Innovative work design in the hotel industry - effects of a team intervention on team productivity, job crafting and work engagement

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Abstract

The Productivity Measurement and Enhancement System (ProMES) was introduced in four departments of a hotel. We assumed that the introduction of ProMES would lead to a productivity improvement of the departments involved as well as to increased job crafting and work engagement among the participants. In line with our expectations, the multi-level analysis confirmed a positive relationship between ProMES and job crafting behaviours of employees during the feedback phase. At the same time, the introduction of ProMES revealed significant gains in productivity. However, the assumed positive relationship between ProMES and work engagement could not be confirmed.

Keywords: ProMES, job crafting, work engagement

Introduction

Hotel and restaurant industries in Germany are particularly affected by the shortage of skilled workers. In the current industry report (Dehoga-Bundesverband, 2019) of spring 2019, 60% of companies saw their biggest challenge in the recruitment of qualified personnel. At the same time, tourist offices in larger cities, set new records every year: While there were still 9.71 million city travellers in 2015 (German-speaking citizens over the age of 14), this number rose to 11.03 million in 2018 (Statista, 2019). However, the hotel and restaurant industry not only has to cope with the shortage of skilled professionals, but also with digitalisation. The hotel industry is one of the sectors most affected by digital trends such as rating portals, online booking portals, and disruptive business models like AirBnB. As a result, hotels are facing increased pressure to receiving and keeping positive reviews.

Hotel personnel not only must meet high performance standards, they are also required to develop creative and innovative solutions in order to stay competitive. From a work and organizational psychology perspective, the industry is facing a dilemma: the demands seem to be constantly increasing while resources are shrinking. According to the Job Demands Resources Model (short: JD-R; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001), this represents a critical state for individual employees, as well as for the organization as a whole. Under stress, new solutions cannot be developed. Maintaining the status quo is not enough to remain competitive. Organizations ask themselves how they can succeed in increasing the quality of services (Salanova, Agut, & Peiro, 2005), and at the same time creating working conditions that enable emotionally and physically demanding activities to be designed in a way that stressors like long working hours or work-family conflicts are reduced (Karatepe, Beirami, Bouzari, & Safavi, 2014). Moreover, is it even possible to create framework conditions in which people can outgrow, mature and thrive (Karatepe et al., 2014; Niessen, Sonnentag, & Sach, 2012)?

In this context, various studies in the performance management literature show that top-down methods are not very promising to foster work performance (O'Leary & Pulakos, 2011). From a top-down performance management perspective, employees are usually assigned a rather passive role as they are merely seen to be recipients of their job (Wrzesniewski, 2013). One promising possibility in order to foster individual growth and to establish a feedback culture, is to use bottom-up methods to link

activities to the needs of employees. The Productivity Measurement and Enhancement System (ProMES) is such a bottom-up method (Pritchard, 1990; Pritchard, Kleinbeck, & Schmidt, 1993; Pritchard, Weaver, & Ashwood, 2012). ProMES is an evidence-based management system for measuring and increasing work group performance (DeNisi & Murphy, 2017; Pritchard, Harrell, DiazGranados, & Guzman, 2008; Rousseau, 2012; Scaduto, Hunt, & Schmerling, 2015).

ProMES: Concept and current state of research

The ProMES research project started in the United States in the mid-1980s (Pritchard, Jones, Roth, Stuebing, & Ekeberg, 1988, 1989). While ProMES had primarily only been used in professional teams, by now a number of scientifically documented applications have been conducted in other areas, such as competitive sports (Roth, Young, Koenig, Schmerling, & Pritchard, 2017), or for the promotion of individual competencies (Minelli, 2008; For further information visit www.promes-icc.com). ProMES is developed bottom-up: The team members jointly decide on the most important objectives and define indicators themselves. Besides typical outcome measures, aspects measuring attitudes, behaviours, qualifications or learning of teams and group members are collected (Schmelzer, 2018). The direct supervisor is part of a design team, the top management participates in a supervisory role and provides impulses and suggestions for the design team. The team regularly receives detailed feedback based on the objectives and indicators developed and coordinated with the management (Pritchard et al., 2012).

ProMES is based on essential psychological theories such as the goal setting theory (Latham, Erez, & Locke, 1988; Latham & Locke, 2007) or the feedback intervention theory (Kluger & DeNisi, 1996). However, the methodology is essentially based on the NPI theory (Naylor, Pritchard, & Ilgen, 1980; Pritchard & Ashwood, 2008). According to the theory, motivation is a process in which a person allocates their available physical, mental and emotional resources into different actions, so that the expected satisfaction of needs, resulting from the consequences of these actions, is as high as possible. ProMES tries to directly influence this process: goals and measurement criteria are defined together as a team – a process on which basis goal achievement is made measurable and strategies can be developed to achieve these goals.

This approach pays off: In their meta-analysis (k = 83), Pritchard and colleagues (2008) report an average effect size d of the intervention on the group performance of 1.44.

Further studies have shown that ProMES also stimulates important communication and role clarification processes in the team (Pritchard et al., 1993; Przygodda, Beckmann, Kleinbeck, & Schmidt, 1995). Furthermore, ProMES also has a positive impact on psychosocial factors such as job satisfaction (Pritchard et al., 1989), team conflicts (Fuhrmann, 1999), and team climate (Agrell & Malm, 2002; Roth & Moser, 2005, 2009). It can be concluded that ProMES succeeds in promoting the performance of work groups without creating an imbalance between resources and demands among the employees involved. While most of the studies presented so far are dealing with the impact of ProMES on group effectiveness (e.g. Pritchard et al., 2008), only a few examine the effects on the individual team members. A recent study in healthcare (Arapovic-Johansson et al., 2018) reports that members of teams who worked with ProMES, did not react with an increased stress level after being exposed to a higher workload as the control group members did. Nevertheless, the number of studies investigating the question of how ProMES affects the individual team members is comparatively low. How can the effects on team productivity and climate be explained? Is the increase of team success possibly also connected with growth, learning and maturing of individual team members? Which individual attitudes and behaviours are crucial for team success and what is ultimately standing behind the idea of "working smarter, not harder" (Pritchard et al., 2012, S. 73)? The concept of job crafting (Demerouti & Bakker, 2014; Wrzesniewski & Dutton, 2001) can provide a starting point to answer this question.

Job crafting and work engagement

In the European research context, job crafting is embedded in the JD-R model (Demerouti et al., 2001; Petrou, Demerouti, Peeters, Schaufeli, & Hetland, 2012), whereby job characteristics are divided into job demands and job resources. Job demands relate to the aspects of the activity that require effort and are therefore associated with psychological and physical costs. Workplace resources, on the contrary, are the aspects of an activity that support the employee in meeting demands, achieving goals and developing personally (Demerouti et al., 2001). In this paper, job crafting is described as proactive adjustments that employees make, in order to achieve a balance between demands and resources in their work and to bring their job in line with personal needs (Tims & Bakker, 2010). Job crafting consists of three central (behavioural) strategies: seeking (structural and social) job resources (1), seeking challenging demands (2) and reducing stressful demands (3) (Petrou et al., 2012; Tims, Bakker, & Derks, 2012).

Increasing resources, such as asking for social support or feedback, has a positive impact on work engagement and on other organizational variables such as work performance (Rudolph, Lavigne, Katz, & Zacher, 2017). In addition, resources act as buffer against high job demands (Demerouti et al., 2001). Another important aspect of the JD-R model is that workplace demands do not necessarily lead to stress and negative effects on health (e.g. burnout). If demands are not stimulating or challenging, boredom or dissatisfaction can occur (Kass, Vodanovich, & Callender, 2001). Therefore, the (proactive) search for new, challenging job demands can be a very profitable strategy of individual workplace design. The third component of job crafting, i.e. the reduction of stressful demands, relates to behaviours that aim to avoid emotional, mental or physical stress. Recent research on job crafting shows that the reduction of demands is somewhat more critical as this strategy for example correlates with turnover intentions (Rudolph et al., 2017). Demerouti and Peeters (2018) therefore suggest paying attention to the optimisation of job demands (e.g. efficient working methods, time management).

In the present study, we assume that employees who influence their way of working, the work content and the resources in their environment experience the feeling of vigour, dedication and absorption, i.e. work engagement, more often (Demerouti, 2014; Rudolph, Lavigne, Katz, & Zacher, 2017). Vigour is characterised by a high level of commitment in one's own activity and a high degree of resilience. Employees who experience a high degree of dedication in their work feel involved, enthusiastic and inspired. If employees are able to concentrate, being engrossed in their work and experience difficulties to detach from work, they experience absorption (Bakker & Bal, 2010).

Not all job crafting components are equally correlated to work engagement. While Tims and colleagues (2012) were able to show that seeking challenges is positively associated with work engagement, Petrou and others (2012) proved that reducing demands correlated negatively with work engagement. However, as the JD-R model implies, promoting work engagement is always about the balance between work demands and work resources. Bakker, Hakanen, Demerouti, and Xanthopoulou (2007) were able to show that job resources had a positive effect on work engagement, especially when demands were high. Job resources, such as feedback, play an important role in intrinsic motivation as they stimulate learning and development. Consequently, basic human needs (Deci & Ryan, 2000) are met and competencies could be expanded. Furthermore, this motivational process, triggered by job resources, can increase work engagement

because individuals experience that their work allows them to use their own skills and develop on a personal level (Bakker & Bal, 2010; Tims et al., 2012).

Proactive behaviour ultimately changes the characteristics of an activity. The goal is to reach improvements by solving problems or optimising processes. Through this way, employees experience a feeling of participation, motivation and increased work engagement (Petrou et al., 2012). As part of the ProMES implementation (system development, feedback phase), team members are encouraged to question working methods, to develop new solutions to problems and to think collectively about improvements in their own work environment. During the system development, however, little of these innovative actions take place. The teams just meet once a week to develop the system (objectives and indicators). Only in the feedback phase, concrete measures are derived in order to specifically improve performance and quality aspects of the work. Despite this background, the following hypotheses are formulated:

Hypothesis 1: The members in the ProMES groups demonstrate a higher level of job crafting during the ProMES implementation, with job crafting increasing more during the feedback phase than during the system development phase.

The implementation of ProMES offers a number of job resources, such as regular feedback, social support, role clarification and participation. In the same breath, however, challenging job demands are added by defining tasks and goals together as a team and encouraging employees to collect and document data in addition to normal day-to-day activities. It is therefore assumed that work engagement for all participants increases over the course of the feedback phase.

Hypothesis 2: Work engagement increases across all participants during the feedback phase.

If the employees not only develop new solutions and suggestions for problems or rethink their previous approach to their work, but also put these new ideas into practice, this should result in increased productivity of the departments and the hotel as a whole. Since the implementation of new approaches and ideas only begins in the feedback phase, it is assumed that the presumed positive productivity effect is particularly evident in this phase.

Hypothesis 3: The introduction of the ProMES feedback has a positive effect on the productivity of the ProMES groups compared to the basic measurement.

Method

Participants and procedure

The present study was conducted during a ProMES implementation process in four departments of a medium-sized hotel (Ulrich, Roth, & Moser, 2017). A total of 30 employees filled out three different types of questionnaires: A general questionnaire at the beginning of the study, daily questionnaires during the system development phase (28 employees) and weekly questionnaires in the feedback phase (26 employees). The participants used a diary booklet to fill in the daily questionnaires. They were instructed to fill in the daily questionnaires at the end of each workday and insert the questionnaires in a closed box, emptied by the facilitators at the end of each week. In order to ensure the participants` anonymity, the employees were asked to fill in a customized code instead of any personal data. The weekly questionnaires during the feedback phase were filled out after each team conducted their feedback meeting and referred to the previous week.

The participants of the study were predominantly female (83%) and on average 31.79 years (SD = 9.59 years) old. The average tenure in the hotel was 5.52 years (SD = 4.51 years), while the participants were employed for 7.85 years (SD = 5.2 years) on average. Thirteen participants (43%) indicated German as their native language, whereas 17 subjects (57 %) reported another language for their native language. With regard to the level of education, 17% of the participants indicated a low level of education, 33% of the subjects medium and 26% of the study participants a higher level of education (17% others). Furthermore, the 30 participants worked in different departments: Five participants were part of the front desk staff, ten participants worked in housekeeping, six employees worked in the kitchen and service team, seven employees were part of the meetings and events staff and two participants were part of the hotel management.

ProMES implementation

The implementation of the ProMES method can be divided into three steps: The system development phase, baseline phase and feedback phase (Pritchard et al., 2012). The ProMES project began in October 2014 (one month before the start of the system development phase) with a kick-off event in which the project plan was presented and the mission of the ProMES project was defined. This mission statement can be viewed as a long-term goal, serving as the foundation for developing the ProMES objectives.

Based on this mission, each one of the hotel teams developed their own team vision for the next five years (see Figure 1). The team vision was presented with a poster and a vision statement.

Figure 1
ProMES implementation process
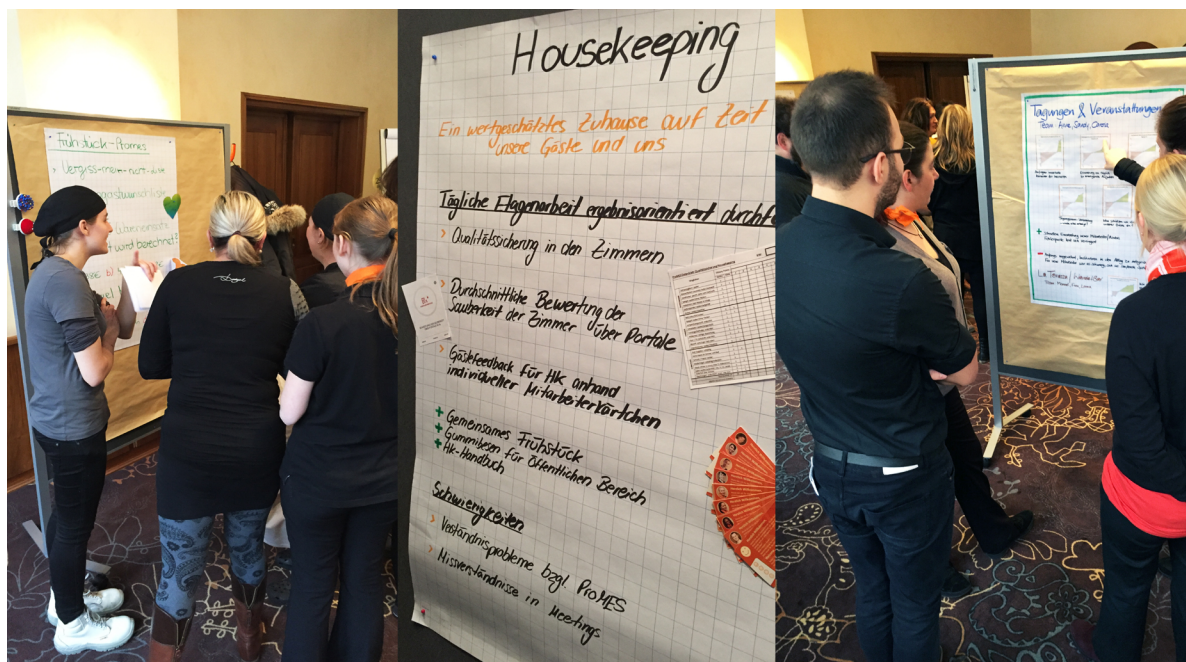
In the next step, a ProMES design team was formed for each department, which consisted of two to three employees per department due to shift work in the hotel. The system development phase began in November 2014 with weekly two-hour meetings in each team except for the management team. To ensure that each team member could participate in the ProMES development process, the participants rotated between the meetings. In general, the meetings were moderated by two external ProMES facilitators. First of all, the teams defined their team objectives, which are based on the essential tasks of the team and are formulated as a goal (e.g. objective of the front desk: "Increasing guest and organizational satisfaction"). In the next system development step, indicators were deviated for each objective. The development of indicators ensures to assess retrospectively that objectives were met (Pritchard et al., 2008). For example, the front desk team developed the indicator "Percentage of workdays with a positive evaluation" for the objective mentioned above. This indicator was operationalised using a rating box with four compartments (see Figure 2). The four compartments symbolised the combination of the perceived stress level and the satisfaction with work results

in high and low values. The participants could rate their workday by dropping a coin into one of the four possible box compartments. The participants also set minimum values, zero points and maximum values for each indicator in order to evaluate the collected data. Moreover, contingencies were developed for each indicator to ensure the comparability of the indicator measurements. Finally, the hotel management approved the indicators before they were tested in the hotel environment. Starting in mid–February 2015, the hotel teams tested their indicators in the baseline phase for six weeks without feedback meetings. The weekly feedback meetings started in mid–April 2015. To make sure that the collected data can be analysed properly, a report for each feedback meeting was created. On the basis of this data and the previously defined contingencies of each indicator, appropriate measures were deviated. Finally, the moderation and implementation of the feedback meetings was handed over to the hotel staff in May 2015.

Figure 2
Rating box for the indicator "Percentage of workdays with a positive evaluation"
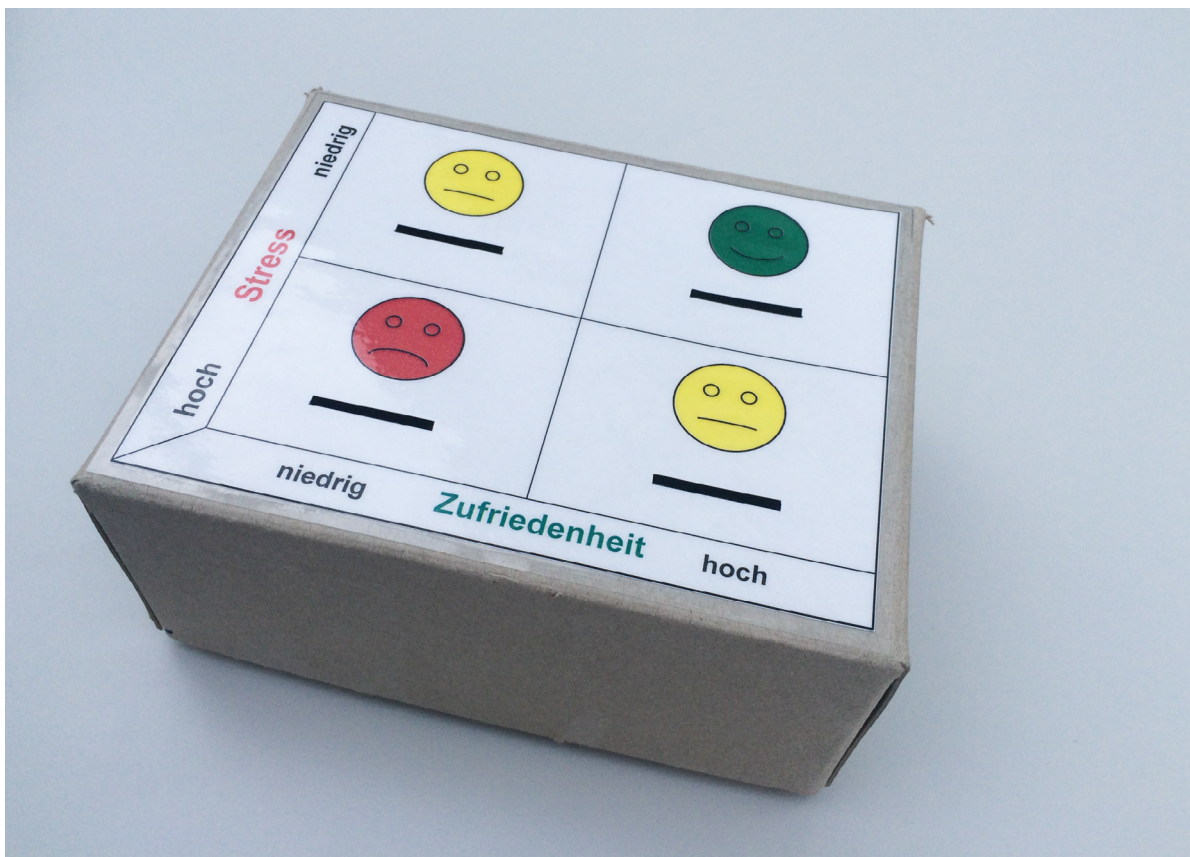
Measures

Daily job crafting

Daily job crafting was measured with ten items from Petrou and colleagues, (2012) day-level job crafting questionnaire during the system development phase. Day-level seeking resources (α = .73) consisted of four items, day-level seeking demands (α = .84) and day-level reducing demands (α= .84) included three items each. A sample item was „*Today, I have asked colleagues for advice*" (seeking resources). Participants answered on a 5-point rating scale ranged from 1 („*does not apply to me*") to 5 („*totally applies to me*"). In addition, the questionnaire was translated into German by eight independent persons. Since some participants indicated a language other than German for their native language, an English version of the questionnaire was also stored in the diary.

Weekly job crafting

Weekly job crafting was also assessed with the ten items from Petrou and colleagues, (2012) day-level job crafting questionnaire during the feedback phase. However, the wording of the items was adapted to the weekly evaluation. A sample item was „*Last week, I have asked for more tasks if I finish my work*". Participants answered on a 5-point rating scale ranged from 1 („*(almost) never*") to 5 („*often*").

Work engagement

Work engagement was assessed with the German version of the *Utrecht Work Engagement Scale* (UWES; Schaufeli, Bakker, & Salanova, 2006) on a weekly basis during the feedback phase. The UWES consists of 17 items representing the three subscales vigour, dedication and absorption. Participants answered on a 7-point rating scale ranged from 1 („*no, does not apply to me*") to 7 („*yes, totally applies to me*"). The wording of the items had also been adapted to the weekly assessment. Hence, a sample item was "*Last week, at work, I felt bursting with energy*".

Control variables

In order to rule out a possible confounding influence on the examined relationships, we controlled for age and gender. The control variables were collected in the general questionnaire at the beginning of the study.

Data analysis

The data has a hierarchical structure with two levels, whereas repeating measurements (Level-1; 905 measurement occasions) are nested within participants (Level-2; 30 participants; Hox, 2002). In order to analyse the hypotheses, we conducted multilevel analyses using R (R Development Core Team, 2003). Level-1 variables were centred around the respective group mean. Level-2 variables were centred around the grand mean.

Results

Descriptive statistics

Table 1 shows the mean values, standard deviations and intercorrelations of the examined variables. Contrary to previous studies (Bakker & Demerouti, 2007; Hakanen, Schaufeli & Ahola, 2008; Petrou et al., 2012), no significant positive correlation between job crafting and work engagement could be confirmed (r = −.01, n. s.).

Table 1
Mean values, standard deviations and intercorrelations

	Variable	M	SD	1	2	3
1	Age	32.8	9.16			
2	Gender[a]	0.88	0.33	.25**		
3	Job Crafting	2.55	0.60	-.53**	-.40**	
4	Work Engagement	5.34	0.50	.20**	.00	-.01

Note. N = 905 measurement occasions, N = 30 participants; [a] 0 = male, 1 = female; * indicates p < .05, ** indicates p < .01.

Hypothesis testing

Job crafting and work engagement

Hypothesis 1 assumed that participants should report a higher level of job crafting during the ProMES implementation, with job crafting increasing more during the feedback phase than during the system development phase. The results of the multi-level analysis reveal an insignificant negative relationship between the system development phase and job crafting (b = −0.08, *n.s.*). Concerning the feedback phase,

the analysis confirms a significant positive relationship between the feedback phase and job crafting (b = 0.81, *p* <.01; see Table 3). As a result, job crafting tends to decrease slightly during the system development phase and increase during the feedback phase, which confirms hypothesis 1.

Table 2
Multi-level analysis predicting job crafting separated by ProMES phases

Model	1			2		
variables	b	SE	t	b	SE	t
Intercept	3.67	0.44	8.42**	3.86	0.41	9.33**
Age	-0.03	0.01	-2.08*	-0.03	0.01	-2.24*
Gender[a]	-0.46	0.34	-1.37	-0.50	0.32	-1.57
Day[b]	0.00	0.00	3.54**	-0.00	0.00	-1.66
System development				-0.08	0.06	1.31
Feedback phase				0.81	0.13	6.15**
-2 x log		1273			1208	
Δ - 2 x log					65	

Note. *N* = 737 measurement occasions; *N* = 24 participants; [a] 0 = male, 1 = female; [b] Days in the ProMES process; * indicates *p* < .05, ** indicates *p* < .01.

Hypothesis 2 assumed a positive relationship between the ProMES implementation and work engagement during the feedback phase. However, as can be seen in Table 4, contrary to expectations, no significant positive correlation can be confirmed (b = 0.00, *n.s.*). This means that the volunteers' work engagement does not increase during the feedback phase. Hypothesis 2 must therefore be rejected.

Table 3
Multi-level analysis predicting work engagement during feedback phase

Model	1			2		
variables	b	SE	t	b	SE	t
Intercept	3.73	0.66	5.68**	3.49	0.74	4.73**
Age	0.05	0.02	2.51*	0.05	0.02	2.54*
Gender[a]	-0.12	0.50	-0.24	-0.17	0.51	-0.33
Day[b]				0.00	0.02	0.72
-2 x log		290			289	
Δ - 2 x log					1	

Note. *N* = 142 measurement occasions; *N* = 24 participants; [a] 0 = male, 1 = female; [b] Days in the ProMES process; * indicates *p* < .05, ** indicates *p* < .01.

Productivity effects

The third hypothesis of the present study assumed that the introduction of feedback during the feedback phase has a positive effect on the productivity of the hotel compared to the baseline measurement. To answer the hypothesis, the effect sizes for the ProMES system were calculated. An effect size (Cohen's d) of 0.84 was achieved across all teams, which can be interpreted as a large effect (Cohen, 1988). With regard to the individual departments, positive effects were achieved. The meeting and event team achieved an effect size of 0.33, the front desk team an effect size of 0.77, housekeeping an effect size of 1.41, and the kitchen and service departments an effect size of 0.85. Overall, the results revealed that the introduction of the ProMES method can be successful in the hotel industry and at the same time leads to productivity gains. Hypothesis 3 can thus be confirmed.

Discussion

The present diary study examined to what extent participants demonstrate proactive behaviour at work, so-called job crafting, in the course of a ProMES team intervention and in turn experience increased work engagement (i.e. vigour, dedication and absorption). In addition, it was investigated if ProMES can be used successfully in the hotel and restaurant industry and whether it is possible to establish a ProMES system over a longer period of time. Finally, it was examined whether ProMES leads to substantial productivity gains in the departments involved.

Job crafting

Over the course of the implementation of the ProMES method, a significant increase in job crafting behaviour across all participants was observed. However, this effect could only be confirmed during the feedback phase, but not during the system development phase. From a practical point of view, this makes perfect sense, as the feedback phase in Lewin's theory is a "moving" phase (Lewin, 1948). In the moving phase new things are tried, old and inefficient habits are removed and space for innovation and change is made. Therefore, the information provided at the group level in the feedback process was apparently used by the individual team members to adapt and change their own work behaviour. However, during the system development phase, clarification processes regarding roles, tasks and goals (Pritchard et al., 1989) take place, while usual activities are still carried out according to traditional procedures.

Work engagement

With regard to work engagement the results are somewhat surprising at a first glance, since various studies have shown that job crafting is associated with increased work engagement (Petrou et al., 2012; Schaufeli & Bakker, 2004). Why work engagement did not increase over the course of the ProMES implementation could be due to the fact that certain variables, e.g. the individual work performance, had not been considered as control variables. A study by Bakker and Bal (2010) verified a positive correlation between individual work performance and work engagement. In the study from Bakker and Bal (2010), performance was measured using a four-item questionnaire. In the present study, the performance data was measured on a group level, but not at the individual level. At least it can be said that the teams with the greatest effect sizes in the ProMES data, namely the housekeeping team (d = 1.41) and the kitchen and service team (d = .85), also achieved the highest values in work engagement. Another possible explanation for the non-significant result could be a ceiling effect, meaning that work engagement was already at a high level before the ProMES process began. Thus, the implementation of ProMES would possibly result only in a slight or no further increase in work engagement.

Productivity

The results showed that the ProMES method could successfully be implemented in all departments involved. Furthermore, the sustainable continuation of the feedback process should be mentioned here. In the meantime, continuous feedback data from the departments involved (and other additional established groups in the hotel) are available from February 2015 to December 2019 (see Figure 3). During the study, all teams showed medium to very strong effects on the productivity indicators. Overall, the value was at an effect size d of 0.84, which can be interpreted as a strong intervention effect to promote productivity in organizations (Hunter & Schmidt, 1983). However, the results are somewhat below the average effect size of (d = 1.44) published in a ProMES meta-analysis (Pritchard et al., 2008) across 88 ProMES interventions.

Figure 3

Productivity trend (mean values) across all teams from February 2015 until August 2019
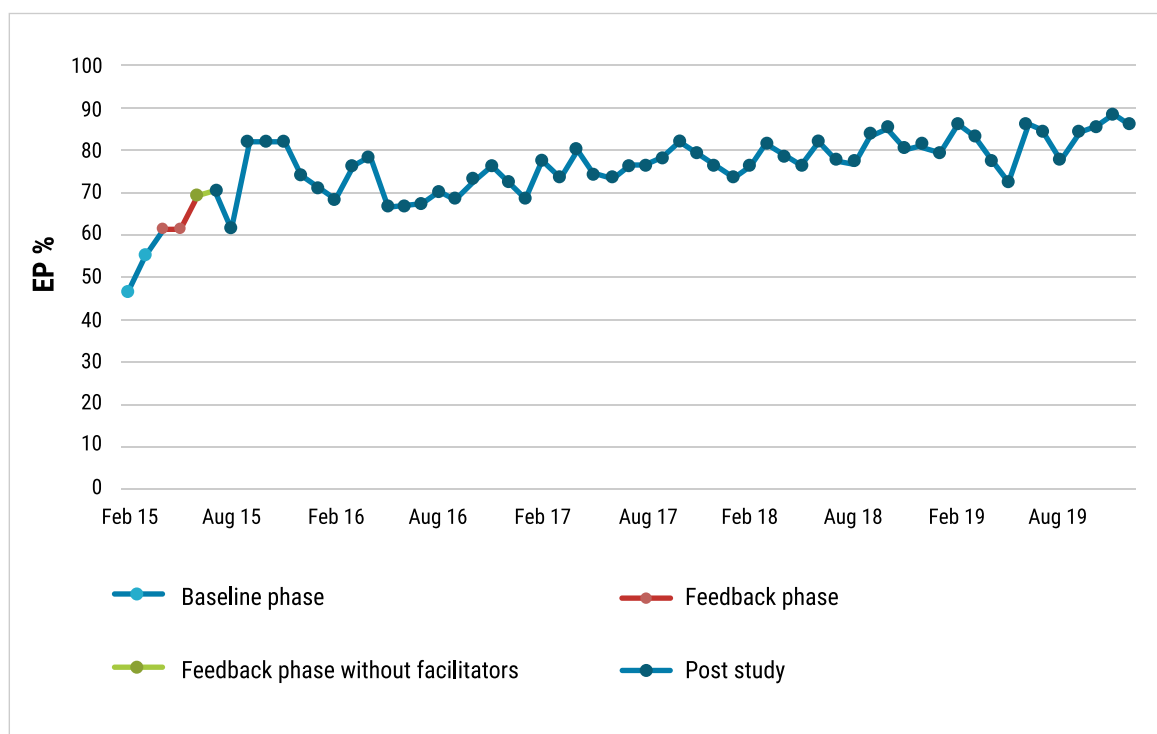
Note. EP % refers to the proportion of the achieved effectiveness points of the maximum achievable effectiveness points across all departments.

Limitations

The present study has three limitations. First, the sample of the study consisted exclusively of similar employees of a privately-run hotel. Most of the participants were female and had comparable qualifications. This high degree of homogeneity in the sample limits the generalisability of the study results. Further research efforts are necessary in order to be able to apply the results of the study to other contexts and professional groups. Second, the hypothesis-relevant variables were collected by the participants themselves, using self-reports, which increases the probability of measurement errors (common method bias; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). However, research in the area of diary studies has shown that the cognitive processing activity of test subjects is very low when filling in the daily questionnaires (Bakker & Bal, 2010). Participants therefore rather report their current feelings than spending additional time for a precise consideration of their response (Robinson & Clore, 2002). This should mitigate the occurrence of common method bias in the response behaviour. Third, the reference point of the job crafting scale changed

across the study, making it more likely that the measurement would be distorted. While the assessment of job crafting was first executed on a daily basis in the system development phase, the feedback phase was characterised by a weekly assessment. At the same time, the English version of the job crafting questionnaire was translated into German by a small number of people, which could have further increased the occurrence of measurement errors.

Practical implications and outlook

The findings of the current study provide valuable insights for the further development of the ProMES method. If job crafting emerges more during the feedback phase, individual indicators could be tested in a more agile process during the system development. Therefore, it can be assumed that job crafting behaviours that are conducive to individual growth and personal learning are stimulated earlier in the process. However, changes to the process should always be treated with caution, as Pritchard and colleagues (2008) were able to show in their meta-analysis that the ProMES effect size decreased when the method was changed or adapted by ProMES users. At least with regard to the observed increase in job crafting behaviour, it can be concluded that the ProMES method stimulates personal growth, learning and maturing in the sense of "thriving" (Niessen et al., 2012). The employees involved increased their activities in terms of seeking resources (e.g. getting support from colleagues), reducing demands (e.g. preventing posture-damaging postures when lifting) and seeking challenges (e.g. voluntary adjustment of the bar menu in summer). In addition, the employees "crafted" cognitively (Wrzesniewski & Dutton, 2001). For example, the self-perception of the housekeeping team has changed from "We are only the cleaning service" to a team vision saying "We are responsible for the well-being of our guests and our colleagues".

With regard to the non-existent positive effect on work engagement, future research should consider individual work performance on the one hand, and potentially mediating variables, such as participatory safety in teams, on the other hand (West, 2004). It is obvious that the effect of a team-based intervention on the individual work experience is also mediated by group dynamics. Salanova and colleagues (2005) were able to proof that work engagement predicted the service climate in a hotel. In the ProMES process, this effect could be reversed: If the team climate is stimulated according to existing research during system development (Roth & Moser, 2009), this could have a positive effect on future work engagement. Another possible explanation

for the non-observable work engagement effect could be the short observation period. Work engagement emerges as a result of successful change processes (Petrou et al., 2012). If employees see an organizational change as a positive challenge and they manage to master it successfully (e.g. with job crafting), then this should also affect the work engagement of the people involved in the long run. To be precise, the introduction of ProMES is a change process in which the responsibility for measuring, assessing and promoting team performance is transferred to the team members. The change goes far beyond the first feedback phases and continues until this day. In future studies, it is recommended to continuously collect data on aspects such as work engagement over a longer period of time. This can also provide important information for the decision making in companies (e.g. continuation or termination of the procedure). Basically, it can be concluded that an introduction of ProMES in the hotel and restaurant industry is definitely recommended. The participants quickly find suitable feedback criteria and therefore collect data, which is already available in the daily routine. The frequent feedback sessions ensure regular communication within and between the teams, but also with the hotel management. Consequently, there is a high level of transparency and a good basis for joint decision making. Due to the unconfirmed hypothesis on work engagement, it remains largely unanswered whether ProMES also leads to health-promoting outcomes in addition to performance-enhancing consequences. Further research is needed to clarify this question. From a practical point of view, however, ProMES has already had an impact on health aspects for the hotel employees involved. Thus, in addition to the existing ProMES systems, a system called "Health in the hotel" was implemented, in which a cross-functional team called "Lab Team Health" continuously records, reports and improves health aspects of the hotel staff. Employee-initiated measures, such as the "Wall of Positive Energy", a collective mindfulness board, help employees collect positive experiences in their everyday hotel life (e.g. nice conversation with guests, get support from colleagues) and share them with colleagues and guests on a magnetic wall, accessible to the public in the hotel as well. Overall, the introduction of ProMES in combination with a positive and mutually respectful corporate culture has created an innovative environment. Considering the challenges in the hotel market in Germany described in the beginning, employee turnover is far below the industry average today. Nevertheless, the challenges for management and personnel remain high: The trend towards city trips continues, as does the competition for qualified and motivated personnel. Reason enough to repeatedly take a critical look at the question of how working together and individual and organizational growth can further be promoted.

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