

Exploring the Interaction Between Volunteering Status, Paid Job Characteristics and Quality of Volunteers' Motivation on Mental Health

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Abstract The literature on the health-promoting effects of community work has primarily dealt with the population in retirement age, yet the vast majority of volunteers are people still in the workforce. The aim of this study is to observe the relationship between volunteering and health within the context of working life, considering paid work conditions and motives to volunteer as moderating variables. We conducted an online survey with a sample of Swiss workers employed in different industries. Results show that volunteers with self-determined motives (but not with controlled motives) report lower levels of stress and burnout than non-volunteers. Moreover, volunteers in general (regardless of the quality of motivation) report higher levels of work engagement and well-being. Analyses further reveal an interaction effect for burnout and stress, where the difference between self-determined volunteers and non-volunteers becomes larger with unfavorable working conditions at their paid job, hinting at potential compensatory effects. Implications for future research and the voluntary sector are discussed.

Résumé Les textes sur les effets bénéfiques pour la santé du travail communautaire ont principalement porté sur la population en âge de la retraite, mais la grande majorité des bénévoles est constituée de personnes encore actives. Le but de cette étude est d'observer la relation entre le bénévolat et la santé en contexte, compte tenu des caractéristiques de l'emploi rémunéré et des motivations pour faire du bénévolat dans un échantillon de travailleurs suisses. Les résultats d'un sondage en ligne montrent que les bénévoles ayant des motivations autodéterminées font part de niveaux de stress et de surmenage inférieurs à ceux des personnes non bénévoles.

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En outre, les bénévoles, en général – peu importe la qualité de la motivation –, indiquent des niveaux plus élevés d'engagement envers le travail et de bien-être. Les analyses révèlent également un effet d'interaction pour le surmenage et le stress, lorsque la différence entre les bénévoles autodéterminés et les non-bénévoles devient plus grande en cas de conditions de travail défavorables dans l'emploi rémunéré. Les auteurs développent les implications pour les recherches futures et le secteur bénévole et communautaire.

Zusammenfassung Die Literatur zu gesundheitsfördernden Effekten von Gemeindefarbeit hat sich hauptsächlich mit Menschen im Rentenalter beschäftigt, obwohl die große Mehrheit der Ehrenamtlichen noch berufstätig ist. Ziel dieser Studie ist es, die Beziehung zwischen ehrenamtlicher Arbeit und der Gesundheit im Zusammenhang zu untersuchen, wobei die Merkmale bezahlter Arbeit und die Motive zur ehrenamtlichen Arbeit in einer Stichprobe von Berufstätigen in der Schweiz betrachtet werden. Die Ergebnisse einer Online-Befragung zeigen, dass Ehrenamtliche mit selbstbestimmten Motiven unter weniger Stress und Burnout leiden als nicht ehrenamtlich Tätige. Darüber hinaus geben die ehrenamtlich tätigen Personen im Allgemeinen (unabhängig von der Motivationsqualität) ein höheres Arbeitsengagement und ein gesteigertes Wohlbefinden an. Analysen zeigen zudem einen Interaktionseffekt für Burnout und Stress, wobei der Unterschied zwischen selbstbestimmten Ehrenamtlichen und nicht ehrenamtlich Tätigen noch größer wird, wenn die Arbeitsbedingungen der bezahlten Tätigkeit ungünstig sind. Implikationen für zukünftige Forschungen und den gemeinnützigen Sektor werden diskutiert.

Resumen El material publicado sobre los efectos del trabajo comunitario que promueve la salud ha tratado fundamentalmente de la población en edad de jubilación, sin embargo la mayor parte de los voluntarios son personas que siguen todavía en activo. El objetivo del presente estudio es observar la relación entre el voluntariado y la salud en su contexto, considerando las características del trabajo pagado y los motivos para ser voluntarios en una muestra de trabajadores suizos. Los resultados de una encuesta online muestran que los voluntarios con motivos autodeterminados notifican menores niveles de estrés y agotamiento que los no voluntarios. Asimismo, los voluntarios en general (independientemente de la calidad de la motivación) notifican niveles más elevados de compromiso laboral y bienestar. Los análisis revelan también un efecto de interacción para el agotamiento y el estrés, en el que la diferencia entre los voluntarios autodeterminados y los no voluntarios se hace más amplia cuando las condiciones laborales en el puesto de trabajo pagado son desfavorables. Se abordan las implicaciones para investigaciones futuras y el sector del voluntariado.

Keywords Volunteering · Community work · Multiple roles · Self-determination · Burnout · Stress · Work engagement · Well-being

Introduction

While the added value of formal volunteering at the societal and community level is widely recognized, researchers have increasingly turned to its benefits at the individual level. By now, the notion of volunteering as an activity that fosters health and well-being has garnered considerable empirical support. Volunteering has been linked, among others, with greater life satisfaction (Thoits and Hewitt 2001; Van Willigen 2000; Haski-Leventhal 2009), lower depression levels (Musick et al. 1999), better self-rated health (Piliavin and Siegl 2007), and even lower mortality rates after controlling for other health determinants (Konrath et al. 2012; Luoh and Herzog 2002). Evidence is based on both cross-sectional and longitudinal data (for reviews see Jenkinson et al. 2013; Wilson 2012). However, the field has been led by a gerontological approach to this research question, focusing primarily on the population in (or near to) retirement age. This is attestable through the dominance of publications in gerontological journals. Statistics show, however, that the vast majority of volunteers are actually people of working age (US Bureau of Labor Statistics 2013). Polls in Switzerland, where the current study was conducted, further reveal that, aside from some gender differences, people working full-time are actually more likely to volunteer than part-time workers and the unemployed (Stadelmann-Steffen et al. 2010). This fact calls for a more holistic understanding of the intricacies between volunteering, paid work, and health.

One of the reasons why scholars might have concentrated on the retired population is that the effects in this group seem to be more pronounced (Grimm et al. 2007). This could be explained by the fact that voluntary work might play a much more central role during retirement, a time when individuals detach themselves from major life roles, such as work and parenting. Another explanation could be the larger health variance found in the older population, what might statistically facilitate the effects. In any case, the impact of other life roles, which represent the daily reality of most volunteer workers, has been largely ignored. We believe that in the face of multiple roles, as it is the case before retirement, volunteering and paid work might operate in tandem, fulfilling either complementary or compensatory function. In particular, we suggest that job demands and resources (hereafter we refer to “job” as paid work) might interact with volunteering status, yielding different health patterns.

Another often quoted reason for the difference between younger and older volunteers is that the latter are more intrinsically motivated (Grimm et al. 2007). In this regard, self-determination theory (SDT; Deci and Ryan 2010) serves as a robust theoretical framework in explaining differences in motivation and well-being. While it is known that motivation shifts from extrinsic to intrinsic as we age (Carstensen 2006; Kooij et al. 2011), we argue that motives to volunteer, above and beyond the age factor, might play a decisive role in well-being.

We will now elaborate on the theoretical and empirical rationale for this study, drawing from research on multiple roles, occupational health models and theories of motivation, and establishing their applicability within the context of voluntary work and well-being.

Research on Multiple Roles and Well-Being

Role Strain and Role Enhancement

Individuals occupy different roles in their lives: they might be sons and daughters, students, parents, employees, and volunteers, among a plethora of other roles they may have in their communities. Different roles might be salient at different points in a lifetime or they might occur concomitantly. There have been two opposing perspectives in this line of research. On the one hand, the role strain hypothesis highlights the drawbacks of role accumulation, arguing that individuals have limited resources, and this might hinder the fulfillment of different role obligations (Goode 1960). Moreover, strain might be a product not only of depleted time resources, but also incompatibility or “discrepant expectations” among roles (Sieber 1974; p. 567). According to the role strain hypothesis, this is ultimately conducive to stress and exhaustion. On the other hand, scholars have recently argued that the interaction of different roles might actually foster well-being (Greenhaus and Powell 2006, Grzywacz and Marks 2000). The advocates of the role enhancement hypothesis posit that “multiple roles may increase or enhance one’s energy by increasing sources of identity, self-esteem, rewards and resources available to cope with the multiple demands” (Marks 1977). Within this research agenda, volunteering could be seen as a potential source of enhancement.

The Interface Between Paid Work and Voluntary Work

The role strain and the role enhancement perspectives have been extensively elaborated in research programs on the work-family interface (for a review see Greenhaus and Allen 2010). However, little has been researched on the interplay between a person’s job and volunteering. Two studies are particularly of interest in this context. Using a one-week diary method, Mojza and Sonnentag (2010) found that volunteering after work moderated the relationship between situational constraints at work (i.e., job demands) and positive affect during the following working day. While situational constraints and next-day positive affect were negatively correlated on evenings when participants did not volunteer, the effect was mitigated after evenings in which they performed voluntary work. These findings support the idea behind the role enhancement hypothesis, revealing that participation in one domain may influence the affective state in another domain. The second study was conducted by Rodell (2013) and unveils the symbiotic relationship between job and volunteering meaningfulness. The author found that meaningfulness in both domains was associated with higher levels of volunteering and that the impact of meaningful voluntary work was stronger when participants reported less meaning in their jobs. Moreover, volunteering was related to greater job absorption (a dimension of work engagement) and better job performance.

One tacit claim in Rodell’s (2013) article is that the experience of meaningfulness (which is a resource) might be a propeller to volunteer, partly in an attempt to make up for the lack thereof in one’s job. Along this stream of thought, previous

research on volunteering has proposed two competing hypotheses (Okun et al. 2011; Oman 2007): on the one hand, the complementary hypothesis posits that individuals with ample psychosocial resources are better positioned to capitalize on the resources provided by their voluntary work, thus reaping the most benefits. In this scenario, people with resourceful jobs might be better off when they are engaged in voluntary work. On the other hand, the compensatory hypothesis suggests that the benefits of volunteering might be stronger for individuals with limited psychosocial resources, since volunteering helps to offset such deficits. For example, people experiencing low job autonomy and high job demands might restore some balance by reaching out to their communities. This connects with the idea of basic needs satisfaction discussed next (Ryan and Deci 2001) Okun and colleagues found support for the compensatory hypothesis in regard to volunteering, well-being, and the number of chronic health conditions (an indicator of physical resources). Yet there has been little (if any) empirical testing of these hypotheses with psychosocial aspects. This study tests them by considering not only job meaningfulness, but also a broader range of psychosocial demands and resources at the workplace and the role of volunteering in explaining work-related health outcomes.

Research on Motivation and Well-Being

Self-determination Theory

SDT is a macro theory concerned with innate psychological needs and the quality of human motivation (Deci and Ryan 2010). Building on established theories (Alderfer 1972; Maslow 1943), SDT proposes three basic human needs: autonomy, competence, and relatedness. Autonomy refers to the ideal of being free and true to one's values. Competence is the feeling of being useful and able to act upon the world in ways that generate positive changes. Finally, relatedness refers to the need for close interpersonal relationships (Weinstein and Ryan 2010). Needs satisfaction is crucial for psychological growth, a sense of integrity and well-being, representing a powerful motivational force (Ryan and Deci 2001).

When it comes to the quality of human motivation, SDT distinguishes between self-determined and controlled motivation. Self-determined motivation refers to a volitional course of action, where individuals fully endorse their doings and they experience full freedom of choice. In contrast, controlled motivation connotes a sense of pressure of having to engage in a particular type of behavior. Deep-rooted convictions are not the locus of behavioral regulation, with overt external pressure, feelings of guilt or contingent self-worth being some of the triggering factors (Deci and Ryan 2010). The SDT further postulates a continuum between self-determined and controlled motivation with varying degrees of internalization (for details see Deci and Ryan 2000). Ever-growing empirical evidence shows that self-determined motivation is a stronger predictor of well-being than controlled motivation (Nix et al. 1999; Weinstein and Ryan 2010).

In the non-profit management literature, SDT has been used, among others, to predict future volunteering intentions (Wu et al. 2015), volunteers' work effort (Bidee et al. 2013) and to investigate the mediating role of needs satisfaction between organizational climate and autonomous motivation of volunteers (Haivas et al. 2012). In all cases, authors have stressed the benefits of autonomous over controlled motivation. By considering health-related outcomes, this study extends the scope of SDT in non-profit management studies.

The Functional Approach to Volunteers' Motives and SDT

The functional approach is the pioneering framework in the assessment of volunteers' motives and has been extensively used in the volunteering research (Clary et al. 1998). The authors propose six goals or functions voluntary work can fulfill expression of deep-rooted values related to altruistic or humanitarian concerns (*values motive*), the acquirement of new skills and knowledge (*understanding motive*), individual growth and development (*enhancement motive*), the improvement of career prospects (*career motive*), alignment with the expectations of the closest social circles (*social motive*), or the offset of negative feelings triggered by a sense of guilt, loneliness, or other personal problems (*protective motive*). The Volunteer Functions Inventory (VFI; Clary et al. 1998) is a tool that has been primarily used within the context of recruitment, retention, and voluntary work design. Only a handful of studies have observed the potential health implications of volunteers' motives. (e.g., Gillath et al. 2005; Konrath et al. 2012); however, their grouping arrangement of volunteers' functions into self-oriented and other-oriented motives has yielded some inconsistent results. We argue that it might not necessarily be the target of the voluntary service that determines well-being but the volitional aspect: that is, whether the behavioral regulation is experienced as self-determined or controlled.

The relationship between SDT and VFI concepts has been established in some studies. MacLellan and Kelloway (2014) assessed both the quality of motivation through SDT items and volunteers' functions. They found that volunteers with values (VFI) and autonomous motives (SDT) reported higher psychological well-being, whereas volunteers with protective, career (VFI), and controlled motives (SDT) reported lower psychological well-being. There have also been attempts to map the VFI dimensions onto the autonomous-controlled continuum of the SDT. Finkelstein (2009) submitted the 30 items of the VFI to a principal axis factor analysis and found that a two-factor solution with self-determined and controlled motives was able to predict volunteer self-concept, prosocial personality, volunteer time, and motive strength, with higher scores for self-determined volunteers. Finally, in the validation study of the German VFI, Oostlander et al. (2014) tested the construct validity of the scale, correlating all six dimensions with the four levels of behavioral regulations postulated by the SDT (for details see Deci and Ryan 2000) and the quality of motivation (i.e., self-determined vs. controlled orientation). They found that values and understanding motives were highly correlated with self-determined motivation, whereas the remaining motives (i.e., social, protective, enhancement, and career) were associated with controlled motivation. Based on

these observations, the functional approach to volunteering used in this study can be further be interpreted as the level of internalization of the voluntary act.

The Present Study

Based on previous research on multiple roles and motivation, this study explores the interaction between volunteering status, job characteristics and volunteers' motives in a sample of Swiss employees. While we expect job characteristics to be the strongest predictor of our health-related outcomes, we also anticipate differential patterns for the role of volunteering as a health-promoting activity. Based on the predicates of Okun et al. (2011), we foresee two possible scenarios: workers with unfavorable job conditions (i.e., when job demands are high and job resources are low) might report better mental health when they are regular volunteers rather than when they do not volunteer (compensatory hypothesis). The opposite may also apply, i.e., workers with favorable job conditions (i.e., low job demands and high job resources) might report better health when they are volunteers in their spare time rather than when they are not (complementary hypothesis). Furthermore, we make use of the correlational findings from Oostlander et al. (2014) to understand volunteers' functions in terms of self-determined and controlled motives. We expect a moderating effect such that self-determined motives are more strongly associated with positive health outcomes than controlled motives.

Method

Procedure and Participants

The data for this study stem from an online poll we conducted on “work and leisure” in the German-speaking part of Switzerland. Participants were recruited randomly through a panel data service provider. Respondents received a small incentive to participate (points to be redeemed toward services or products after completion of several surveys). They had to be at least 18-year old and employed at least 20 h a week. A total of 774 panelists completed the survey (18 % response rate), of which 292 were volunteers in a non-profit organization. The sample was reduced in two stages: first, given the dichotomous nature of our main predictor (volunteer vs. non-volunteers) we created equal group sizes through computer-based randomization in order to avoid biased estimates when performing *t* tests (Field 2009; $N = 552$). Finally, in order to create clear-cut motivation profiles, the sample of volunteers was reduced, excluding the 20th percentile of participants around the mean (see below for operationalization of volunteer motives; Final $N = 500$; 260 non-volunteers, 240 volunteers). In average, it took participants 14–20 min to fill out the questionnaire, with volunteers taking longer due to a longer survey. Almost 70 % of our sample was composed of full-time workers. The sample was quite heterogeneous in terms of occupational background, with the most represented jobs being clerical/commercial jobs (17 %), jobs in health and social care (14 %), and

informatics and communication (10 %). Forty-six percent were women and the mean age was 42.3 (SD 11.83).

Measures for Predictor Variables

Job Demands and Resources

We used subscales from the Work Design Questionnaire (WDQ; Morgeson and Humphrey 2006) and the Second Copenhagen Psychosocial Questionnaire (COPSOQ II; Pejtersen et al. 2010) in order to capture the distribution of demands and resources in participants' paid work. On the demands' side, we focused on quantitative demands only (4 items; e.g., "Do you have enough time for your work tasks?"), as these demands have shown to be the primary source of work stress (Geurts et al. 1999). We measured resources with three components: autonomy (e.g., "The job gives me considerable opportunity for independence and freedom in how I do the work"), social support (e.g., "My supervisor is concerned about the welfare of the people that work for him/her"), and job significance (e.g., "Do you feel that the work you do is important?"). All items were rated on a 5-point Likert scale with labels depending on the scale of origin. For the purposes of this study (and since our focus is on volunteering), we have opted for a simplified operationalization by calculating a job demand-resources ratio (JD-R ratio; Jenny et al. submitted). The JD-R ratio has shown to be a reliable measure of overall working conditions for use in translational research. We first computed a grand mean for resources and demands, respectively, and then calculated the quotient of resources over demands. Higher scores in JD-R ratio were indicators of favorable working conditions.

Volunteering Motives

We administered the validated German version (Oostlander et al. 2014) of the Volunteer Functions Inventory (VFI; Clary et al. 1998). All items were based on a 7-point Likert scale ranging from "not at all important/accurate" to "extremely important/accurate." Based on the correlations found between VFI and SDT constructs (Oostlander et al. 2014), we created a VFI-Index which would allow us to assess the quality of motivation (i.e., controlled vs. self-determined). We reverse-coded the items for career, social, protective and enhancement motives, and averaged them with the scores of the remaining motives so that higher scores represent stronger self-determined motives. In a later step, we dichotomized the VFI-Index in low and high scorers, including only participants below the 40th and above the 60th percentile in our analyses (effective final $N = 500$). The choice of these cut-off points was a compromise between creating clear, distinguishable motivation profiles and losing the least amount of participants. Despite the well-known drawbacks incurred in the dichotomization of continuous variables (MacCallum et al. 2002), this practice is herein justified, as our variable of interest (i.e., volunteering status: yes/no) is categorical (DeCoster et al. 2009). In other words, the observation of motives in two groups (volunteers with controlled

motivation vs. volunteers with self-determined motivation) allows us to make comparisons with the control group of non-volunteers. Following convention on interactions between categorical and continuous variables (Aiken and West 1991), we created two dummy variables. We coded variable D_1 as controlled = 1, self-determined = 0, and non-volunteers = 0. Variable D_2 was coded as controlled = 0, self-determined = 1, and non-volunteers = 0. Thus, non-volunteers served as comparison group.

Measures for Outcome Variables

We chose our outcome variables on the basis of the job demands and resources model (JD-R; Demerouti et al. 2001), which has garnered considerable acceptance among researchers and practitioners when it comes to the assessment of psychosocial factors in the workplace and their health implications. The revised JD-R model (Schaufeli and Bakker 2004) proposes two parallel processes: on the one hand, the *health-impairment axis*, where job demands are predictors of burnout, which in turn explains negative outcomes (e.g., health complaints and stress symptoms). On the other hand, there is the *motivational axis*, where job resources are the antecedents of work engagement, which in turn explains positive outcomes (e.g., job performance and mental well-being). Following this approach, we measured burnout and work engagement (as the two more job-related outcomes), stress and related symptoms (negative health outcome) and psychological, emotional and social well-being (positive health outcome).

Burnout

We used the 4-item scale from COPSOQ II (Pejtersen et al. 2010) to assess the frequency of episodes of exhaustion (e.g., “How often have you felt worn out?”). Answers were on a 5-point Likert scale from “never/almost never” to “always.”

Stress and Related Symptoms

We used the 12 items from the COPSOQ II scale (Pejtersen et al. 2010) to measure overall stress (e.g., “How often have you been tense?”) and the ensuing cognitive (e.g., “How often have you had problems concentrating?”) and somatic symptoms (e.g., “How often have you had tension in various muscles?”). The questions were rated on a 5-point Likert scale from “never” to “always.”

Work Engagement

Work engagement is “the positive work-related state of fulfillment that is characterized by vigor, dedication and absorption” (Schaufeli et al. 2006; p. 701). Each of these three aspects is captured in a 9-item scale. Examples are “I am proud of the work that I do” and “I get carried away when I am working.” Participants rated the frequency of these events on a 7-point Likert scale from “never” to “always.”

Positive Mental Health

We included the Mental Health Continuum (short-form) questionnaire (MHCsf; Lamers et al. 2011) in order to assess psychological, emotional, and social well-being, derived from an overall appraisal of one's social functioning, emotional stability, and life satisfaction. Participants were asked to rate on a 6-point Likert scale the frequency of positive feelings and emotions within the last month. Examples are "During the past month, how often did you feel that your life has a sense of direction or meaning to it?", "(...) that you belong to a community?" or "(...) that you like most parts of your personality?". Participants answered on a 6-point Likert scale ranging from "never" to "every day."

Data Coding and Analysis

We proceeded with the data analysis as follows: we first ran a bivariate correlation analysis among all study variables, including the compound variables (i.e., JD-R ratio and VFI-Index) and their subscales. We then performed four multiple regression analyses (one for each outcome variable) using Hayes' (2013) PROCESS Macro for testing moderation effects. We also applied the Johnson-Neyman technique to calculate regions of significance where necessary (Bauer and Curran 2005). Age and gender were controlled for in all the analyses. Finally, we plotted the regression lines of all three groups considering their scores on the outcome variables at one standard deviation below and one standard deviation above the mean of the JD-R ratio (Aiken and West 1991a).

Results

Correlations Among Study Variables

Bivariate correlations are displayed in Table 1. All four subscales of the JD-R ratio were intercorrelated, further supporting their condensation into a single factor. The ratio was negatively associated with burnout and stress, and positively associated with work engagement and positive mental health. In sum, this simple analysis shows that the JD-R ratio can be used for presenting overall working conditions and predicting health-related outcomes in a parsimonious way. The VFI-index was positively correlated to values and understanding motives and negatively correlated with the remaining motives. Moreover, the index was negatively associated with burnout and stress, and positively associated with work engagement. Correlations of the VFI subscales with job demands, job resources, and health outcomes were expected to be rather low in comparison to the unequivocal, strong relationship between JD-R and health. However, we found some significant correlations, such as those of understanding and value motives with positive mental health and work engagement. Predominantly, protective motives were highly correlated with burnout, stress, and all JD-R dimensions.

Table 1 Correlation table for study variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Understanding motive	(.79)															
2. Values motive	.49**	(.75)														
3. Enhancement motive	.49**	.37**	(.77)													
4. Career motive	.50**	.21**	.47**	(.80)												
5. Social motive	.30**	.31**	.36**	.28**	(.81)											
6. Protective motive	.39**	.24**	.55**	.41**	.42**	(.78)										
7. VFI-index	.27**	.46**	-.33**	-.38**	-.39**	-.49**	-									
8. Quantitative demands	.02	.06	.13*	.05	.06	.20**	-.11	(.85)								
9. Social support	.11	.17**	.08	.08	.16**	-.06	.07	-.15**	(.80)							
10. Job significance	-.05	.05	-.07	-.09	-.05	-.23**	.16**	-.13**	.44**	(.83)						
11. Work autonomy	.01	.02	-.07	-.06	-.05	-.17**	.14*	-.14**	.41**	.48**	(.94)					
12. JD-R ratio	-.04	-.04	-.09	-.10	-.07	-.25**	.10	-.63**	.46**	.58**	.31**	-				
13. Stress & related symptoms	.00	-.01	.15*	.09	.07	.25**	-.20**	.37**	-.18**	-.25**	-.19**	-.39**	(.90)			
14. Burnout	-.05	-.09	.09	.01	.05	.22**	-.21**	.36**	-.19**	-.28**	-.18**	-.38**	.79**	(.90)		
15. Positive mental health	.12*	.12*	.03	.11	.08	-.05	.07	-.16**	.39**	.45**	.29**	.39**	-.48**	-.49**	(.91)	
16. Work engagement	.01	.14*	-.04	.05	-.02	-.12	.13*	-.14**	.41**	.68**	.41**	.42**	-.38**	-.40**	.57**	(.96)

Cronbach's α are displayed between parentheses along the diagonal line

* $p < .05$; ** $p < .01$. $N = 552$ except where VFI subscales were analyzed ($N = 292$)

Regression Analysis with Interaction Terms

The results of the four regression analyses are shown in Tables 2 and 3 and the corresponding interaction plots are displayed in Fig. 1 (outcome variables in the plot graphs are shown in standardized form so as to enable comparisons across measures).

Table 2 presents the results for the outcome variables along the health-impairment axis, i.e., burnout and stress. Both control variables (age and gender) showed significant effects in both measures: burnout ($\beta = -.16$) and stress ($\beta = -.16$) were negatively associated with age, and women in our sample reported higher levels of burnout ($\beta = .16$) and stress ($\beta = .18$) than men. When observing main effects, the JD-R ratio was, as expected, negatively associated with both measures ($\beta = -.36$ and $\beta = -.39$, respectively), accounting for most of the variance. From the two dummy-coded variables, only self-determined volunteers differed from non-volunteers, reporting significantly lower levels of burnout ($\beta = -.13$; Fig. 1a) and marginally lower levels of stress ($\beta = -.07$; Fig. 1b). Volunteers with controlled motivation displayed scores and slopes similar to non-volunteers in both measures. Furthermore, an interaction effect was at work: Differences between self-determined volunteers, on the one hand and controlled and

Table 2 Multiple regression for burnout and stress & related symptoms as outcome variables

	Burnout					Stress & related symptoms				
	<i>B</i>	SE	β	<i>t</i>	<i>p</i>	<i>B</i>	SE	β	<i>t</i>	<i>p</i>
Control variables										
Age	-.07	.02	-.16	-4.04	.000	-.05	.01	-.16	-3.95	.000
Gender	.28	.07	.16	3.77	.000	.22	.05	.18	4.36	.000
Main effects										
JD-R ratio	-3.94	.48	-.36	-8.29	.000	-2.92	.34	-.39	-8.65	.000
Controlled motivation (<i>D</i> ₁)	-.06	.09	-.03	-.70	.487	-.01	.07	.01	.19	.844
Self-determined motivation (<i>D</i> ₂)	-.28	.09	-.13	-3.00	.003	-.11	.07	-.07	-1.71	.087
Interactions										
JDR × controlled motivation	.73	.95	.04	.76	.448	.46	.68	.03	.69	.491
JDR × self-determined motivation	2.40	.84	.12	2.85	.005	1.55	.60	.11	2.60	.010
Total <i>R</i> ²	.23**					.24**				
<i>R</i> ² change due to interactions	.013*					.010*				

N = 500. Controlled motivation and self-determined motivation are dummy-coded. In both variables, non-volunteers are assigned a value of 0, serving as control group

Table 3 Multiple regression for work engagement and positive mental health as outcome variables

	Work engagement					Positive mental health				
	<i>B</i>	SE	β	<i>t</i>	<i>p</i>	<i>B</i>	SE	β	<i>t</i>	<i>p</i>
Control variables										
Age	.10	.02	.16	3.49	.000	-.03	.01	.10	2.35	.019
Gender	.02	.09	.01	.45	.651	-.02	.07	-.01	-.29	.772
Main effects										
JD-R ratio	5.50	.58	.41	9.55	.000	2.86	.39	.39	7.25	.000
Controlled motivation (D_1)	.31	.11	.16	2.75	.006	.31	.08	.18	4.10	.000
Self-determined motivation (D_2)	.48	.11	.20	4.27	.000	.37	.08	.20	4.77	.000
Interactions										
JDR \times controlled motivation	-.66	1.16	.05	-.57	.567	.29	.79	.02	.36	.719
JDR \times self-determined motivation	-1.58	1.02	-.01	-1.55	.122	-.33	.70	-.02	-.48	.633
Total R^2	.25**					.22**				
R^2 change due to interactions	ns					ns				

Controlled motivation and self-determined motivation are dummy-coded. In both variables, non-volunteers are assigned a value of 0, serving as control group

non-volunteers on the other hand, increased steadily as the JD-R ratio decreased (region of significance for burnout: $z < .36$, $p < .05$; region of significance for stress: $z < -.05$, $p < .05$). In other words, participants with unfavorable job conditions seemed to benefit more from volunteering when self-determined motives were the driving force. However, when working conditions were favorable (i.e., high JD-R ratio) all three groups had similar burnout and stress levels.

The pattern was somewhat different along the motivational axis. The results are shown in Table 3. First, while age was associated with more work engagement ($\beta = .16$) and better positive mental health ($\beta = .10$), no effects were found for gender. Second, whereas JD-R was, as expected, the strongest predictor of work engagement ($\beta = .41$; Fig. 1c) and positive mental health ($\beta = .39$; Fig. 1d), we also found main effects for both dummy variables. In other words, both groups of volunteers showed more work engagement and better positive mental health in comparison to non-volunteers. The effect was somewhat stronger for self-determined volunteers ($\beta = .20$ in both measures) than for those with controlled motivations ($\beta = .16$ and $\beta = .18$), but it was not statistically significant. Finally, we found no interaction effects for the positive outcome measures, with volunteers reporting higher levels of work engagement and well-being in comparison to non-volunteers, regardless of their working conditions.

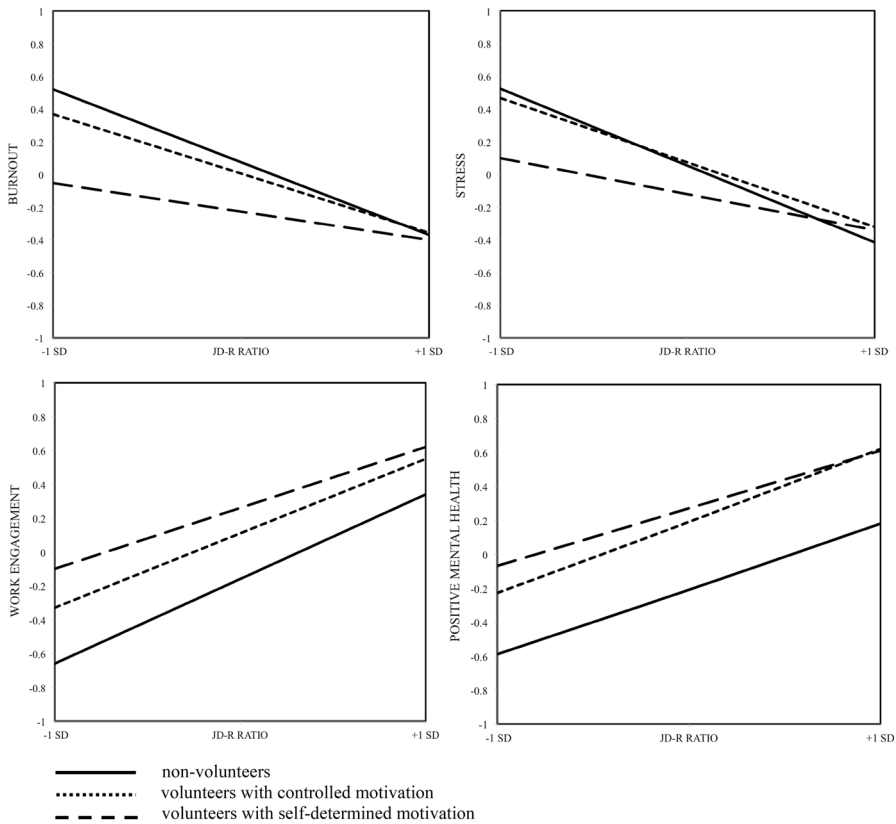


Fig. 1 Plot graphs for interaction effects. Outcome variables were standardized for the sake of comparison

In sum, we found differential effects of volunteering, contingent to paid work conditions, motives to volunteer and, unexpectedly, contingent to the outcome variables observed. We will now discuss the implications of these findings for future research and for the voluntary sector.

Discussion

The aim of this study was to observe the relationship between volunteering and health-related outcomes bearing in mind the work context and volunteers’ motivation. The dominant gerontological perspective in this line of research has resulted in a knowledge gap regarding the largest group in the volunteering sector, namely people in the workforce. By considering the characteristics of people’s paid work and their motives to volunteer, this study adds to the understanding of volunteering as a psychosocial resource in the face of multiple roles.

The use of various outcome variables revealed differences and commonalities: first, as expected, a favorable JD-R ratio was consistently associated with better health outcomes: when participants experienced meaningfulness, autonomy and social support in their jobs, and at the same time felt in control of their workload (i.e., low quantitative demands), they reported lower levels of burnout and stress symptoms, more work engagement and they strived emotionally, socially and psychologically as captured by the positive mental health scale. This is consistent with the vast literature on the health effects of job demands and resources (Schaufeli and Bakker 2004) and requires no further elaboration.

The novelty lies on the interaction between working conditions, motives to volunteer and volunteering status. Along the health-impairment axis, we found that volunteers with controlled motivation did not differ from non-volunteers in their burnout and stress appraisals. However, self-determined volunteers differed significantly in burnout levels and marginally in stress levels from non-volunteers (Fig. 1a, b). These results may imply that voluntary work (which is per definition time-demanding) might be experienced differently based on motives. On the one hand, self-determined volunteers might perceive it as a challenging demand, in the sense that it promotes mastery, personal growth, and self-actualization. On the other hand, when controlled motives prevail, volunteering might be seen as a hindering demand, which comes along with the experience of stress and exhaustion (along this stream of thought, please refer to Van den Broeck et al. 2010). Furthermore, the gap between self-determined volunteers and non-volunteers became larger as a function of a decreasing JD-R ratio. When participants reported above-average working conditions (i.e., high JD-R ratio), there was no significant difference among the three groups. This interaction effect supports the compensatory hypothesis, which posits that people with fewer resources should benefit the most from volunteering. The compensatory effect was found in previous research in regard to physical resources (see Okun et al. 2011) and the present study further extends it to resources of the psychosocial type as those found in the work domain. Should these results be replicated in longitudinal studies, it would imply that volunteering out of self-determination might offset resource deficits at the job, contributing to lower levels of burnout and stress in the workplace.

However, we found a different pattern along the motivational axis (Fig. 1c, d). First, all volunteers (regardless of their motives) reported higher levels of work engagement and positive mental health than non-volunteers, although the effects were somewhat stronger for the self-determined group. How do we explain these different alignments for volunteers with controlled motivation? Although they report high burnout and stress levels, it seems plausible that people with controlled motives (where career advancement and the influence of social circles including the workplace play an important role) are also more engaged in their paid jobs. Inversely, if their high levels of work engagement motivate them to volunteer (be it as a way of obtaining competitive advantage or recognition), this could be seen as an act of over-commitment. Over-commitment has been associated with stress and exhaustion (Siegrist 1996). While this is a viable hypothesis, it cannot be tested with the current, cross-sectional data. We also found that, contrary to the health-impairment axis, no interaction effects were at work in the motivational axis,

meaning that the main effect for volunteering was irrespective of paid work conditions. In the face of these results, both the compensatory and the complementary hypotheses would help to explain work engagement and positive mental health. This differential pattern between the health-impairment and motivational axis might speak for some of the rationale and empirical evidence found in the JD-R literature. The model posits that demands directly affect negative health outcomes (such as burnout and stress). However, resources not only enhance motivation and well-being, but also help to buffer the effect of demands on strain (Bakker et al. 2005). When we observe volunteering as a psychosocial resource that enables social relatedness, the experience of meaningfulness and a heightened sense of mastery, then the compensatory (buffering) effects along the health-impairment axis and the complementary (boosting) effects along the motivational axis seem plausible.

Contributions, Limitations and Future Research

By considering individuals' working conditions, this study has shed a new light on the approach to volunteering and well-being. The revealed patterns show that different life roles might contribute to our health in different ways and in interaction with each other. Furthermore, the driving force behind people's actions (whether internal or external) has also proven to be an important determinant of health-related outcomes. Albeit small, these interaction effects were found in a sample of Swiss workers with heterogeneous occupational backgrounds.

Second, while still in need of further validation, the study has also shown that indexes such as the JD-R ratio (Jenny et al. submitted) and the VFI-Index developed in this study on the basis of SDT correlates (Oostlander et al. 2014) can be useful tools for simplifying scientific models and constructs, facilitating integrative practical applications.

At this point, certain limitations should be addressed. First and foremost, we should mention the self-report, cross-sectional nature of the study. Such a design does not allow causal interpretations, meaning that either volunteering could promote health or health could be a prerequisite for volunteering. In fact, there is empirical evidence in both directions (Li and Ferraro 2006). However, we think that the revealed interaction effects (rather than claims of causation) stand at the core of our findings, paving the way for a more contextualizing approach to research questions around volunteering. While common-method effect cannot be fully ruled out due to the use of self-report only, this concern is less dramatic in moderation analyses like the ones conducted here, as they have shown to be less vulnerable to such biases (Siemsen et al. 2010).

The simplification of working conditions and volunteers' motives in this study served its purpose, illustrating patterns through clear dichotomizations (i.e., favorable vs. unfavorable working conditions; self-determined vs. controlled motivation). However, this is at the expense of some explained variance, even when such losses have shown to be rather low (Jenny et al. submitted). In addition, we assessed demands with only one dimension (i.e., quantitative demands). After

obtaining this larger picture, future studies might want to strive for details, eventually pairing specific working conditions to specific motives to volunteer. This would certainly require a more controlled, specific sampling regarding occupational fields and areas of volunteering. A closer observation could additionally explain much of the riddles around the age factor. In this study, we found a main effect for age in all outcome variables, hinting toward better work-related health as people get older. This could well be the sign of a healthy-worker effect (Li and Sung 1999), yet we believe that the motivational shifts that come along with age might have a strong explanatory potential: first, as to why people volunteer, and second, as to what resources become relevant (or irrelevant) across the lifespan. As we argued in the introduction, motivation gradually shifts from external to internal with age (Kooij et al. 2011) and aging individuals downplay the instrumentalization of their actions in favor of the maintenance of positive social relationships and experiences that elicit positive emotions (Carstensen 2006). Hence, motives and resources that were important in an earlier life stage might become less relevant (or even detrimental) later in life. A more discerning approach, considering a broader array of demands and resources (both in the job and in the voluntary work) could yield valuable insights for work design in both domains throughout the lifespan.

Finally, a closer look into the interaction between the demands and resources in both domains should provide a better insight into the recovery effects of volunteering. For instance, a person with high emotional demands in their paid work (e.g., social worker) might have some sort of reactivity toward this type of demands during their off-job time. While more empirical evidence is needed, some argue that people should engage in off-job activities that utilize resources other than those used at work (Geurts 2014).

Practical Implications

The evidence for the health-promoting effects of volunteering has been growing steadily in the last years. However, little has been researched on volunteering in interaction with other life domains. A research program that further develops this path would generate best-practice insights on how to accommodate both activities and on how to optimize work design in both domains. Longitudinal studies would help to disentangle some of the differential patterns we found for different health outcomes and to establish causal links. In this regard, it is also important to consider earlier empirical evidence for the relationship between volunteering and health in the opposite direction: People with higher education levels (and presumably with more resourceful jobs), better integration, and those who are healthy in the first place are more likely to volunteer (Li and Ferraro 2006; Thoits and Hewitt 2001; see also US Bureau of Labour Statistics 2013; Stadelmann-Steffen et al. 2010). These selection biases may be the result of socialization processes and convenient recruitment strategies (e.g., Corporate Volunteering), which might influence the likelihood that a person be exposed to volunteering. Bearing this in mind, non-profit organizations may want to strive toward a diversification of the volunteering workforce, and address different sectors of the community with different

occupational backgrounds. Our data suggest that people who experience high demands and low resources in their paid jobs might particularly benefit from volunteering. While this should not undermine the responsibility of employers to minimize stress and foster resources whenever possible, volunteering might help to mitigate transient or enduring negative (subjective) experience at work. Finally, the results suggest that the different socialization instances (particularly the education system) should instill the visions and values of a solidary community from an early age and that recruitment strategies desist from the instrumentalization of volunteering, so that intrinsic, self-determined action can unfold.

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