



Article

The Importance of Self-Leadership Strategies and Psychological Safety for Well-Being in the Context of Enforced Remote Work

Kirsi Sjöblom ^{*}, Soile Juutinen and Anne Mäkikangas 

Work Research Centre, Tampere University, 33014 Tampere, Finland; soile.juutinen@tuni.fi (S.J.); anne.makikangas@tuni.fi (A.M.)

* Correspondence: kirsi.sjoblom@tuni.fi

Abstract: This study examines the relationship between self-leadership strategies and occupational well-being and whether psychological safety has moderated these relationships in the context of enforced remote work caused by COVID-19. Altogether, 2493 higher education employees, most of whom were working entirely remotely due to the pandemic, responded to an electronic survey in May 2021. Hierarchical multiple linear regression analyses were conducted as the main method of analysis. The results showed that goal-oriented and well-being-related self-leadership strategies as well as psychological safety were positively related to meaningfulness of work and negatively to job burnout. Psychological safety moderated the relation between goal-oriented self-leadership strategies and meaningfulness of work. The study presents much-needed novel knowledge about self-leadership and psychological safety in the context of remote work and sheds light on the interrelatedness between self-leadership strategies, psychological safety, and occupational well-being. It presents a novel category of well-being-related self-leadership strategies and contributes to the measurement of both self-leadership and psychological safety. In order to both enable sufficient well-being and facilitate flourishing at work, it is imperative to support employees in learning and applying diverse self-leadership strategies as well as ensure psychological safety at workplace, especially in post-pandemic multi-locational work.

Keywords: self-leadership; psychological safety; COVID-19; remote work; multi-locational work; well-being; meaningfulness; burnout; work and organizational psychology; occupational health



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1. Introduction

As a large and ever-growing proportion of work is multi-locational, knowledge-intensive, and highly autonomous in nature, individual employees' proactive skills in leading and managing their own work become crucial [1,2]. This has become particularly evident along with the dramatic increase in remote work during the COVID-19 pandemic, but the phenomenon itself is not limited to these exceptional conditions but rather was already there [3,4]. It has been predicted that flexible and distributed working arrangements will also continue to be a much-used form of working in the post-pandemic era [5]. Therefore, there is an evident need for a better understanding of self-leadership and its prerequisites in multi-locational work.

This study examines self-leadership in the conditions of enforced remote work during the COVID-19 pandemic, during which a large proportion of knowledge workers were working remotely full-time. Remote work refers to work taking place outside the main office [2]. Many of the studies from the pandemic era have used either this term or teleworking [6,7], perhaps because in the exceptional conditions, a significant proportion of the work has been carried out at home rather than at multiple locations. More broadly, multi-locational work refers to work that is carried out in many different locations, such as office, home, public spaces, and mobile locations such as cars or trains, and it was fairly common even before the pandemic [8].

This study contributes to the current knowledge on self-leadership in three crucial ways. First, even though self-leadership is particularly important in remote work [3,9,10], and the remote working conditions may challenge productivity in many ways [11], research in this context is sparse. There exists evidence showing that employees engage in self-goal setting more often when working at home, which leads to higher job satisfaction [3]. These findings demonstrate the accentuated need for both self-leadership in remote work and for further research on the topic.

Second, even though self-leadership has traditionally included several different categories of self-leadership strategies, they have not included strategies related to *well-being*. Employee well-being and appropriate balance between effort and recovery is a focal challenge in today's working life [2,12–17]. Along with the increasingly autonomous role of employees, in remote working in particular, this constitutes a novel area needed in the self-leadership literature. In this study, we focus on two essential dimensions of self-leadership that support both productive and sustainable work: goal-oriented and well-being-related self-leadership strategies, defined in detail in the section *Self-leadership and occupational well-being*. We examine the relations between these two categories of self-leadership and the well-being outcomes of interest, namely meaningfulness of work and burnout.

Third, even though research on self-leadership has been active since the 1980s, the prerequisites for effective self-leadership are yet to be defined more closely. There is established knowledge on several determinants of self-leadership, but the role of psychological safety in facilitating it has not been researched. Psychological safety essentially supports a culture of initiative and active roles for individuals at the workplace [18] and has been shown to play a central role in many positive workplace behaviors [19]. Therefore, there is reason to believe that it may create a fruitful environment for proactive self-leadership behavior as well and plausibly moderate the relationship between individual employees' self-leadership behavior and workplace well-being (meaningfulness of work, burnout)—mechanisms examined in the current study.

In the following, we first introduce the concept of self-leadership and also review the relevant existing research on it. Then, we proceed to elaborate on the topic of psychological safety and on the grounds for it functioning as a facilitator of occupational well-being and a possible moderator between self-leadership and well-being.

1.1. Self-Leadership and Occupational Well-Being

Self-leadership is defined as a process of self-influence through which people achieve the self-direction and self-motivation necessary to perform [20,21]. It consists of specific behavioral and cognitive strategies designed to positively influence personal effectiveness [22]. Different kinds of self-leadership strategies have often been grouped into behavior-focused strategies, natural reward strategies, and constructive thought-pattern strategies [21–23].

Behavior-focused self-leadership strategies strive to heighten an individual's self-awareness in order to facilitate behavior management, especially regarding necessary but unpleasant tasks [21]. They include self-observation, self-goal-setting, self-reward, self-punishment, and self-cueing. Behavior-focused strategies are aimed to encourage positive, desirable behaviors that lead to successful outcomes and to suppress negative, undesirable behaviors that lead to unsuccessful outcomes [22].

Natural reward self-leadership strategies focus on creating situations in which one is motivated or rewarded by inherently enjoyable aspects of the activity [21,22]. This can be done by either building more pleasant and enjoyable features into the task itself so that it becomes naturally rewarding, or by directing attention away from the unpleasant aspects of a task and focusing it on the task's inherently rewarding aspects. Natural reward strategies aim to create experiences of competence and self-determination, which in turn energize performance-enhancing behaviors [22].

Finally, constructive-thought-pattern strategies are about facilitating the formation of thought patterns and ways of thinking that can positively impact performance [21,24,25]. They include positive self-talk; mental imagery, such as envisioning a successful perfor-

mance of an activity in advance of the actual performance; and identifying and replacing dysfunctional beliefs and assumptions with more constructive ones [22].

In this study, we focus on two essential dimensions of self-leadership that are assumed to support productive, sustainable work: goal-oriented self-leadership strategies and well-being-related self-leadership strategies. Goal-oriented self-leadership strategies include behavior-focused strategies such as self-goal setting (setting clear goals for one's work performance), self-observation (monitoring one's progress), and self-leading one's work and focus on a practical level (identifying, planning and scheduling one's primary tasks). Earlier research shows that goal-oriented leadership, that is, setting challenging and specific goals, can significantly enhance individual performance [26,27] and that in order for the process of achieving goals to progress well, self-observation is necessary in monitoring one's own progress in the task pursued and choosing effective ways to proceed [21].

Furthermore, as a specific feature of today's multi-locational and knowledge-intensive work, in order for it to be effective and sustainable, it essentially requires managing mental workload factors [2,28]. Mental overload and stress are a common challenge among employees, and certain aspects of novel work environments have been found to potentially risk employee health and well-being [2,14,29,30]. It is crucial for the effectiveness of employees to be able to maintain and replenish their mental and physical resources available for work on a daily basis. Based on these perspectives, we view well-being-related self-leadership strategies as an integral part of essential self-leadership practices and suggest that it is necessary to include them to update the concept to better meet the needs of today's working life. In this study, well-being-related self-leadership strategies include one's practices related to vigor and recovery, such as taking care of physical well-being and sufficient recovery at work from the perspective of ergonomics, exercise, breaks, and nutrition, as well as ensuring sufficient rest daily.

Research on self-leadership has focused specifically on different kinds of organizational phenomena and performance outcomes, such as self-leading teams, empowering leadership, and goal performance [22]. Self-leadership has also been studied as an antecedent of occupational well-being: it has been found to be positively related to work engagement, self-efficacy, subjective well-being, and job satisfaction [31–33] and negatively to stress, anxiety, burnout, and workaholism [34–36]. However, there is so far only one study looking into the direct relationship between self-leadership and burnout [34], and there are no studies scrutinizing the relationship between self-leadership and meaningfulness of work. In this respect, the present study makes an unequivocally novel contribution to the field of self-leadership research.

The concept of self-leadership itself partly overlaps with other concepts relevant to research into well-being. Many self-leadership strategies are founded upon other established theories and concepts of motivation and self-influence, such as intrinsic motivation and self-regulation [22,37,38]. Similarly, the general self-determined nature of self-leadership behavior is likely to be linked to autonomous motivation, which, according to a large body of research, is known to be a strong antecedent of various well-being outcomes [22,38–40].

In addition to the general self-determined and well-being supportive nature of self-leadership behavior, utilizing goal-oriented self-leadership strategies, and regularly identifying one's most essential tasks and best practices in approaching them is likely to lead to more successful outcomes at work, to a better awareness of the importance of one's work, and to an appropriate input to one's work, as opposed to reacting in a more passive way to the many and varying expectations and stimuli of the environment on a daily basis. Utilizing well-being-related strategies, on the other hand, is essential for sufficient recovery at work and, as such, prevents an excessively consuming experience of work and is also likely to support experiences of enjoying one's work. These aspects are likely to be linked to the well-being outcomes of this study, namely burnout and meaningfulness of work. Burnout, representing a negative well-being outcome in the study, is defined as a multi-dimensional stress syndrome consisting of mental fatigue (exhaustion); negative, cynical attitudes and feelings related to one's work (cynicism); and a tendency to evaluate oneself

negatively with regard to one's work and professional competence (reduced personal efficacy) [41]. Meaningfulness, representing a positive well-being outcome in the study, is defined as the value of a work goal or purpose, judged in relation to an individual's own ideals or standards [42,43]. It has been argued that individuals have a primary motive to seek meaning in their work [44] and that work experienced as meaningful facilitates both personal growth and motivation for work [45].

Based on the aforementioned aspects on relations between self-leadership and well-being, we expected that:

Hypothesis 1. *Goal-oriented self-leadership strategies are positively related to meaningfulness.*

Hypothesis 2. *Goal-oriented self-leadership strategies are negatively related to burnout.*

Hypothesis 3. *Well-being-related self-leadership strategies are positively related to meaningfulness.*

Hypothesis 4. *Well-being-related self-leadership strategies are negatively related to burnout.*

1.2. Psychological Safety as a Facilitator and Moderator between Self-Leadership and Occupational Well-Being

Today's working life requires individual employees to be in an active role, to speak up, to initiate new ideas, and to constantly learn what they do not already know; however, in a world of complex problems, this usually involves the risk of making mistakes and being imperfect, possibly appearing in an unfavorable light in the eyes of others. This is where psychological safety becomes focal: it enables employees to "feel safe at work in order to grow, learn, contribute, and perform effectively in a rapidly changing world" [18]. Furthermore, the increasingly common remote work conditions call for research on psychological safety in this specific context, as it is likely to create specific needs and challenges compared to the more traditional working conditions in which earlier research has been conducted. Therefore, we examine the role of psychological safety in self-leadership behavior and well-being outcomes. Earlier research shows that both psychological safety and self-leadership are linked to leadership style and team characteristics as well as to various well-being outcomes [19,22,46,47], but the interrelations between these concepts have so far received little attention.

Initially, psychological safety was identified as a cognitive state necessary for learning and change to take place and essential for making people feel secure and capable of changing their behavior in response to shifting organizational challenges [48], and it was later defined as individuals' perceptions as to whether they are comfortable and willing to employ and express themselves without fear of negative consequences to self-image, status, or career [49]. Currently, the most well-known definition of psychological safety is the more recent one by Edmondson [50], defining psychological safety as a shared belief held by members of a team that the team is safe for interpersonal risk-taking. It is measured by a scale that captures perceptions as to whether team members believe that others will not reject them for being themselves, team members care about each other as individuals, have positive intentions to one another, and respect the competence of others [19,50].

In this study, we focused on the psychological safety of the immediate work community rather than that of the team, as in today's working life it is common for individuals to be working simultaneously in several different teams. In our operationalization of the psychological safety of the immediate work community, in addition to focal elements from Edmondson's team psychological safety scale, we also included aspects explicitly emphasizing the culture regarding mistakes and failures, as well as immediate work community members' attentiveness to each other's well-being.

Psychological safety has been shown to be positively related to work engagement [46,50–52] and positive job attitudes such as commitment and job satisfaction [46,49,53,54]. Very few studies have traced the direct relationship between psychological safety and the well-being outcomes of this study, namely burnout and meaningfulness. Psychological safety has

been found to be negatively related to the burnout dimension of emotional exhaustion as well as depersonalization [55]. It has also been shown to mediate the relationship between leadership style and burnout [56] and psychological distress [57]. A team-focused burnout intervention approach that focused on encouraging communication and psychological safety resulted in improved teamwork and reduced burnout [58]. Thus, there is preliminary evidence of an inverse relationship between burnout and psychological safety, although more comprehensive research on the topic and the exact nature of the relationship is still needed.

Meaningfulness, on the other hand, has mostly been studied as a parallel construct to psychological safety; for example, the early study by Kahn [49] already described the three psychological conditions of meaningfulness, psychological safety, and availability, relating to how people engage or disengage at work. Many subsequent studies have looked at meaningfulness, psychological safety, and availability as determinants of engagement or other working life phenomena of interest, either as direct antecedents or as mediators, but not at their interrelations [42,59–61].

In the present study, we examine psychological safety, both as a direct antecedent of meaningfulness and burnout and as a potential moderator of the relationship between employees' self-leadership behavior and the well-being outcomes. Psychological safety is focal in supporting individuals' active role at the workplace, and it has shown to be related to proactive workplace behaviors such as learning behavior, creativity, and innovation [19]. Therefore, it may also create a supportive environment for proactive self-leadership behavior and in fact even be a boundary condition for this kind of behavior to take place. As a similar finding, research has shown that a leadership style that is empowering and facilitates individual and team self-leadership is usually a necessary component of effective self-leadership in practice [47,62–64]. This overlaps with psychological safety: both empowering leadership and psychological safety give employees important indications of trust in their abilities and judgement as well as encouragement in being in an active and independent role, which is likely to be of focal importance for self-leadership behavior to take place. Based on these findings, we expected that:

Hypothesis 5. *Psychological safety is positively related to meaningfulness.*

Hypothesis 6. *Psychological safety is negatively related to burnout.*

Hypothesis 7. *Psychological safety moderates the positive relation between goal-oriented and well-being-related self-leadership strategies and meaningfulness. That is, the relationship between self-leadership strategies and meaningfulness is stronger in the case of high (vs. low) psychological safety.*

Hypothesis 8. *Psychological safety moderates the negative relation between goal-oriented and well-being-related self-leadership strategies and burnout. That is, the negative relationship between self-leadership strategies and burnout is stronger in the case of high (vs. low) psychological safety.*

The conceptual model of the study is presented in Figure 1.

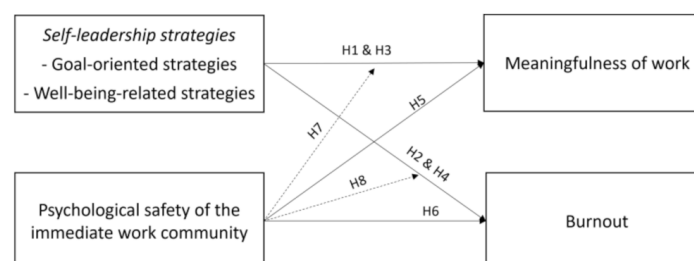


Figure 1. Conceptual model of the study and hypotheses tested. Dashed lines indicate the moderator effects hypothesized.

2. Method

2.1. Participants and Procedures

The data used in this study were collected from the employees of three Finnish universities as a part of the research project “Safely remotely—occupational well-being and its management in telework”, funded by the Finnish Work Environment Fund. The project examines higher education employees’ experiences of COVID-19-induced remote work, focusing especially on leadership practices and well-being.

The electronic LimeSurvey tool was used to collect the data, and the employees were informed about the survey before it was sent to them. Invitations to participate in the survey and two reminders were sent to the work email addresses of 12120 employees through mailing lists. The survey was available from 12 April to 3 May 2021. Altogether 3543 employees participated in the survey; the response rate was 29%.

The present sample ($n = 2493$) consists of members of teaching and research staff (including doctoral researchers and people working under a resource agreement) and administrative and support staff who were of female or male gender, provided their age, and answered all items used in the analyses. Research assistants and management-level staff were excluded from the data in order to form homogeneous groups in terms of job descriptions.

Of the participants, 59.5% were teaching and research staff, and 40.5% were administrative and support staff. The average age of the participants was 45.3 years ($SD = 10.9$), and 70% were women. The most common levels of education were master’s degree (43%) and doctoral degree (39%). Most participants (71%) worked entirely remotely at the time of the survey.

2.2. Measures

Goal-oriented self-leadership strategies were measured using three items. Two of these were drawn from the Revised Self-Leadership Questionnaire (RSLQ) [65], with minor changes in the phrasing of the items: “I have established specific goals for my own performance” and “I have monitored my progress at work”, and one was from the Self-Regulatory Skills in Multi-Locational Knowledge Work Questionnaire [66]: “I have planned and scheduled my primary weekly tasks”. The participants indicated their level of agreement with these statements on a 5-point scale (1 = Not at all, 5 = Very much). Exploratory factor analysis supported a one-factor solution, which explained 70% of the variation. Factor loadings varied between 0.67 and 0.83, and the Cronbach’s alpha for the scale was 0.78.

Well-being-related self-leadership strategies were measured through three items developed by Sjöblom and colleagues [66], with minor linguistic changes in the phrasing of the items: “I have taken care of maintaining healthy vigor for work during the working day”, “I have taken care of sufficient rest in my everyday life”, and “I have taken care of my physical well-being and sufficient recovery at work (e.g., ergonomics, exercise, breaks, nutrition)”. The items were assessed on a 5-point scale (1 = Not at all, 5 = Very much). Exploratory factor analysis supported a one-factor solution, which explained 70% of the variation. Factor loadings varied between 0.65 and 0.83, and the Cronbach’s alpha for the scale was 0.78.

Psychological safety of the immediate work community was measured using six items. Three of these were taken from the Team Learning and Psychological Safety Survey [50], with minor modifications, i.e., including attitudes to making mistakes and trying out new ways: “The atmosphere in our work community has allowed the courage to deal with work-related problems and mistakes”, “Working with the members of my work community, my unique skills and talents have been valued and utilized”, and “It has been safe to take risks and do things in new ways in our work community”. One item was from the Danish Psychosocial Work Environment Questionnaire (DPQ) [67]: “The members of our work community have been attentive to each other’s well-being”, and two were developed specifically for the project: “In our work community, we have not had to fear failure”, and “In our work community, mistakes have been regarded as a natural part of work and learning new things”. The items were assessed on a 5-point scale (1 = Not at all,

5 = Very much). The items formed a clear one-factor structure in the factor analysis. This single factor explained 66% of the variation. Factor loadings were high, with the lowest being 0.67 and the highest 0.85. The Cronbach's alpha was 0.90.

Meaningfulness was measured with four items drawn from May et al. [42,68–71]: “The work I do on this job has been meaningful to me”, “The work I do on this job has been worthwhile”, “I have felt that the work I do on my job is valuable”, and “The work I do on this job has been very important to me”. The participants evaluated their agreement with each statement on a 5-point scale (1 = Strongly disagree, 5 = Strongly agree). Exploratory factor analysis supported a one-factor solution, which explained 79% of the variation. Factor loadings varied between 0.78 and 0.91, and the Cronbach's alpha for the scale was 0.91.

Burnout was measured with four items taken from the Burnout Assessment Tool (BAT) [72]: “At work, I have felt unable to control my emotions”, “At work, I have felt mentally exhausted”, “I have struggled to find any enthusiasm for my work”, and “At work, I have had trouble concentrating”. The items were assessed on a 5-point scale (1 = Never, 5 = Always). Exploratory factor analysis supported a one-factor solution, which explained 58% of the variation. Factor loadings varied between 0.45 and 0.77, and the Cronbach's alpha for the scale was 0.75.

Age (continuous variable), gender (1 = men, 2 = women), education (1 = Secondary school graduate or equivalent, 2 = Bachelor's degree, 3 = Master's Degree, 4 = Licentiate/Doctorate), job position (1 = Teaching and research personnel, 2 = Support services and faculty personnel), and previous remote work experience (1 = Not at all; 2 = Less than one day per week; 3 = 1–2 days per week; 4 = 3–4 days per week; 5 = All the time or almost all the time) were used as background variables.

2.3. Data Analysis

Hierarchical multiple linear regression analyses were used as the main method of analysis to examine the main effects of self-leadership and psychological safety on well-being outcomes (meaningfulness of work and job burnout), as well as a possible moderating effect of psychological safety on self-leadership and well-being outcomes [73]. The independent variables were regressed on the antecedent sets in five steps as follows: (1) background variables (age, gender, education, job position, previous remote work experience); (2) goal-oriented self-leadership strategies; (3) well-being-related self-leadership strategies; (4) psychological safety of the immediate work community; and (5) the interaction terms between the two dimensions of self-leadership strategies and psychological safety of the immediate work community. The magnitude of R^2 change at each step of the analysis was used to determine the variance explained by each antecedent or set of antecedents. The standardized beta values reported were used to determine the effect of each variable on meaningfulness and burnout. Analyses were conducted using IBM SPSS Statistics 26. The data were checked for basic assumptions of regression analysis and multicollinearity.

3. Results

3.1. Descriptive Statistics

The means, standard deviations, and correlations of all the study variables are presented in Table 1. The correlations between the study variables were in the expected direction: both self-leadership dimensions and as psychological safety correlated positively and statistically significantly with the meaningfulness of work ($r = 0.27–0.40$, $p < 0.001$) and negatively and statistically significantly with burnout ($r = -0.32–0.41$, $p < 0.001$). The two self-leadership dimensions and psychological safety correlated moderately with each other ($r = 0.22–0.34$, $p < 0.001$).

Table 1. Descriptive Information on the Study Variables ($N = 2493$).

Variable	M/%	SD	α	1	2	3	4	5	6	7	8	9
(1) Age	44.70	11.25	—	—	—	—	—	—	—	—	—	—
(2) Gender ^a	30.40 ^e	0.46	—	−0.02	—	—	—	—	—	—	—	—
(3) Education ^b	3.11	0.89	—	−0.01	−0.16 ***	—	—	—	—	—	—	—
(4) Job position ^c	59.1 ^f	0.49	—	0.18 ***	0.22 ***	−0.62 ***	—	—	—	—	—	—
(5) Remote work experience ^d	2.14	1.13	—	0.01	−0.02	0.20 ***	−0.24 ***	—	—	—	—	—
(6) Goal-oriented s-l	3.68	0.74	0.78	0.10 ***	0.08 ***	0.09 ***	−0.05 **	0.14 ***	—	—	—	—
(7) Well-being-related s-l	3.31	0.79	0.78	0.11 ***	0.01	−0.07 ***	0.09 ***	0.07 ***	0.34 ***	—	—	—
(8) Psychological safety	3.59	0.83	0.90	−0.04 *	−0.07 ***	−0.04 *	0.05 **	0.03	0.22 ***	0.23 ***	—	—
(9) Meaningfulness	3.96	0.84	0.91	0.16 ***	−0.01	0.02	−0.03 *	0.12 ***	0.39 ***	0.27 ***	0.40 ***	—
(10) Job burnout	2.54	0.69	0.75	−0.19 ***	0.05 **	0.09 ***	−0.11 ***	−0.02	−0.32 ***	−0.41 ***	−0.35 ***	−0.57 ***

Note. ^a Gender: 1 = men, 2 = women; ^b Education: 1 = Secondary school graduate or equivalent, 2 = Bachelor's degree, 3 = Master's Degree, 4 = Licentiate/Doctorate; ^c Job position: 1 = Teaching and research personnel, 2 = Support services and faculty personnel; ^d Remote work experience preceding the pandemic: 1 = Not at all; 2 = Less than one day per week; 3 = 1–2 days per week; 4 = 3–4 days per week; 5 = All the time or almost all the time. ^e = percentage of men among participants, ^f = percentage of participants belonging to teaching and research personnel job position group. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Of the background characteristics, age was positively and statistically significantly related to meaningfulness ($r = 0.16$, $p < 0.001$) and negatively to burnout ($r = -0.19$, $p < 0.001$). That is, older employees experienced more meaningfulness and less burnout than younger employees. Previous experience of remote work correlated positively with meaningfulness of work ($r = 0.12$, $p < 0.001$) but had no statistically significant correlation with burnout. Furthermore, teaching and research personnel experienced more meaningfulness ($r = -0.03$, $p < 0.05$) but also more burnout ($r = -0.11$, $p < 0.001$) than support service and faculty personnel. Women and employees with a higher degree experienced more burnout than men ($r = 0.05$, $p < 0.01$) and participants with a lower degree ($r = 0.09$, $p < 0.001$).

We also tested for any differences with regard to the variables studied between members of teaching and research staff and administrative and support staff. One-way ANOVA showed that administrative and support staff reported lower level of goal-oriented self-leadership, $F(1, 2491) = 5.780$, $p < 0.05$, and job burnout, $F(1, 2491) = 29.665$, $p < 0.001$ than did teaching and research staff. Moreover, administrative and support staff reported a higher level of well-being-related self-leadership strategies, $F(1, 2491) = 19.084$, $p < 0.001$, and psychological safety, $F(1, 2491) = 6.377$, $p < 0.05$, than did teaching and research staff.

3.2. Results of Regression Analyses

The results of the multiple regression analyses are presented in Table 2. After controlling for the effects of the background variables (Step 1), entering goal-oriented self-leadership strategies (Step 2) and well-being-related self-leadership strategies (Step 3) revealed support for the hypothesized main effects. Both self-leadership dimensions were directly and positively related to meaningfulness of work ($\beta = 0.10$ – 0.26 , $p < 0.001$) and negatively related to job burnout ($\beta = -0.17$ – -0.27 , $p < 0.001$), supporting Hypotheses 1–4. Similarly, psychological safety of the immediate work community (Step 4) was positively related to meaningfulness of work ($\beta = 0.33$, $p < 0.001$) and negatively related to job burnout ($\beta = -0.25$, $p < 0.001$), supporting Hypotheses 5 and 6. In total, antecedents explained one-third of the studied outcomes.

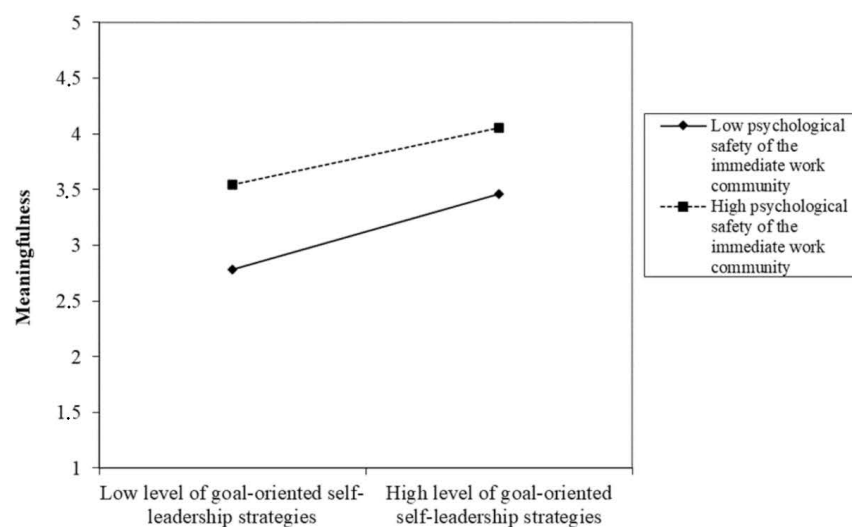
The interaction terms at Step 5 revealed that only one interaction was statistically significant, namely the interaction between goal-oriented self-leadership strategies and psychological safety on the meaningfulness of work ($\beta = -0.06$, $p < 0.01$). The interaction term between well-being-related self-leadership strategies and psychological safety turned out to be nonsignificant, and no significant interactions were observed for job burnout. Therefore, our Hypothesis 7 was only partly supported, and Hypothesis 8 was not supported.

Table 2. Results of Multiple Regression Analyses with Meaningfulness and Job Burnout as Dependent Variables.

Variable	B	SE B	Meaningfulness β	ΔR^2	R^2	B	SE B	Job Burnout β	ΔR^2	R^2
Step 1: Background variables				0.039 ***	0.039 ***				0.050 ***	0.050 ***
Age	0.01	0.00	0.15 ***			−0.01	0.00	−0.15 ***		
Gender ^a	0.01	0.03	0.01			0.09	0.03	0.06 **		
Education ^b	−0.04	0.02	−0.04			0.05	0.02	0.06 **		
Job position ^c	−0.15	0.04	−0.09 ***							
Remote work experience ^d	0.04	0.01	0.05 **							
Step 2: Goal-oriented self-leadership	0.30	0.02	0.26 ***	0.134 ***	0.173 ***	−0.16	0.02	−0.17 ***	0.102 ***	0.152 ***
Step 3: Well-being-related self-leadership	0.10	0.02	0.10 ***	0.019 ***	0.192 ***	−0.24	0.02	−0.27 ***	0.087 ***	0.239 ***
Step 4: Psychological safety	0.34	0.02	0.33 ***	0.098 ***	0.290 ***	−0.21	0.02	−0.25 ***	0.057 ***	0.296 ***
Step 5: Interaction terms				0.003 *	0.293 ***				0.001	0.296 ***
Goal-oriented s-l * Ps. safety	−0.04	0.02	−0.06 **			0.02	0.01	0.03		
Well-being-related s-l * Ps. safety	0.01	0.02	0.02			−0.01	0.01	−0.01		

Note. ^a Gender: 1 = men, 2 = women; ^b Education: 1 = Secondary school graduate or equivalent, 2 = Bachelor's degree, 3 = Master's Degree, 4 = Licentiate/Doctorate; ^c Job position: 1 = Teaching and research personnel, 2 = Support services and faculty personnel; ^d Remote work experience preceding the pandemic: 1 = Not at all; 2 = Less than one day per week; 3 = 1–2 days per week; 4 = 3–4 days per week; 5 = All the time or almost all the time. B = unstandardized beta-coefficient from the final step, SE B = standard error of the unstandardized beta-coefficient, β = standardized beta-coefficient from the final step, ΔR^2 = change in explanation rate in each step, and R^2 = explanation rate. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Graphical representation of the significant two-way interaction (see Figure 2) was done using the standardized regression coefficients of the regression lines for employees high (1 SD above the mean) and low (1 SD below the mean) on psychological safety of the immediate work community. Figure 2 shows that high level of goal-oriented self-leadership strategies was related to greater experience of meaningfulness, but psychological safety moderated this effect: in a situation where employees used a lot of goal-oriented self-leadership strategies, high psychological safety of the immediate work community further strengthened its relationship to meaningfulness. That is, in this situation, the meaningfulness of work was the highest. However, the beneficial effect of psychological safety of the immediate work community on meaningfulness was even more marked in a situation where employees only made small use of goal-oriented self-leadership strategies.

**Figure 2.** A significant interaction effect between goal-oriented self-leadership strategies and psychological safety of the immediate work community.

4. Discussion

This study focused on the role of goal-oriented and well-being-related self-leadership strategies and psychological safety of the immediate work community in the context of enforced remote work caused by COVID-19. Although both self-leadership and psychological safety have been studied extensively for decades, research currently lacks emphasis on (1) their relationship to the well-being outcomes of this study: job burnout and meaningfulness of work, (2) their interrelatedness, and (3) the context of remote work and multi-locational work. In addition to studying these important aspects, the present study also contributed to the measurement of self-leadership and psychological safety: we added focal extensions to existing scales on both phenomena. In the following, we will discuss the main findings and their implications.

4.1. Main Findings

In this study, we included two categories of self-leadership strategies: goal-oriented and well-being-related strategies. Well-being-related self-leadership strategies are a novel contribution of this study and of particular importance to the current challenges of working life, namely the need for a balanced and sustainable approach to work versus excessive stress and mental overload impairing employees' working capacity and well-being. Aligned with Hypotheses 1–4, both goal-oriented and well-being-related self-leadership strategies were positively related to meaningfulness of work and negatively to burnout. Furthermore, our results showed that the two types of self-leadership strategies had differing relations to well-being outcomes: goal-oriented strategies had a stronger positive relation than well-being-related strategies to meaningfulness of work, and well-being-related strategies had a stronger negative relation to burnout than did goal-oriented strategies. It is plausible that utilizing goal-oriented self-leadership strategies and regularly identifying one's most essential tasks and best practices in approaching them is likely to lead not only to more successful outcomes at work but also to a better awareness of the importance and meaning of one's work. Well-being-related self-leadership strategies, on the other hand, such as taking regular care of one's physical well-being and sufficient recovery at work, are essential, especially in preventing an excessively consuming work routine. These findings also demonstrate that self-leadership is focal to both positive and negative aspects of occupational well-being and that the self-leadership strategies applied need to be diverse in order to aid employees in leading themselves towards both productive and sustainable work. Goal-oriented and well-being-related self-leadership strategies represent qualitatively different kinds of strategies, both of which are needed in today's working life: sufficient self-discipline in approaching essential goals and sufficient self-care in supporting that process.

The results showed that, as hypothesized (Hypotheses 5 and 6), psychological safety of the immediate work community was positively related to meaningfulness of work and negatively to burnout. The findings concur with those of earlier research, showing positive relations between psychological safety and other positive job attitudes [46,51,52,54] and suggesting negative relations between psychological safety and burnout [55,58]. They also demonstrate that psychological safety is important in both supporting positive and preventing negative aspects of occupational well-being, which are both essential aspects of it.

Furthermore, the relation of psychological safety to meaningfulness of work was slightly stronger than the relation to burnout. This is an interesting and novel finding; so far, there has been more research on the relations between psychological safety and positive measures of occupational well-being than those of ill-being. In fact, many key studies on psychological safety have seen the phenomenon first and foremost as a focal prerequisite for learning, self-expression, growing, contributing, and performing effectively [18,48–50]. It may be that while psychological safety is essential in protecting employees against workplace ill-being, it has an even more focal role in creating circumstances conducive to

flourishing at work. Determining the exact nature of the role of psychological safety in workplace well-being and ill-being calls for further research on the topic.

The hypothesized moderating effect of psychological safety on the positive relation between goal-oriented self-leadership strategies and meaningfulness of work (Hypothesis 7) showed that meaningfulness of work is at its highest when goal-oriented self-leadership strategies are utilized in a psychologically safe environment. This interesting finding prompts further research on the role of psychological safety in self-leadership behavior. In light of our findings, we suggest that psychological safety may in fact be a boundary condition for self-leadership; aligned with earlier research, it supports a culture of initiative and enables proactive behavior among employees [18,19]. As a similar finding, earlier research has shown that external leadership has a pivotal role in facilitating individual employees' self-leadership behavior [47,74]. However, immediate work community characteristics and psychological safety have received less attention, and in this regard, the present study offers a valuable opening.

Other hypothesized interactions between psychological safety and self-leadership strategies were not supported in this study (Hypotheses 7 and 8). That is, psychological safety did not have a moderating effect on the positive relation between well-being-related self-leadership strategies and meaningfulness of work or on the negative relation between self-leadership strategies and burnout. This appears to be in line with the main effects detected in this study: the positive relation between psychological safety and meaningfulness was stronger than the negative relation between psychological safety and burnout. It may be that psychological safety has a more important role in positive workplace phenomena and various measures related to efficacy at work, such as learning behavior and work engagement [46,50–52]. Goal-oriented self-leadership strategies and meaningfulness of work fall into this category, whereas well-being-related self-leadership strategies and burnout are workplace phenomena that are essentially related to recovery from work.

4.2. Implications

Self-leadership is increasingly important in today's working life, and the ways to measure it need to be updated to meet the current needs encountered by employees. We suggest that well-being-related self-leadership strategies should be included in both measuring and applying self-leadership strategies. This is particularly important in the context of remote work—varying working conditions at home, such as inadequate ergonomics, frequent interruptions, or lack of a peaceful environment for focused work, may challenge both productivity and well-being in many ways. Applying diverse self-leadership strategies is essential.

It is also important to point out that even though the need for self-leadership skills is underlined in today's working life and remote work conditions in particular [3,9,10], and many employees have a highly autonomous role that permits self-leading one's work [1,2], this does not yet mean that all employees have the necessary skills. Organizations need to pay attention to offering sufficient support in learning the needed skills, as well as providing sufficient support for work in general, not leaving the employees in an excessively autonomous role [38,40,75]. During the pandemic, many organizations have, in fact, offered their employees support for learning self-leadership skills and other skills that are relevant for remote working. In this regard, the pandemic may have been beneficial since this was needed already preceding it and it will be in the post-pandemic time as well.

Self-leadership is also not separate from the community or its prevailing culture: even though self-leadership is a concept concerning individual skills, it is likely to be strongly influenced by the practices of the team. Similarly, in the context of an adjacent concept of self-organizing, it has been pointed out that the self-directed behavior of an individual is not separate from the activities of the team but essentially a part of them and of the joint movement towards shared goals [76]. In fact, in today's working life, the shift to understanding leadership as a distributed activity and a collective phenomenon is increasingly topical, and self-managing organizations and radical decentralization of

authority are broader manifestations of organizations responding to the changes in working life [77,78]. This study, for its part, responds to the need to take more account of team characteristics, more specifically, psychological safety, when researching individual self-leadership behavior. It cannot be taken for granted that the work environment fully supports what is expected of the employees; especially in transitioning into a new culture and practices, conflicting norms may prevail. For example, if the employees are expected to assume an autonomous role but are still simultaneously led in a controlling way, this is problematic and likely to impair autonomous behavior [1,75].

This study contributes to the much-needed knowledge of psychological safety in the context of remote work. This is essential in both pandemic and post-pandemic times, and studies on this topic are so far few. However, earlier research does indicate that remote working comes with certain specific challenges regarding psychological safety. For example, feeling confident about speaking up without fear of being rejected is facilitated by frequent, spontaneous, and informal conversations; in a virtual setting, however, conversations are less frequent, less spontaneous, and less informal [79,80]. Employees may find it harder to reach out for help and to have a sense of human connection over sporadic online communication [80]. Overall, this era of remote work appears to greatly enhance the importance of fostering trusting relationships and psychological safety [79]. These results underline the need for further research on psychological safety in the context of remote work and multi-locational work. In addition to the immediate work-community perspective on it, the role of leadership on psychological safety in remote work requires further attention.

Finally, the new concept of psychological safety of the immediate work community showed promising results in terms of the consistency of the scale. It served to supplement the existing scales of team psychological safety e.g., [50] by covering additional aspects of psychological safety apparent in the definition of the concept and in the relevant literature [18,50] but not explicit in current scales, i.e., attitudes to trying out new ways and making mistakes. In addition, the new concept expanded the construct to cover the immediate work community in general, as in current times, many employees frequently work in more than one team.

4.3. Strengths and Limitations

This study contributed to the current knowledge on self-leadership in the specific context of remote work. Earlier research has suggested that self-leadership is particularly important in this setting, yet studies focusing on it have been few. Furthermore, the study was carried out during enforced remote work caused by the COVID-19 pandemic, which further accentuates the role of remote work conditions. The study also broadened the concept and measurement of both self-leadership and psychological safety. Furthermore, it focused on the interrelations between self-leadership and psychological safety, which is a novel approach in researching these two topical phenomena.

However, there are limitations to this study that should also be considered as well.

This study utilized cross-sectional data, which inhibits conclusions about causal effects. The study should therefore be replicated with longitudinal data as well as a more representative sample in terms of professional field and organizations as this study utilized a homogeneous sample of university employees. The literature on psychological safety would also benefit from researching the topic on different levels, i.e., individual, immediate work community, and organization. This challenge has also been acknowledged in earlier research: research has mostly focused on measuring individuals' perceptions of team psychological safety [19]. Although Edmondson's [50] original work was designed at the group level, there is still surprisingly little group-level and cross-level research [46].

A more comprehensive understanding of the role of psychological safety in self-leadership behavior and its effect on well-being requires further research. This study focused on goal-oriented and well-being-related self-leadership strategies, and in future research, it would be very informative to include a broader set of self-leadership strategies

to study their relations to psychological safety and well-being. Examples include constructive thought-pattern strategies and natural reward strategies [21–23], both of which are more about internal self-leadership processes as opposed to external behavior-related self-leadership strategies, into which category both goal-oriented and well-being related strategies fall.

5. Conclusions

This study examined the role of self-leadership and psychological safety and their interrelations in the context of enforced remote work caused by COVID-19. It was conducted during the pandemic, during which most employees were working from home, but the results have important academic and practical implications beyond the exceptional circumstances. Indeed, remote work and multi-locational work are likely to remain common ways of working after the pandemic, and knowledge of self-leadership and psychological safety in this specific context is needed, since studies with this approach are still so rare.

The study had novel value in shedding light on the interrelatedness of self-leadership, psychological safety, and occupational well-being. We discovered not only that self-leadership strategies and psychological safety were positively related to meaningfulness of work and negatively to job burnout, but also that psychological safety moderated the relation between goal-oriented self-leadership strategies and meaningfulness of work. This result suggests that psychological safety has an important role as a boundary condition for self-leadership, enabling an individual to be active in self-leadership behavior. Furthermore, the results suggest that psychological safety is more important for the meaningfulness of work than for reducing job burnout.

Moreover, the study contributed to the measurement of self-leadership and psychological safety by elaborating on the scales to better capture current workplace phenomena. More specifically, it presented a novel category of well-being-related self-leadership strategies, shifted the focus of psychological safety beyond one single team to the immediate work community and potentially multiple teams, and also included aspects explicitly emphasizing the culture regarding mistakes and failures, as well as immediate work community members' attentiveness to each other's well-being.

Overall, the results of this study underline the importance of both diverse self-leadership strategies and the psychological safety of the immediate work community for employees' well-being in today's working life. It is important to offer sufficient support for both aspects as they are crucial to both the well-being and productivity of employees, the more so in remote work conditions. More research is needed to further unravel and consolidate the dynamics between psychological safety and self-leadership behavior.

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