Journal of Public Value and Administrative Insight
Journal Homepage: http://readersinsight.net/JPVAI

Research Article

Exploring the moderating effect of coworker support and supervisor support on the relationship between self-efficacy and subjective well-being of academic faculty in Pakistan

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Submitted: 28 November 2021 *Revised: 25 February 2022* *Accepted: 06 March 2022*

ABSTRACT

In recent years academic faculty jobs have undergone significant changes from being low demanding and highly satisfying to stressful and challenging. The ongoing challenge of COVID-19 has intensified the teaching and research challenge of placing academicians' well-being at stake. The current study explores a personality antecedent (self-efficacy) and a contextual antecedent (job social support) of academic faculty subjective well-being measured as job satisfaction and overall satisfaction with life. Data collected from 326 public and private sector faculty was subjected to measurement and structural model analysis using SMART-PLS 3. Hypothesis testing for direct effect revealed that self-efficacy and supervisor social support are significantly related to life satisfaction. Coworker support and supervisor social support are significantly associated with job satisfaction. The moderation analysis revealed that supervisor support positively moderates the relationship between self-efficacy and subjective evaluation of well-being. In contrast, coworker support negatively moderates the relationship between self-efficacy and subjective well-being. The results revealed that although supervisor support is an important determinant of how self-efficacy leads to higher well-being among academicians, a high level of coworker support may negatively affect individuals with high self-efficacy. The study highlights the importance of matching personality with the job's situational factors to improve faculty's well-being.

Keywords: *Supervisor Support; Co-Worker Support; Self-Efficacy; Subjective Well-Being; Academic Faculty*

1. INTRODUCTION

University academic faculty are the critical knowledge producers and educators in the contemporary knowledge society (Bentley et al., 2013). Recent statistics reveal that their jobs have undergone significant changes in the recent past, negatively impacting their well-being. A few decades ago, employment in academia did not pose many challenges for them (Zábrodská et al., 2017). They were generally intrinsically motivated, while the jobs were low demanding and highly satisfying (Willie & Stecklein, 1982). However, due to recent marketisation and socio-economic trends, they are losing many of traditional resourceful job characteristics like social support, academic autonomy, job flexibility, low

https://doi.org/10.31580/jpvai.v5i1.2139
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conformity needs, tenured jobs, stress-free environment, social prestige, and opportunity to learn and develop (Jacobs & Winslow, 2004; Zabrodska et al., 2016). Present-day faculty are facing more competitiveness, job insecurity and heightened work demand, including publication pressures, teaching loads and excessive paperwork at the job (Zábrodská et al., 2017).

The scenario of higher education institutes in Pakistan has also transformed over the last fifteen years. The advent of the Higher education commission (HEC) in 2001 witnessed a landmark growth in terms of universities, students, faculty, disciplines, and postgraduates (Atta-ur-Rehman, 2013). To improve the quality of higher education and elevate the ranking of universities, HEC has changed the job scenario from flexible, autonomous, and low stress to considerably more competitive and demanding. Parallel to teaching and administrative tasks, they are also expected to enhance their education level to PhD and indulge in research activities as a precursor for this sector's progression. On the positive side, faculty has also seen a considerable increase in their financial rewards, job status, and a well-defined career growth opportunity (Parveen et al., 2011). On the negative, faculty has also seen an increase in competing workloads of teaching, research, and administrative duties with tighter deadlines and performance repercussions (Riaz et al., 2017). Eventually, they become overburdened and consider the working environment very stressful (Khalid et al., 2012). Studies have shown a prevalence of burnout and occupational stress among Pakistan's academic faculty (Khan et al., 2014; Yusoff & Khan, 2013).

In recent times, when COVID-19 has infested almost all professions, teaching is one of the most affected jobs since classes shifted to online mode without much prior preparation and training. A recent survey on online education during the COVID-19 pandemic revealed that teachers experience much higher workloads and stress than on-campus classes (Marek, Chew, & Wu, 2021). Given that academicians are the backbone of higher education institutes and play the central role in the intellectual development of the next generation, understanding the factors contributing to their well-being is critically essential. A review by Diener et al., (2016) mentioned health, greater longevity, social relationship, ability to remain positive in difficult circumstances, and higher productivity as few benefits of subjective well-being.

This paper explores the moderating influence of job-based social support available to faculty on the relationship between self-efficacy and subjective well-being. Our study is unique in multiple aspects. First, we studied two aspects of well-being: 1) job satisfaction or constructs representing subjective well-being at work and 2) life satisfaction, or construct representing general happiness in life (Cerci & Dumludag, 2019). In this way, our study deviates from a plethora of previous literature, mainly focused only on the occupational well-being represented by job satisfaction. Diener et al., (2016) posit that subjective well-being is a holistic concept, and organisations recognise that analysing multiple indicators will contribute to a better workplace. Second, previous studies have mostly cited contextual and situational workplace factors as predictors of job and life satisfaction (Diener et al., 2016). Our research takes the person-situation interaction approach to explore how social support available to faculty at the workplace moderates

the relationship between efficacy beliefs and job satisfaction and between efficacy beliefs and life satisfaction.

1.1. Self-Efficacy, Life and Job Satisfaction

Life satisfaction is an individual's accumulated and generalised evaluation of their overall life at a certain point in time. This evaluation can range from low to high (Diener, 1984). Life satisfaction is a broader judgment about whole life, which is an essential component of subjective well-being evaluation. It is a cognitive judgment process in which people compare their current state of life with their desired state of life (Diener, 2000). Job satisfaction as an individual's affective reaction towards one's experiences at the job, which can be favorable or unfavorable (Brief, 1998). It is the most prominent and widely discussed job attitude within management research (Judge & Kammeyer-Mueller, 2012; Zhu, 2013). Both life satisfaction and job satisfaction are correlated with dispositional tendencies. For instance, studies have shown dispositional traits of emotional stability, agreeableness, extraversion, and conscientiousness are positively related to job satisfaction (Templer, 2011).

The personality trait of generalised self-efficacy (GSE) is defined as one's self-concept about ability and capacity to organise and perform various tasks in life to attain designated goals (Bandura, 1977). Positive personality traits like self-efficacy are categorised as personality resources. Resources are those contextual or psychological factors useful to achieve some goal or can be used to generate more resources (Hobfoll, 2002). Instead of exploring domain-specific self-efficacy, we examined the broader and generalised dimension related to a wide situation (Chen et al., 2001). This is because our focal outcomes are both job and overall life satisfaction. According to social cognitive theory, self-efficacy beliefs are manifested in both cognitions and emotions (Bandura, 1997). GSE is not a general evaluation of one's abilities and skills. A high in GSE person judges that they can do a lot of tasks with the current level of skills and abilities. It is also referred to as mastery expectations related to individual perception of opportunities and beliefs to overcome obstacles in the environment (Bandura, 2006). People with high GSE show a higher level of endurance and persistence when encountering complex tasks. Simultaneously, people low in GSE show more significant stress and dissatisfaction in difficult and strenuous situations (Bandura, 1997). Literature indicates that GSE is related to positive outcomes in the work and life domains (Maddux & Gosselin, 2012).

Previous research has consistently found a strong association between self-efficacy and job satisfaction among teachers (Federici & Skaalvik, 2012; E. Skaalvik & Skaalvik, 2014). In the same manner, studies have also documented GSE as a consistent positive predictor of life satisfaction. For instance, Çelik and Kahraman (2018) found a modest positive link between GSE beliefs and teachers' life satisfaction among 412 secondary and high school teachers in Turkey. We believe that this relationship holds for higher education academicians as well.

H1: Academicians GSE positively relates to job satisfaction

H2: Academicians GSE positively relates to life satisfaction

1.2. Social Support as a Moderator

Social support is the emotional, cognitive, and instrumental support from social role partners (Ten Brummelhuis & Bakker, 2012). Like GSE, it is also a type of resource. According to Cobb (1976), social support is a contextual resource that believes that individuals are cared for, loved, and esteemed by others. In academia, social support is available from multiple sources, especially supervisors and colleagues. Studies have found that a supportive and cooperative working environment is related to positive health indicators, job satisfaction, and other beneficial outcomes in general (Jolly et al., 2020) and academia (Kinman et al., 2011). According to S. Cohen and Wills (1985) social support can play a dual role in determining well-being among individuals. First is the direct beneficial influence of social support on well-being irrespective of stress from the environment. Gayathri and Karthikeyan (2016) reported a positive association between work social support and the life satisfaction of elderlies. In this study, we have classified work social support as two dimensions of coworker social support and supervisor support. Coworker support is the support received from those fellow employees who are at a similar level and perform similar or overlapping tasks. Supervisor support is the positive instrumental and affective work support from the immediate supervisor.

Keeping in view the direct effect of social support on well-being, we hypothesise that

H3a) coworker support positively relates to academicians' job satisfaction.

H3b) coworker social support positively relates to academicians' life satisfaction.

H4a) Supervisors social support positively relates to academicians' job satisfaction.

H4b) Supervisors social support positively relates to academicians' life satisfaction.

The dual role of social support mentioned in the literature is the buffering effect which assumes that higher social support dampens the negative impact of workplace stressors on well-being. For instance, perceived social support from the organisation buffers emotional labor's negative effect on job satisfaction (Duke et al., 2009). However, scant studies have examined the moderating role of social support in the relationship between GSE, a personality trait, and subjective well-being. Both self-efficacy and social support are types of resources. According to the conservation of resource theory (Hobfoll, 1989), resources are essential to individuals, and one resource is utilised to gain other resources. We believe that social support will boost the positive personality strength of GSE since a person will feel more confident of performing the task, leading to a stronger relationship between self-efficacy and satisfaction outcomes. Therefore, it is hypothesised that:

H5a) Coworker support enhances the association between GSE and job satisfaction

H5b) Coworker support enhances the association between GSE and life satisfaction

H6a) Supervisor support enhances the association between GSE and job satisfaction

H6b) Supervisor support enhances the association between GSE and life satisfaction.

2. METHODS

2.1. PARTICIPANTS

Participants of this study were full-time academic faculty of public and private sector universities in Pakistan. Participation was voluntary. We administered the link of the online survey using snowballing sampling techniques. Links of the survey were first administered to the academic staff among our close circle with instructions to forward to the academic staff of universities in Pakistan, among their close social networks. One week was allocated to data collection. At the end of the allotted time, we had received 345 responses.

Of the 345 responses received, 326 (94.4%) were screened, and valid responses were available for further data analysis. Unengaged responses, missing values, and non-academic samples were removed from the data set. Demographic analysis of data revealed that of the total respondents, 102 (31.3%) were females, and 230 (70.6%) were married. Respondents who were less than 29 years of age were 107(32.8%), between 30 and 39 were 127(39.0%), between 40 and 49 were 56 (17.2%) and above 50 years of age were 36 (11.0%). There were 164 (50.3%) Ph.Ds. In comparison, 162 (49.7%) had a master's degree. The designation levels were as follows: 164(50.3%) lecturers, 106(32.5%), Assistant Professors, 28 (8.6%) Associate Professors, and 28 (8.6%) Full professors. Of the total sample, 137 (42.0%) were from private universities while the remaining were from public sector universities.

2.2. MEASURES

All the measures were adopted from existing studies and used a five-point Likert scale for consistency. The scale was as follows: strongly disagree (1), disagree (2), neutral (3), agree (4), strongly agree (5). All scales were positive such that a greater score indicates a higher level of the psychological construct it captures.

2.2.1. Life Satisfaction

SWLS (Satisfaction with life scale) with five items was used to measure overall life satisfaction (Diener et al., 1985). An example item is "in most ways my life is in general close to my ideal."

2.2.2. Job Satisfaction

We measured faculty's overall job satisfaction with four job satisfaction scale items (Judge, Locke, Durham, & Kluger, 1998). An example item is: "I feel fairly well satisfied with my present work".

2.2.3. Generalised Self-efficacy

The GSE was gauged by a scale developed by Chen et al., (2001). The scale has eight items to measure an individual's generalised self-efficacy. An example item is "I will be able to achieve most of the goal that I have set for myself"

2.2.4. Supervisor and Coworker support

Coworker social support was measured by a three-item scale adopted from QEEW (Van Veldhoven & Meijman, 1994). An example item is "if necessary, you can ask your colleague for help". Similarly, supervisor social support at work was assessed by the three-item scale of Van Veldhoven and Meijman (1994). An example item is "can you count on your superior when you come across difficulty in your work?"

2.5. Analysis Scheme

We assessed the proposed model for measurement model and structural model. The analysis was conducted using the PLS approach of structural equation modeling. SMART PLS. 3 software was utilised for PLS analysis (Ringle et al., 2015). To test the hypothesis, 500 bootstrapping resamples were used. In the first step, that is, measurement model analysis, validity and reliability of the model were determined. In the second step, the structure model was analysed for effect size, coefficient of determination, path coefficients, and predictive power.

3. RESULTS

3.1. Measurement Model

We analysed the measurement and structural model using the direct effect model. Cronbach's Alpha (α) and Composite Reliability (CR) were used to determine the inter-item consistency reliability of the research model. For both of the indicators, the lower cut-off values are 0.70 (Hair et al., 2017). As we can see from the table, the Cronbach Alpha is in the range of .892 to .924 and CR is in the range of .920 to .952. Therefore, all the measures of the study construct have adequate reliability. To assess the convergent validity of the measures, we calculated factor loadings and average variance extracted. The rule of thumb for the factor loadings (also known as indicator reliability) should be greater than 0.4, but 0.7 is ideal.

Similarly, for AVE, the recommended value is more than 0.5 (Hair et al., 2017). Except for Self-efficacy, all other constructs have factor loading greater than 0.7. For self-efficacy, one item has a factor loading of 0.693, and all other items have loadings higher than 0.7. Therefore, all factors' loadings fulfilled the required criteria for convergent validity. The AVE values of the constructs were also adequate as they ranged from 0.591 to 0.868.

Table 1. Measurement model: reliability and convergent validity

Construct/Indicator	Factor Loading	α	CR	AVE
Life Satisfaction		0.917	0.938	0.752
LS1	0.903			
LS2	0.913			
LS3	0.879			
LS4	0.848			
LS5	0.788			
Job Satisfaction		0.892	0.925	0.756
JS1	0.883			

Construct/Indicator	Factor Loading	α	CR	AVE
JS2	0.891			
JS3	0.877			
JS4	0.826			
Generalised Self-Efficacy		0.902	0.92	0.591
SE1	0.716			
SE2	0.756			
SE3	0.75			
SE4	0.801			
SE5	0.881			
SE6	0.799			
SE7	0.693			
SE8	0.74			
Coworker Support		0.924	0.952	0.868
CoworkSup1	0.932			
CoworkSup2	0.934			
CoworkSup3	0.93			
Supervisor Support		0.917	0.947	0.857
SupervisorSup1	0.941			
SupervisorSup2	0.947			
SupervisorSup3	0.888			

To determine the study constructs' discriminant validity, we employed Fornell-Larcker (F-L) criteria (Fornell & Larcker, 1981). This method calculates the square roots of AVE values. If these square roots are greater than the correlations among the constructs, both constructs are deemed discriminant. Table 2 shows the results of the F-L methods. The diagonal represents the square roots of the AVE values. As we can see, the results in table 2 depict that all the study constructs are discriminant.

Table 2. Discriminant validity as depicted by Fornell-Larcker method

	Construct/Indicator	1	2	3	4	5
1	Coworker Support	0.932				
2	Job Satisfaction	0.311	0.869			
3	Life Satisfaction	0.276	0.627	0.867		
4	Generalized Self-Efficacy	0.274	0.221	0.307	0.769	
5	Supervisor Support	0.489	0.324	0.374	0.312	0.926

3.2. Structural Model

The structural model analysis was carried out as per guidelines of Hair, Hult, et al. (2017). First, we tested the direct effect model with demographic variables: age, gender, marital status, and education level. The results revealed that none of the demographic variables was significantly related to the outcome variable of life satisfaction. Following the previous literature recommendation, we removed the demographic variables from further analysis (Becker et al., 2012). We then created the moderation model for structural model analysis. Results depict that all the exogenous variables have VIF values less than three compared with the endogenous variables of life satisfaction. Secondly, we determined the coefficient of determination (R2) of life satisfaction. The results (Table 3) depict that exogenous variables of optimism, self-efficacy, coworker support and supervisor support explain 45.9% of the variance in the outcome variable of life satisfaction. The model has adequate predictive relevance since Q2 values are above the

threshold of zero (Geisser, 1974; Stone, 1974). The f2 effect sizes were also estimated for the structural model. As suggested by Cohen (1988), values in the range of 0.02 and above are considered small, 0.15 and above are considered medium, and 0.35 and above are considered large. All of the effect sizes in the current study were relatively low in magnitude.

Table 3. Regression coefficients, R2 and Q2 values of direct effect and moderated effect

Construct/Indicator	β	T Statistics	P Values	F Square
Direct Effects				
H1: GSE -> Job Satisfaction	.068	1.169	.121	.005
H2: GSE -> Life Satisfaction	.188	3.71	0	.036
H3a: Coworker Support -> Job Satisfaction	.174	2.411	.008	.027
H3b: Coworker Support -> Life Satisfaction	.070	0.973	.166	.004
H4a: Supervisor Support -> Job Satisfaction	.220	3.493	0	.041
H4b: Supervisor Support -> Life Satisfaction	.269	3.846	0	.064
Moderated Effect				
H5b: GSE X CWS 1 -> Life Satisfaction	-.107	1.995	.023	.014
H5a: GSE X CWS 2 -> Job Satisfaction	-.168	2.69	.004	.034
H6b: GSE X SS 2-> Life Satisfaction	.197	2.724	.003	.028
H6a: GSE X SS 2 -> Job Satisfaction	.176	2.257	.012	.021
R^2_{adj} (Life Satisfaction)	.196			
R^2_{adj} (Job Satisfaction)	.162			
Q^2 (Life Satisfaction)	.149			
Q^2 (Job Satisfaction)	.122			

As depicted in table 3, bootstrapping of direct effect revealed that self-efficacy is a significant positive predictor of life satisfaction, β = .188, *p* <.01 but not job satisfaction β = .068, *p* =.121. Therefore, H1 is not accepted, but H2 is accepted. Coworker support is significantly and positively related to job satisfaction, β =. 174, *p* <.01 but not significantly related to life satisfaction, β = .07, *p* = .161. Hence H3a is accepted, but H3b is rejected. Supervisor support is significantly and positively related to both job satisfaction, β = .220, *p* <.01 and life satisfaction, β = .269, *p* <.01. Both H4a and H4b are accepted. Fig. 1 also depicts the regression coefficients and significant values of direct effect relationships.

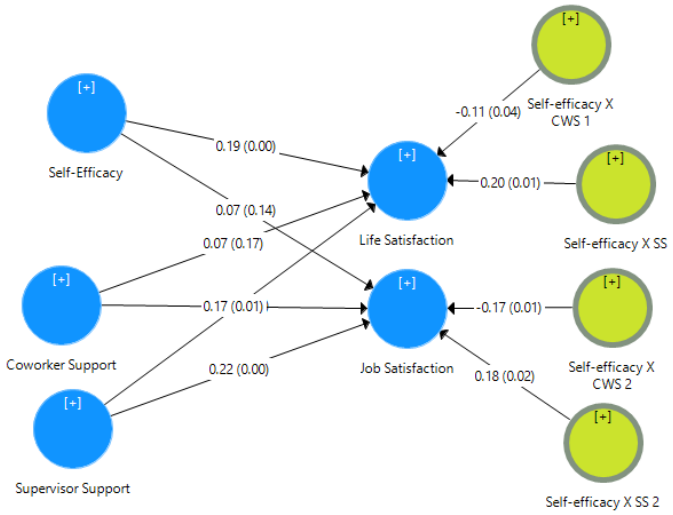


Fig. 1. Structural model results with interaction terms

3.3. Moderation Analysis

To create moderation, we used the two-step approach. In the two-step approach, the composite score of an independent construct is multiplied with the composite score of a moderator to create the interaction effect (Hair et al., 2017). Four variables were generated after the interaction effect. The relationship of the interaction term, GSE, and coworker support was significantly related and negatively related to life satisfaction, β = -.107, *p* <.05, and job satisfaction, β = .168, *p* <.01. This depicts that coworker social support is a negative moderator in GSE and life satisfaction and GSE and job satisfaction. So H5a and H5b are not accepted.

On the other hand, the interaction term of GSE and supervisor support is significantly and positively related to life satisfaction, β = .197, *p* <.01 and job satisfaction, β = .176, *p* <.05. Therefore, H6a and H6b are both accepted. This depicts that supervisor social support is a positive moderator in GSE and life satisfaction, GSE, and job satisfaction. Fig. 1 highlights the regression coefficients and significant values of the relationship between interaction terms and outcome variables. Fig. 2 to Fig. 5 depicts the interaction plots for the four interaction terms in the structural model.

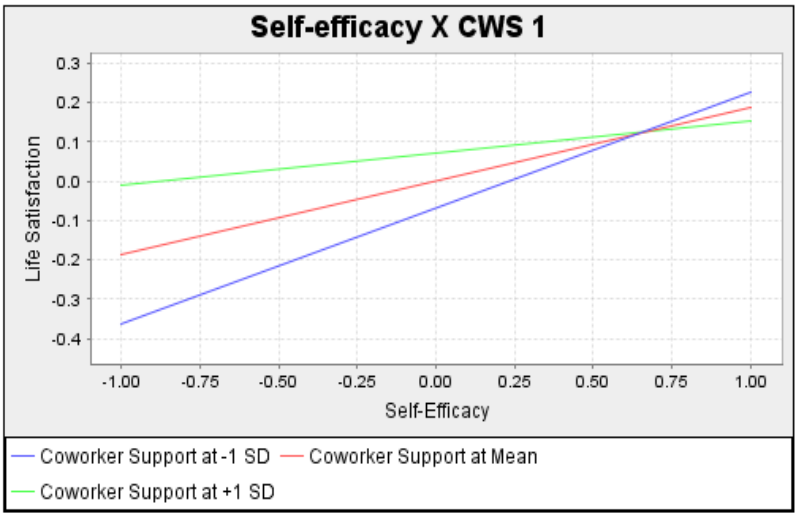


Fig. 2. Interaction plot for moderation of coworker support between GSE and life satisfaction

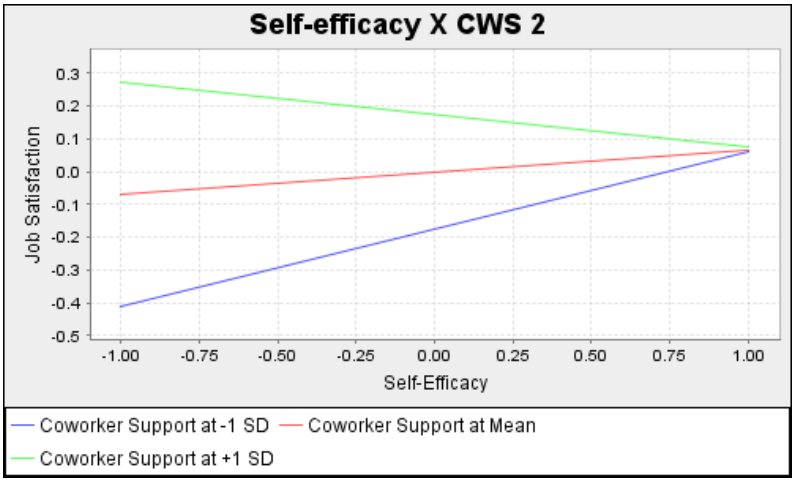


Fig. 3. Interaction plot for moderation of coworker support GSE and job satisfaction

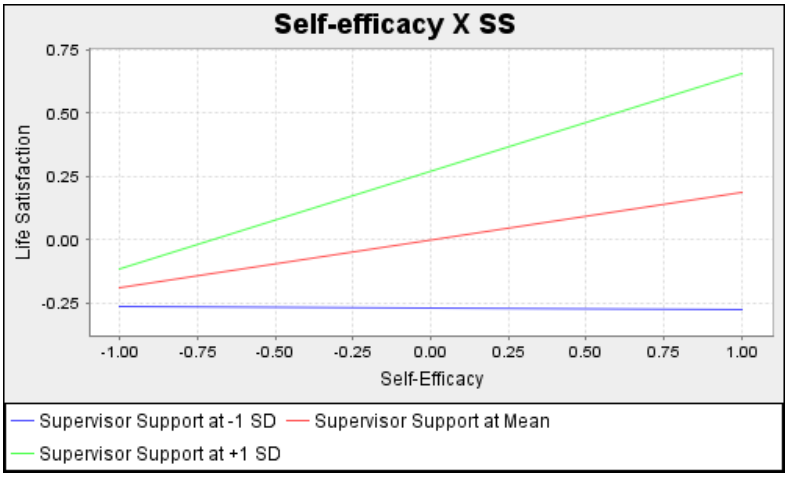


Fig. 4. Interaction plot for moderation of supervisor support between GSE and life satisfaction

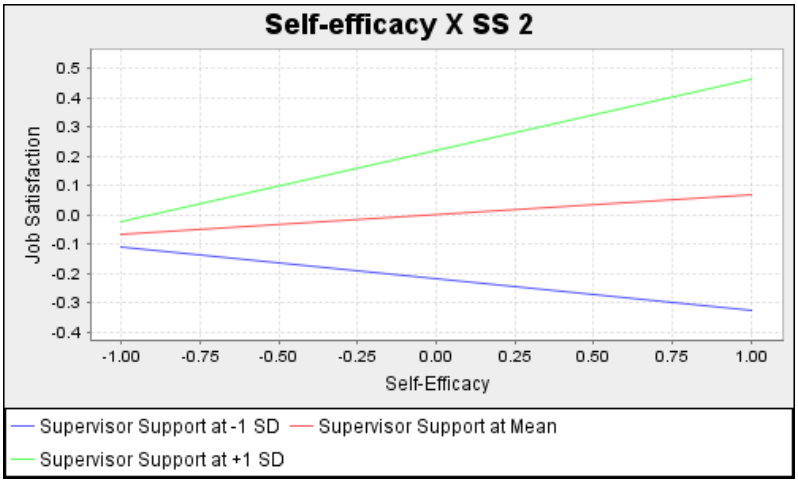


Fig. 5. Interaction plot for moderation of supervisor support between GSE and job satisfaction

4. DISCUSSION

We began this study by asking the question whether academic faculty's life satisfaction and job satisfaction is influenced by their GSE, job social support (coworker support and supervisor support). Also endeavor to explore whether the interaction of both GSE and job social support affects the well-being. As for our direct effect hypothesis, we found ample support for most of the proposed relationship. We found that GSE was not a significant predictor of job satisfaction but was significantly related to life satisfaction. In this way, our results regarding the relationship between GSE and job satisfaction deviate from previous research on teachers (R. A. Federici & E. M. Skaalvik; E. M. Skaalvik & S. Skaalvik). We concur that previous studies have adopted a somewhat different measure of self-efficacy, which is more relevant to the teacher's self-efficacy in academic settings. Our measure of GSE is more universal in nature and is more closely related to overall life satisfaction than a positive evaluation of one's job. A person who feels confident of performing various tasks irrespective of the domain (family, job, or other domains) in his or her life would tend to feel more satisfied with overall life.

For the proposed association between social support and well-being outcomes, we could not find any support for the proposed influence of coworker support on life satisfaction.

On the other hand, coworker support significantly relates to job satisfaction. Supervisor support positively influences both job satisfaction and life satisfaction. From the results, we can infer that supervisor support is a more important predictor of faculty subjective well-being since the effect sizes of the relationship of supervisor support with well-being compared to coworker support are higher. This stronger relationship of supervisor support with workplace outcomes than coworker support is also documented in previous literature. For instance, Charoensukmongkol et al., (2016) found that supervisor support was strongly related to job satisfaction compared to coworker support.

The results of the interaction effect were somewhat unexpected as well. First of all, the moderating effect of supervisor support on GSE and life satisfaction linkage and the GSE and job satisfaction linkage was in concordance with our hypothesis. We found ample evidence that if faculty found greater support from their immediate supervisors within academia, the relationship of their GSE on well-being outcomes would be stronger. This depicts that supervisor support contributes to how their confidence in achieving a task transforms into their satisfaction with the job and positive evaluation of overall life. On the contrary, we found unexpected moderation of coworker support. Higher coworker support results in a dampened relationship between self-efficacy and job satisfaction and between GSE and life satisfaction. This is probably because of the cross-over effect since the independent variable of GSE was not a significant predictor in relation to job satisfaction. In the second relationship with life satisfaction, the moderator variable was not a significant predictor.

However, the negative moderation of coworker support on the personality trait of self-efficacy is not a new concept to the literature. Many recent studies have reported that social support negatively moderates personality resources and well-being relationships such as self-esteem (Dupasquier et al., 2020), self-efficacy, organisational-based self-esteem, and optimism (Mehta & Sharma, 2021). For faculty, the supervisor support is more instrumental, which enhances their self-concept of task capacity and how it relates to subjective well-being. On the other hand, coworker support may be more useful in providing emotional and instrumental support, which may reduce the positive impact of self-efficacy on the faculty's well-being, a notion supported in existing literature as well (Hobfoll, 2002). Perhaps for the intellectual workers, as faculty members are, the help from coworkers can make them believe less competent, putting a negative influence on subjective evaluation of satisfaction in job and life domains.

5. CONCLUSION

Academia Our research shows the importance of self-efficacy and social support at work to determine academic faculty's well-being in terms of job and life satisfaction. Our moderation results indicated that while supervisor support enhances the GSE and well-being relationship, coworker support diminishes this relationship. This indicates that a high level of coworkers' support may not be recommended in case the faculty member already possesses a high GSE since this may have an adverse effect on their well-being. Yet highly self-efficacious academicians still need support from their supervisors to remain satisfied with their job and life. Determining employees' personality characteristics in universities and providing them with an environment with optimised

social support can enhance the subjective perception of well-being, leading to a satisfied, healthy, and productive academician.

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