Does Servant Leadership Moderate the Relationship between Job Stress and Physical Health?

Larry M. Dooley 1, Amin Alizadeh 1, Shaoping Qiu 2,* and Hongchao Wu 3

1 Department of Educational Administration & Human Resource Development, Texas A & M University, College Station, TX 77843, USA; l-dooley@tamu.edu (L.M.D.); ameen59@tamu.edu (A.A.)
2 Department of Engineering Technology & Industrial Distribution, Texas A & M University, College Station, TX 77843, USA
3 School of Education, South China Normal University, Guangzhou 510631, China; wuhc@scnu.edu.cn
* Correspondence: qsp680504@tamu.edu; Tel.: +1-979-402-6510

Received: 15 July 2020; Accepted: 10 August 2020; Published: 14 August 2020

Abstract: High school teachers experience high levels of job stress, which could lead to serious health problems. This study focused on Chinese high school teachers, as they have to manage negative stress and health issues. The research aimed to: (1) investigate the relationship between hindrance job stress, depersonalization, and physical health; (2) investigate if servant leadership, in fact moderates the relationship between hindrance job stress and depersonalization, as well as physical health. The study design was cross-sectional and data analyses were conducted by using SPSS 21 and Mplus 7. The sample consisted of 857 high school teachers across Southern China. The results showed that hindrance stress is related to depersonalization among high school teachers (β = 0.63, p < 0.01). Both hindrance job stress (β = 0.32, p < 0.01) and depersonalization (β = 0.16, p < 0.01) are positively related to physical health. In addition, servant leadership moderates the relationship between hindrance job stress and physical health among the Chinese high school teachers (β = −0.09, p < 0.01). However, the results did not find that the effect of hindrance job stress on depersonalization is moderated by servant leadership (β = 0.02, p = 0.53). It is suggested that Chinese high schools recruit and train leaders in servant leadership, relieve teachers’ stress, and promote their health to ensure the sustainable development of schools.

Keywords: servant leadership; hindrance job stress; physical health; depersonalization; high school teachers; China

1. Introduction

Stress has long been conceptualized with the dual nature of eustress—constructive stress—and distress—negative or destructive stress [1]. Accordingly, scholars have categorized it into two types: challenge-related and hindrance-related stress [2]. Challenge stress is considered as supporting personal growth and achievement, whereas hindrance-related stress threatens personal development and accomplishments [3]. Teaching as a profession carries more stress and anxiety than many occupations worldwide. Teachers face mental and physical stress daily as their work conditions have huge responsibilities to not only students, but also all stakeholders, from parents to governmental officials [4]. In China, where families are small, the goal for children to matriculate to tertiary schools and beyond causes tremendous stress on parents, which then passes on to teachers. This is especially true for high school teachers, who are obliged to carry tremendous hindrance job stress. As a psychological construct, hindrance job stress is a kind of stress that constrains personal achievement and hinders individuals’ goal progress [2]. Examples include administrative requests, conflicting instructions and expectations, and unclear job tasks. Generally, the hindrance stress of Chinese high school teachers
comes from education policy, school administrators, workload, student affairs, peer relations, social expectation, and students’ acceptance rate into college [5].

Previous research revealed that hindrance job stress reduces performance [6], job satisfaction [2], and employee engagement [7]. Too much job stress can contribute to burnout, frustration, anxiety, depression, and other psychophysical health illnesses [8]. Depersonalization in the workplace is commonly considered a component of burnout. Burnout is “a psychological syndrome, which rises in response to the chronic exposure to work-related stress” [9] (p. 26). Pereira-Lima and Loureiro [10] declared that burnout is composed of four dimensions: emotional exhaustion (feeling overwhelmed at work); dehumanization (any dehumanizing behaviors at work); depersonalization (also known as cynicism); and professional accomplishment (also known as professional efficacy). Maslach, Schaufeli, and Leiter [11] declared that the two core dimensions of job burnout are emotional exhaustion and depersonalization; they stated that depersonalization refers to “a negative, callous, or excessively detached response to various aspects of the job” (p. 399). Individuals with depersonalization feel disturbingly disconnected from their sensations and surrounding events as if they are outside viewers [12]. Instead of the overall burnout, this study focused on depersonalization. As a phenomenon, depersonalization has been prevalent among Chinese schoolteachers. This is most alarming, especially in a school setting, where teachers are generally on their own in the classroom and rarely under close supervision. Depersonalization in the classroom could lead to a dangerous situation for the students.

Servant leaders in schools lead in a manner where they prioritize the needs of their employees above their own, and in so doing, can provide emotional healing for teachers who suffer from broken spirits and emotional hurt [13]. Scholars and practitioners in the field of leadership have recommended a more genuine, authentic leader whose value-based leadership can minister to those suffering from stress and psychological issues, such as anxiety and depression. Servant leadership is the most needed leadership style [14].

Although relationships between hindrance job stress, perceived servant leadership, depersonalization, and physical health have been studied in the workplace in organizations, this nomological network has rarely been investigated in the Chinese high school setting. Therefore, this research is warranted and will fill a much-needed gap in the literature. The purpose of the current study was to examine how hindrance job stress, perceived servant leadership, depersonalization, and physical health are related by clarifying the strength of the association and the mechanism involved in the Chinese high schools. This study was interested in investigating the moderating role of perceived servant leadership in these relationships. Particularly, this study proposed a moderated mediation model whereby hindrance job stress interacts with servant leadership to affect depersonalization as well as physical health disorders. This research was conducted in the Chinese high school setting. Given that job stress and health issues are currently prevalent among the Chinese high school teachers, such a setting constituted an appropriate context for the study of hindrance job stress, perceived servant leadership, depersonalization, and physical health.

This paper is structured as follows. First, theoretical frameworks to guide the study are presented and hypotheses to be tested are formulated. Next, sample, data collection, and measures are described, followed by a data analysis to test the hypotheses. This paper concludes with a discussion of the results, implications, limitations, and future research directions.

2. Theoretical Frameworks and Hypotheses

The demand–control model of stress [15] and the self-categorization theory [16] were used to inform this study. The demand–control model considers two aspects of the job: the amount of employee control in workplace situations and psychological job demands. In this model, high pressure, which includes depersonalization, exhaustion, and health complaints, results when job demand and hindrance stress are high and employee control is low. The demand–control model foresees the stress-related health risks of the job. This model helps explain the interactive mechanism between hindrance stress, depersonalization, and physical health.
While the demand–control model concerns employees’ work-related stress and health, the self-categorization theory [16] posits that individuals construct the social world in meaningful ways by categorizing themselves into larger groups. Through this process of self-categorization, individuals feel a sense of belonging to the larger group. This phenomenon helps build a shared identity for members, which can serve as a basis for support and belongingness that might be able to improve employees’ health [17]. The self-categorization of employees in the first step depends on the degree of trust between members and supervisors. Servant leadership has been proposed by several researchers as a tool to enhance trust level in organizations [18,19]. This paper proposes that servant leaders can create a positive atmosphere between employees and their organization. Consequently, it was expected that servant leadership impacts mental and physical health positively because it helps to create a sense of shared identity.

Evidence has shown that stress can cause poor mental health [20]. For example, Yulita, Idris, and Dollard [7] found hindrance stress positively correlated with emotional exhaustion in the workplace. Some scholars found a link between the impact of hindrance stress on exhaustion in the learning environment [21]. Schneider, Hornung, Weigl, Glaser, and Angerer [22] analyzed a three-stage study that surveyed 400 German physicians from 2005 to 2014 and declared that hindrance stress had a positive correlation with depersonalization. However, there is a dearth of studies to show whether hindrance stress has any impacts on depersonalization among Chinese high school teachers.

In addition to examining the relationship between hindrance job stress and depersonalization, we also investigated the boundary condition to explain how this relationship occurs. Specifically, this study further examined whether servant leadership moderates the hindrance stress–depersonalization link. Servant leadership is a new leadership paradigm that invites all members into the decision-making process; it strongly encourages caring behaviors and aims to increase the personal growth of followers [23]. Servant leadership is mainly manifested by humility, empowerment, courage, forgiveness, and standing back [24]. Qiu, Dooley, and Xie [25] declared that servant leaders can show empathy and understanding to their followers and, therefore, reduce stress and mental health issues in the Chinese hospitality industry. Rivkin, Diestel, and Schmidt [26] conducted two studies using employees from a major bank and undergraduate students in Germany. Their results revealed that servant leadership is the key determinant of employees’ psychological health. A recent study surveyed 2636 Chinese schoolteachers and found that there was a positive correlation between perceived servant leadership and hindrance stress [4]. However, the impact of servant leadership on the hindrance stress–depersonalization link is not clear. Based on the above theories and literature, the following two hypotheses were proposed.

**Hypothesis (H1).** Hindrance stress is positively related to depersonalization among Chinese high school teachers.

**Hypothesis (H2).** Perceived servant leadership moderates the relationship between hindrance stress and depersonalization among Chinese school teachers.

The proposed model suggests that hindrance stress is correlated with physical health. Previous studies have generally supported the proposition that stress can negatively affect psychological and physical health [27,28]. Salovey, Rothman, Detweiler, and Steward [29] asserted that positive emotional states improve the physical well-being of individuals. When individuals work under severe stress for a month or more, they are more likely to suffer physical illnesses. Johansson, Johnson, and Hall [30] concluded that job stress also leads to an adverse health style, such as smoking, alcohol abuse, overeating, and less exercise. Kristensen [31] reviewed the literature and declared that not only can job stress cause cardiovascular diseases, but it also may cause many other physical health issues, including alcohol-related illnesses, musculoskeletal diseases, diabetes, cancer, psychiatric disorders, gastrointestinal diseases, and suicides.

In more recent studies, Mawritz, Folger, and Latham [32] surveyed 215 employees and supervisors from different industries in the United States and found that hindrance stress was positively correlated
to anger, anxiety, and abusive supervision, proving that there is a link between anger, anxiety, and decline in physical health [33]. Ma, Yang, Guo, Wang, and Deng [34] analyzed 2426 healthcare workers in Chinese hospitals and found that hindrance stress negatively impacts employees’ physical and mental health. Another study surveyed 479 university non-teaching employees in the U.S. and found that hindrance stress is harmful to employee physical health and well-being [35]. Servant leaders serve by prioritizing employees’ needs above their own, supporting their employees to explore their full potential and assist others in completing their tasks appropriately [36]. It was expected that servant leadership would reduce the effects of negative stress and improves employees’ physical health among high school teachers. Therefore, the following were hypothesized:

**Hypothesis (H3).** Hindrance stress is positively related to physical health among high school teachers in China.

**Hypothesis (H4).** Perceived servant leadership moderates the relationship between hindrance stress and physical health among high school teachers in China.

The framework suggests that depersonalization might be associated with physical health. However, empirical evidence is still lacking in supporting the idea that depersonalization is related to physical health. Previous studies have only investigated the connection between burnout and health. For example, Kim, Ji, and Kao [37] analyzed 406 California registered social workers, and their research discovered that participants with higher levels of burnout later reported increased physical health problems. Nakamura, Nagase, Yoshida, and Ogino [38] also found that depersonalization has a positive relationship with diminished cellular immunity. Another study from the hotel industry in Turkey declared that depersonalization (cynicism) affects employees’ physical health and, likewise, their psychological health [39]. Given that depersonalization is one dimension of burnout, it was expected that depersonalization is positively related to physical health. Since there is little research in the literature examining such an association in the context of education in China, the following hypothesis was proposed:

**Hypothesis (H5).** Depersonalization is positively associated with physical health among high school teachers in China.

The following conceptual model was based on the theories and hypotheses previously discussed (see Figure 1).

![Hypothesized conceptual model](image)

**Figure 1.** Hypothesized conceptual model. HS denotes hindrance stress, SL represents perceived servant leadership, DE is depersonalization, and PH signifies physical health.
3. Materials and Methods

3.1. Sample and Data Collection

A non-probability convenience sample comprised of 1043 teachers was recruited from high schools across Southern China in October 2019. This sampling technique was employed due, in part, to a class of students of the fourth author, who completed an internship program in high schools in the Southern part of China. The student teachers asked their school colleagues to participate in this study, and after permission was obtained, they were sent a link to potential participants. A message was sent a week later to remind the participants to complete the questionnaires. Of the initial 1043 high school teachers, 857 provided valid data with a response rate of 82.2.

The study was cross-sectional; all the questionnaires were administered in Chinese. The participants were informed of the purpose and importance of the study. Their responses were kept confidential and their anonymity was guaranteed. In addition, clear instructions were given, ambiguous terms and vague concepts were avoided, and the questions were simple, specific, and concise in order to further mitigate common method variance (CMV) [40].

Of the 857 participants who provided valid data, 546 (63.7%) were female teachers, while 311 (36.3%) were male. The mean age of participants was 38.08 years (SD = 8.44). On average, the participating teachers had 14.50-year teaching experience (SD = 8.75). The average annual income was CNY 96.1 thousand (SD = 5003). Table 1 presented the descriptive characteristics of the samples.

Table 1. Descriptive information of the participants.

<table>
<thead>
<tr>
<th>Description</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>36.3</td>
</tr>
<tr>
<td>Women</td>
<td>63.7</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>20s</td>
<td>22.3</td>
</tr>
<tr>
<td>30s</td>
<td>43.4</td>
</tr>
<tr>
<td>40s</td>
<td>26.5</td>
</tr>
<tr>
<td>Above the 50s</td>
<td>7.8</td>
</tr>
<tr>
<td>Teaching tenure</td>
<td></td>
</tr>
<tr>
<td>1–10 years</td>
<td>34.1</td>
</tr>
<tr>
<td>11–20 years</td>
<td>41.9</td>
</tr>
<tr>
<td>21–30 years</td>
<td>20.6</td>
</tr>
<tr>
<td>Above 30 years</td>
<td>3.4</td>
</tr>
<tr>
<td>Annual income (Thousand CNY)</td>
<td></td>
</tr>
<tr>
<td>Below 50</td>
<td>17.9</td>
</tr>
<tr>
<td>50–99</td>
<td>38.8</td>
</tr>
<tr>
<td>100–149</td>
<td>33.3</td>
</tr>
<tr>
<td>Above 149</td>
<td>10.0</td>
</tr>
</tbody>
</table>

3.2. Measures

Participants were asked to respond to each item of the four main variables: hindrance stress, servant leadership, depersonalization, and physical health. They were also required to complete a demographic survey.

3.2.1. Hindrance Stress

Hindrance stress was assessed with 10 items developed by LePine, Zhang, Crawford, and Rich [41]. One of the sample items in this scale was “coworkers received undeserved rewards/promotions”. A five-point Likert-type scale was utilized, ranging from 1 “strongly disagree” to 5 “strongly agree”. The Cronbach’s alpha for these 10 items was 0.86 in the current study.
3.2.2. Perceived Servant Leadership

For measuring perceived servant leadership, this study used the six-item short form of the Servant Leadership Behavior Scale (SLBS-6) developed by Sendjaya, Eva, Robin, and Castles [13]. High school teachers were asked to rate their principals’ servant leadership behaviors. A five-point Likert-type scale was used, ranging from 1 “strongly disagree” to 5 “strongly agree”. An example item included “my principal respects me for who I am, not how I make him or her feel.” The alpha coefficient was 0.84 for these six items.

3.2.3. Depersonalization

Depersonalization was assessed using five items from the Maslach Burnout Inventory (MBI) [42]. The participants were asked to rate the degree to which they felt emotionally overextended or exhausted by their work. A five-point Likert-type scale was used for this measure. An example item included was “I have become more callous towards people since I took this job.” The present study found Cronbach’s α of 0.76 for this construct.

3.2.4. Physical Health

Physical health was assessed with a five-item scale developed by Skaalvik and Skaalvik [43]. The items included five physical health problems: (a) pain in the neck, back, or shoulders, (b) digestion problems, (c) headache, (d) dizziness, and (e) sleeping problems. Participants were asked to rate to what extent they have been bothered by these five physical health issues during the recent school year. A five-point scale was adopted from “not at all bothered” (1) to “very much bothered” (5). The consistency reliability for the scale was 0.86.

3.2.5. Control Variables

To reduce the possibility of confounding variables to influence the study results, participants’ gender, age, annual income, and teaching tenure were controlled for in this study. The previous study found that these variables have relationships with school teachers’ physical well-being [44,45].

3.3. Analysis Strategies

Data analyses were conducted using SPSS 21 and Mplus 7. First, SPSS 21 was used to compute mean, standard deviation (SD), skewness, and kurtosis, as well as zero-order correlations, variance inflation factor (VIF), and Cronbach’s α for main variables. Then, Mplus 7 was utilized to compare measurement models to examine convergent and discriminant validities by using a confirmatory factor analysis (CFA). Finally, Hayes’ [46] PROCESS v3.4 was used to determine the regression coefficients to test the proposed hypotheses. The following fit indices were used to assess how well the hypothesized models fit the data: chi-square (χ²), root mean square error of approximation (RMSEA), comparative fit index (CFI), the Tucker Lewis Index (TLI), and standardized and root mean square residual (SRMR). Furthermore, 95% confidence intervals (CIs) were used for the indirect effects by bootstrapping with 5000 iterations.

4. Results

4.1. Descriptive Statistics and Correlations

A descriptive analysis was performed first to compute means, standard deviations, and reliability coefficients for all the variables, as well as Pearson’s correlations between variables. Table 2 reported the results of the analysis. As can be seen from the table, hindrance stress, depersonalization, and physical health were positively related to each other, whereas perceived servant leadership was negatively associated with all the above three variables. For example, hindrance stress was highly positively correlated with both depersonalization (r = 0.62, p < 0.01) and physical health (r = 0.46, p < 0.01).
Perceived servant leadership was negatively related to hindrance stress ($r = -0.50, p < 0.01$). For control variables, while age was related to depersonalization and physical health ($r = -0.09, p < 0.01; r = 0.08, p < 0.01$), teachers’ tenure was associated with physical health ($r = 0.09, p < 0.01$). All other correlations between control variables and the four main variables were not statistically significant.

### Table 2. Means, standard deviations, reliabilities, and correlations.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gender</td>
<td>1.64</td>
<td>0.48</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>2. Age</td>
<td>38.08</td>
<td>8.4</td>
<td>−0.28 **</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>3. Tenure</td>
<td>14.52</td>
<td>8.8</td>
<td>−0.26 **</td>
<td>0.94 **</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>4. Income</td>
<td>9.61</td>
<td>5.00</td>
<td>0.24 **</td>
<td>0.29 **</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>5. HS</td>
<td>3.04</td>
<td>0.74</td>
<td>−0.13</td>
<td>0.06</td>
<td>0.08</td>
<td>0.08</td>
<td>0.86</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>6. SL</td>
<td>2.90</td>
<td>0.80</td>
<td>−0.08</td>
<td>−0.09 **</td>
<td>−0.05</td>
<td>−0.04</td>
<td>0.62 **</td>
<td>−0.31 **</td>
<td>0.76</td>
<td>−</td>
</tr>
<tr>
<td>7. DE</td>
<td>2.41</td>
<td>0.75</td>
<td>−0.08</td>
<td>−0.09 **</td>
<td>−0.05</td>
<td>−0.04</td>
<td>0.62 **</td>
<td>−0.31 **</td>
<td>0.76</td>
<td>−</td>
</tr>
<tr>
<td>8. PH</td>
<td>2.85</td>
<td>0.66</td>
<td>0.06</td>
<td>0.08 **</td>
<td>0.09 **</td>
<td>−0.01</td>
<td>0.46 **</td>
<td>−0.24 **</td>
<td>0.38 **</td>
<td>0.84</td>
</tr>
</tbody>
</table>

Note: ** $p < 0.01$, HS denotes hindrance stress; SL represents perceived servant leadership; DE is depersonalization; PH represents physical health; SD = Standard deviation. The reliability coefficients are presented in the diagonal.

### 4.2. Preliminary Analyses

Data screening was performed to detect missing data and outliers and to test the normality and collinearity. There were no missing data or outliers. Moreover, data distributions were close to normal distribution, since most absolute values of skewness were less than 1, while the values of kurtosis all fell between −3 and +3. In addition, no major collinearity issues existed, as the variance inflation factors (VIF) scores were less than 2. Moreover, Harman’s single factor test was performed to check if there were CMV issues in the data. The result demonstrated that one single factor accounted for 32.91% of the variance, indicating no major issues with CMV.

Prior to testing the proposed hypotheses, a CFA analysis was conducted to examine the construct validities. Four measurement models were compared, as shown in Table 3. The four-factor model showed a better fit to the data than any other models ($\chi^2 = 574.01$, df = 224, RMSEA = 0.04, CFI = 0.95, TLI = 0.95, SRMR = 0.04). These results provided support for the discriminant validity of the four main variables, indicating that hindrance stress, perceived servant leadership, depersonalization, and physical health were distinct variables. Moreover, all the factor loadings for the items on their corresponding variables were greater than 0.50 and all the values of average variance extracted (AVE) for the four main variables were greater than 0.50. These results demonstrated that hindrance stress, perceived servant leadership, depersonalization, and physical health all have good convergent validities.

### Table 3. Model comparison.

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$\Delta \chi^2$</th>
<th>RMSEA</th>
<th>CFI</th>
<th>TLI</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four-factor model HS, DE, SL, PH</td>
<td>574.01</td>
<td>224</td>
<td>−</td>
<td>0.04</td>
<td>0.95</td>
<td>0.95</td>
<td>0.04</td>
</tr>
<tr>
<td>Three-factor model HS + DE, SL, EE</td>
<td>887.15</td>
<td>227</td>
<td>313.14 **</td>
<td>0.06</td>
<td>0.91</td>
<td>0.90</td>
<td>0.05</td>
</tr>
<tr>
<td>Two-factor model HS + DE + SL, PH</td>
<td>1740.52</td>
<td>229</td>
<td>853.37 **</td>
<td>0.09</td>
<td>0.79</td>
<td>0.77</td>
<td>0.07</td>
</tr>
<tr>
<td>One factor model HS + DE + SL + PH</td>
<td>2720.47</td>
<td>230</td>
<td>979.95 **</td>
<td>0.11</td>
<td>0.65</td>
<td>0.61</td>
<td>0.10</td>
</tr>
</tbody>
</table>

Note: HS represents hindrance stress; DE denotes depersonalization; SL indicates perceived servant leadership; PH represents physical health. ** $p < 0.01$. 
4.3. Hypothesis Testing

To test the proposed hypotheses, a hierarchical multiple regression analysis was performed by employing PROCESS v3.4 [46]. Aside from the four main variables, the control variables were also entered into the model as covariates. Bootstrapping with 5000 iterations and 95% confidence intervals (CIs) was used for the indirect effects. In addition, pairwise contrasts of indirect effects were also checked in the model to compare different indirect regression coefficients. Moreover, −1 SD, mean, +1 SD were checked as conditional values. In order to reduce the collinearity, the values of hindrance stress, depersonalization, and perceived servant leadership were mean-centered.

The results are shown in Table 4. Hypothesis 1 proposed hindrance stress to be related to depersonalization among high school teachers. As indicated in Model 1, the regression coefficients from hindrance stress to depersonalization was significant ($\beta = 0.63$, $t = 20.06$, $p < 0.01$, 95% CI (0.57, 0.69)). Therefore, H1 was confirmed. Hypothesis 2 posited that perceived servant leadership moderates the relationship between physical health problems and depersonalization. The results showed that perceived servant leadership did not moderate the relationship between hindrance stress and depersonalization ($\beta = 0.02$, $t = 0.64$, $p = 0.53$, 95% CI (−0.03, 0.07)). Therefore, H2 was rejected. Additionally, the regression coefficients from hindrance stress to physical health in Model 2 were also positively significant ($\beta = 0.32$, $t = 8.53$, $p < 0.01$, 95% CI (0.25, 0.40)), and so were the regression coefficients from depersonalization to physical health problems ($\beta = 0.16$, $t = 4.59$, $p < 0.01$, 95% CI (0.09, 0.22)). Thus, H3 and H5 were also supported. Both hindrance stress and depersonalization were positively related to physical health among high school teachers in China.

Table 4. Results of the PROCESS for relationships between predictors and outcome variables.

<table>
<thead>
<tr>
<th>Model 1</th>
<th>Outcome Variable: DE</th>
<th>Coefficient</th>
<th>SE</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS</td>
<td></td>
<td>0.63</td>
<td>0.03</td>
<td>20.06</td>
<td>0.00</td>
<td>0.57</td>
<td>0.69</td>
</tr>
<tr>
<td>SL</td>
<td></td>
<td>0.00</td>
<td>0.03</td>
<td>0.06</td>
<td>0.95</td>
<td>−0.06</td>
<td>0.06</td>
</tr>
<tr>
<td>Interaction: HS × SL</td>
<td></td>
<td>0.02</td>
<td>0.03</td>
<td>0.64</td>
<td>0.53</td>
<td>−0.04</td>
<td>0.07</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model 2</th>
<th>Outcome Variable: PH</th>
<th>Coefficient</th>
<th>SE</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS</td>
<td></td>
<td>0.32</td>
<td>0.04</td>
<td>8.53</td>
<td>0.00</td>
<td>0.25</td>
<td>0.40</td>
</tr>
<tr>
<td>DE</td>
<td></td>
<td>0.16</td>
<td>0.03</td>
<td>4.59</td>
<td>0.00</td>
<td>0.09</td>
<td>0.22</td>
</tr>
<tr>
<td>SL</td>
<td></td>
<td>0.01</td>
<td>0.03</td>
<td>0.18</td>
<td>0.86</td>
<td>−0.05</td>
<td>0.06</td>
</tr>
<tr>
<td>Interaction: HS × SL</td>
<td></td>
<td>−0.09</td>
<td>0.03</td>
<td>−3.24</td>
<td>0.00</td>
<td>−0.14</td>
<td>−0.03</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Effect</th>
<th>SE (Boot)</th>
<th>Boot LLCI</th>
<th>Boot ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect effect: HS → DE → PH</td>
<td>0.00</td>
<td>0.01</td>
<td>−0.01</td>
</tr>
</tbody>
</table>

Note: HS represents hindrance stress; DE denotes depersonalization; SL indicates perceived servant leadership; PH represents physical health.

Lastly, perceived servant leadership was hypothesized to moderate the relationship between hindrance stress and physical health problems. As indicated in Model 2, the interaction term of perceived servant leadership and hindrance stress was negatively significant ($\beta = −0.09$, $t = −3.24$, $p < 0.01$, 95% CI (−0.14, −0.03)). Hence, H4 was confirmed. To further depict the moderation effects, the interaction terms were decomposed by splitting perceived servant leadership into three groups: high perceived servant leadership (+1 standard deviation), medium perceived servant leadership (mean), and low perceived servant leadership (−1 standard deviation). Figure 2 depicts the interaction effect of perceived servant leadership and hindrance stress on physical health problems. As shown in Figure 2, for the high, medium, and low levels of perceived servant leadership, the relationships between hindrance stress and physical health problems were all positive. The positive relationship was
stronger for the low perceived servant leadership group. This means that perceived servant leadership buffered the relationship between hindrance stress and physical health.

![Diagram showing the moderating effect of perceived servant leadership on the relationship between hindrance stress and physical health.](image)

**Figure 2.** Moderating effect of perceived servant leadership on the relationship between hindrance stress and physical health.

5. Discussion

This study assumed all along that hindrance stress and depersonalization were related to physical health, and this was supported by this research. Moreover, it was proposed that perceived servant leadership moderated the relationship between hindrance stress and physical health, and this was also confirmed. It is fair to say that servant leadership can play a very important role in the stress and psychophysical health of the workplace. As discussed earlier, in China, where stress and anxiety for teachers are very acute, this research can play an instrumental role in alleviating stress and anxiety in this most important work setting. However, this study did not find that perceived servant leadership moderated the effect of hindrance stress on depersonalization. It is somewhat surprising that servant leadership made no difference in affecting the relationship between hindrance stress and depersonalization. There are several plausible reasons. First, the link between hindrance stress and depersonalization is more complex than expected. It is highly possible that some more potent predictors of depersonalization were ignored that should have been included in this study: for example, contextual factors, such as social environment and competition among teachers. Another reason might be that hindrance stress is so strong a predictor that it overshadows the effect of servant leadership in Chinese high schools. This is evidenced by both the much stronger correlation and path coefficients between hindrance stress and depersonalization.

This study contributes to stress and burnout literature in a school setting. It is demonstrated in this study that hindrance stress is associated with mental and physical costs, including depersonalization, which supports the demand–control model model. Second, research on stress, servant leadership, and employees’ well-being still remains scarce in both leadership and health literature, especially in the context of education [47,48]. Therefore, this research adds to the literature by extending our understanding of how servant leadership impacts the power of the relationship between stress and employees’ well-being. Third, this study challenges the common notion that servant leaders display empathy and heal their followers’ emotional sufferings, thus, helping to decrease depression [46].
The results from the literature review revealed that servant leadership is positively associated with all its positive outcome variables, such as engagement, job satisfaction, and organizational commitment [49,50]. However, although this study did not hypothesize servant leadership to be related to depersonalization and physical health, the study results demonstrated that servant leadership is not associated with either depersonalization or physical health. Therefore, this study responded to a call made by Eva, Robin, Sendjaya, van Dierendonck, and Liden [49] that future research is encouraged to include and report non-significant findings in order to fully understand the influence of servant leadership. To find no relationship between servant leadership and depersonalization, as well as employees’ health, means that further research is warranted in this area.

This study also has several practical implications. First, it was indicated in this study that hindrance stress was positively associated with teacher’s depersonalization and physical health problems. It appears evident that educational authorities and school administrators need to be aware of the severity of this issue and take necessary measures to relieve the stress imposed on teachers. It is critical to lessen the stresses of teachers given that the stress burdened on their shoulders is too heavy and their well-being is worsening in most Chinese schools. For example, principals and administrators give teachers clear job tasks, provide them with adequate resources to accomplish tasks, resolve conflicts and disputes among teachers, and reduce administrative hassles and red tape. Second, this study showed that servant leadership functions as a buffer between hindrance stress and the schoolteacher’s well-being. If schools aspire to seek a trade-off and gain a mutual benefit of both hindrance stress and teachers’ well-being, it is recommended that educational authorities recruit and train school principals and other administrators in servant leadership practices, with a particular focus on empowering their teachers in a way to help them to achieve sustainable development. These newly empowered teachers, trained in servant leadership principles, should begin to influence and encourage positive moral actions [50]. Finally, there is a spillover effect of depersonalization on the teacher’s well-being. It appears that encouraging the development of empathy and compassion among teachers even outside of the school domain would benefit the teachers in terms of their physical well-being. Again, principals and administrators will play a significant role.

Without a doubt, there were several limitations in this study. First, this study used self-reported data from high school teachers. This research did not introduce a temporal separation between the measures of the predictor and outcome variables. Therefore, CMV may affect the estimates of the path coefficients between variables in this study. However, this study followed instructions recommended by Podsakoff, MacKenzie, and Podsakoff [40] to mitigate the influence of CMV. For example, the participants were told that their confidentiality and anonymity were ensured to relieve their anxiety about the divulgence of personal information. They were also given clear instructions: vague terms and languages were avoided, and survey questions were kept simple, specific, and concise as much as possible. Future research would benefit from employing other strategies to control CMV.

Next, a snowball sampling strategy was used to recruit high school teachers. The student teachers asked their colleagues to participate in this study. As teachers were nested in the same departments and the same schools, hierarchical linear modeling (HLM) could have been a more appropriate statistical tool to analyze the data. However, this study did not record the department and school information because the majority of teachers felt uncomfortable about the release of this information. Future research could include a hierarchical level and utilize HLM to avoid type I errors to obtain more accurate results if possible.

Third, this study used a cross-sectional design. Therefore, this study could only investigate the associations between hindrance stress, servant leadership, depersonalization, and physical health, as well as the moderation effect of perceived servant leadership. Future research could use a longitudinal study to examine whether causal relationships exist between variables of interests.
6. Conclusions

It has been reported in this study that hindrance job stress, depersonalization, and physical health are positively related to each other among Chinese high school teachers. Perceived servant leadership was also found to moderate the relationship between hindrance stress and physical health. However, perceived servant leadership did not moderate the relationship between hindrance stress and depersonalization among Chinese high school teachers.

As noted in the findings, servant leadership functions as a buffer between hindrance stress and well-being among Chinese high school teachers. It is important, therefore, for high school administrators to recruit and train school leaders in servant leadership to ensure the sustainable development of the schools. With good servant leaders, high school teachers should become empowered and more likely to succeed with long careers in the schools. A school that practices servant leadership will work together, always looking out for each other and going the extra mile to get the job done. They are less likely to work alone and concentrate on individual goals, but rather will strive for team and high school goals, sometimes at the expense of short-term individual goal accomplishment. The metaphor most associated with this phenomenon is a rising tide raises all ships. As individual teacher’s productivity rises, so does the overall sustainable development of the whole high school.

Author Contributions: Conceptualization, L.M.D. and S.Q.; methodology, S.Q.; software, S.Q.; data collection, H.W.; data analysis, S.Q.; resources, L.M.D.; data curation, H.W.; project administration, L.M.D.; writing—original draft preparation, S.Q., L.M.D., and A.A.; writing—review and editing, L.M.D., S.Q., and A.A. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Acknowledgments: We thank anonymous reviewers for insightful comments.

Conflicts of Interest: The authors declare no conflict of interest.

References


45. Ouellette, R.R.; Frazier, S.L.; Shernoff, E.S.; Cappella, E.; Mehta, T.G.; Mariñez-Lora, A.; Atkins, M.S. Teacher job stress and satisfaction in urban schools: Disentangling individual-, classroom-, and organizational-level influences. Behav. Ther. 2020, 49, 494–508. [CrossRef]

© 2020 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).