem) of the interviewed persons applies in more than 85% of the cases.</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>A positive relationship exists between the scales of the SCI and the actually determined samples of AVEM.</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Women are present in samples G and S (Avem) in significantly greater quantity than men.</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>The older, the greater the number of interviewed persons in samples A and B (AVEM) after evaluation.</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Interviewed persons, who are in a relationship (married, relationship) are more frequently in samples G and S (Avem) after the evaluation.</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>Full-time employees are in samples A and B (Avem) in significantly greater quantity.</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>The larger the number of employees within the company, the greater the number of interviewed persons in samples G and S (Avem) after evaluation.</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>The higher the net income, the greater the number of interviewed persons in samples A and B (Avem) after evaluation.</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>A positive relationship exists between the individual items of question 1 of the &quot;General additional questions&quot; and the actually determined samples of AVEM.</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>If the Employer participates in the study, the number of interviewed persons in sample G and S is significantly greater.</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>The higher the number of hours spent for studies per week, the greater the number of interviewed persons in samples A and B.</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>13</td>
<td>The higher the number of hours spent at work per week, the greater the number of interviewed persons in samples A and B.</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>14</td>
<td>A positive relationship exists between the individual items of question 5 of the &quot;General additional questions&quot; and the actually determined samples of AVEM.</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>A positive relationship exists between the individual items of question 6 of the &quot;General additional questions&quot; and the actually determined samples of AVEM.</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>A positive relationship exists between the individual items of question 7 of the &quot;General additional questions&quot; and the actually determined samples of AVEM.</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Overview of the significance of hypotheses

Source: own illustration.
2. Quantitative research

2.6 Design and recommendations for action

Based on the descriptive and inductive statistics and their results, this chapter once again refers to the following underlying research questions:

1) How high is the stress level of avocational students in North Rhine-Westphalia?

2.) What are the influential factors of the degree of the personal stress level?

The AVEM-44 questionnaire provides the option to classify interviewed persons in a so-called experience and behavioural pattern. 4 possible variations exist, which could be allocated to the feature carriers:

- **Sample G**: health-promoting conduct and experience pattern
- **Sample S**: conduct and experience pattern oriented toward the preservation (or protection)
- **Sample A**: health-jeopardising conduct and experience pattern
- **Sample B**: constant experience of being overtaxed, fatigue and resignation

Tendentially, most of the 496 interviewed persons (270 persons) could be allocated to sample G. This is followed by 93 feature carriers to whom sample S applies. Risk pattern A could only be identified for 92 persons and risk pattern B for 41 persons.

This means that more than half of the interviewed persons behave health-promoting and have a principally positive attitude toward life.

In order to further answer the first underlying research question, further results could be generated through the results of the SCI questionnaire.

When measuring the current stress level - in total - 459 utilisable results were obtained. This also indicates that the stress level of the interviewed persons is relatively low. On average, 43.66 of maximally 101 points were achieved (this equates to the highest stress level).

With reference to the first underlying research question it can thus be stated that part-time students in North Rhine-Westphalia are largely exposed to rather low stress levels.

Based on this study, it can therefore be established that health-promoting additional offers of the employer are not necessarily required and productive for all part-time

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students. However, there are also persons within the target group whose health is at a considerable risk. Nonetheless, according to the study, 26.8 % of the feature carriers could be allocated to a risk pattern (see dissertation chapter 5.2.4.4). The objective of the company has to be to identify and sensitise these employees at risk - if necessary, by applying suitable questionnaire instruments - and to implement individual, preventive and protective measures.

By answering the second underlying research question, reference is made below to the reasons for and the impact factors on stress.

**What are the influential factors of the degree of the personal stress level?**

Avocational students, who apply active and independent coping behaviour and who receive social support, experience a rather low stress level. However, if the affected persons use alcohol or drugs as coping methods, it has a negative impact on the stress level. The religious coping method "Support in Faith" is applied by few students and is rather irrelevant for the target group.21

It was furthermore possible to verify that the funding of the studies by the employer has a significantly large impact on the stress level of the employees (see dissertation hypothesis 11). Therefore, if a company is financially involved in the academic plans of its employee, it has a positive impact on his stress perception.

Likewise, it was possible to verify significantly that full-time employees have a higher stress level (see dissertation hypothesis 7). With the increase of the occupational workload, the stress level thus inevitably increases. Conversely, in most cases, a higher net income is achieved the more hours are invested in work. In this context, it was also possible to prove that a higher net income leads significantly often also to an increase of the stress level (see dissertation hypothesis 9).

For companies, this allows the conclusion that these employees are at a particular stress risk during the study phase. During this period of double load, their academic and professional development should be closely monitored.

The age of the students also influences their perception of stress (see dissertation hypothesis 5). The older an employee who participates in academic training, the more

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21 See dissertation chapter 5.2.4.4.
they are affected by stress. This means that the personnel training should commence as early as possible for ambitious employees and particularly for the 'high potentials' in order to provide protection from possible overtaxing. Furthermore, the reason/motive for studies is also associated with the personal stress level (see dissertation hypothesis 10). Thus, there are positive effects, which induce intrinsic motives such as the 'expansion of occupational competencies' and the 'interest in specialist contents', but also the intrinsic motive of 'recommendation/request of the company', which was also the decisive factor for the pro study decision in most of the lesser stressed students. Hypothesis 8 provided the realisation that lesser stress-affected employees (sample G) are particularly represented in companies with more than 1,000 employees. Reason for this could be a professionally organised environment as well as the fact that large companies are better equipped to promote their employees financially. However, the derivation of a recommendation for action at this point is rather difficult.
3  Summary

3.1  Target achievement

The subject and objective raised in the introduction could ultimately be processed, analysed and evaluated.

Both underlying research questions:

1) How high is the stress level of avocational students in North Rhine-Westphalia?
2.) What are the influential factors of the degree of the personal stress level?

could be answered. Based on the theoretical fundamentals (see dissertation chapters 2, 3 and 4) and the results of quantitative research (see dissertation chapter 5), specific and comprehensive recommendations for action could be provided to the companies and employees in chapter 5.2.5 of the dissertation.

3.2  Future perspectives

The health system is currently undergoing a change. In the past, the focus mainly was in the treatment of illnesses. Today, the awareness of people for the preservation of health is more pronounced. Thus the people's interest in areas of healthy diets or physical fitness has increased during the past years.\textsuperscript{22} Health is generally considered a resource, which leads to the relief of social systems, if available.\textsuperscript{23}

For companies, the health of its employees will increase in importance also in the future and will take on greater value as - as described in the context of this dissertation - the corporate success is also influenced by the health resources of the employees in an environment of lacking experts and demographic changes.\textsuperscript{24} Next to the health aspect, the value drivers of a successful company in the area of Human resources lie in the segments 'motivation' and 'good education'.\textsuperscript{25} At best, an employee can combine all value drivers within himself.

In the course of above-mentioned developments, the so-called 'corporate health management' (BGM) has been established particularly in large companies for quite

\textsuperscript{23} Franke, A. (2012), page 10.
some time. Here, the activities of the corporate health management are "controlled and coordinated by [corporate management] with management methodologies and implements them in the company organisation\textsuperscript{26}. Particularly the sections 'prevention' and 'protective factors' are defined as company-specific tasks in addition to 'risk reduction'.\textsuperscript{27} However, this also includes the control of efficiency and feasibility of executed measures in order to allow an economic application of financial investments.\textsuperscript{28}

According to a survey among 556 companies conducted by the University of Applied Sciences for technology and economy Berlin and the Humboldt-University in Berlin in 2014, the relevance of BGM will increase substantially in the future.\textsuperscript{29} However, this is not a unilateral future task of companies in the context of health promotion. Rather, a successful implementation of measures is only possible in cooperation with employees who extensively acquire helpful and necessary competences themselves and who responsibly take care of their personal health.\textsuperscript{30} It is important to ensure so-called job-fitness, which is nothing more than the employability of staff.\textsuperscript{31} In this context, the term employability is used increasingly.\textsuperscript{32}

According to Rump and Eilers, companies who want to maintain this employability of staff should act according to the following principles in their personnel development:

\begin{itemize}
  \item "Promotion of 'lifelong learning'
  \item Taking on responsibility for the personal advanced education by the employees
  \item Target-group-differentiated further education [offering]
  \item Mediation of professional and interdisciplinary competencies as well as
  \item integration of work-related subject areas into the work routine."
\end{itemize}

\textsuperscript{27} See Uhle, T., Treier, M. (2015), page 7.
Summary

In the course of increasing stress levels, performance and competition pressure - particularly in the work environment -, this task will not become easier for the parties in the future.

The "New Ways of Working" trend in the professional environment offers many opportunities for fulfilled working; however, it demands the correct handling of employees and executives with the newly acquired flexibility of many working areas. These developments also have to be promoted and monitored in the context of a strategic corporate health management.

The working environment is also expecting great changes on a demographic aspect. The number of gainfully employed will drop drastically. This will result in the "War for Talents" being fought with greater strategy and possibly more aggressive.

34 New Ways of Working is a trend from the working environment. One main component of this trend comprises the flexibility of working processes. See Aflerbach, T., Gläsener, K.M. (2016), page 171.
Bibliography

This booklet uses literature which is a part of the bibliography of the dissertation itself. The author refers to this bibliography within the dissertation because due to the formal rules and regulations this booklet should only the publications by the author. The following chronological descending numeration does not contain any editorship’s.


