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Subjective Wellbeing and Work Performance among Teachers in Hong Kong during the COVID-19 Pandemic: Does Autonomy Support Moderate Their Relationship?

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Abstract: (1) Background: A higher level of subjective wellbeing is often assumed to have a positive effect on the performance of workers. However, this relationship has seldom been studied extensively among teachers shifting from face-to-face teaching to online teaching. Thus, this study provided quantitative evidence regarding the effect of subjective wellbeing on work performance among male and female teachers during the outbreak of a pandemic. (2) Methods: We examined the subjective wellbeing of teachers from three perspectives, namely workload, organisational support, and interaction with students. Furthermore, we tested whether autonomy support affected the association between subjective wellbeing and work performance, and a comparison between male and female teachers was drawn. (3) Results: The findings suggested that the student interaction wellbeing of female teachers positively and significantly affected their work performance ($b = 1.19$, $t = 4.28$, $p < 0.001$). Moreover, autonomy support tended to amplify the positive effect of organisational wellbeing for both male and female teachers (males' OWB: $b = 0.25$, $t = 2.44$, $p < 0.05$; females' OWB: $b = 0.31$, $t = 0.09$, $p < 0.05$). (4) Conclusions: This study provides useful information for educational management when reviewing teacher performance and wellbeing during the pandemic.

Keywords: subjective wellbeing; work performance; autonomy support; COVID-19; student interaction wellbeing; organisational wellbeing



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1. Introduction

When the COVID-19 pandemic broke out in late December 2019, arrangements were made for Hong Kong pupils to participate in online learning at home to curb the risk of the spread of the virus. Amidst these changes, teachers encountered numerous difficulties, such as struggling with technology due to the online teaching arrangements; carving out a silent area at home; and having ambiguous boundaries between the work and private life domains, leading to work–family conflict [1]. Teachers had to consider the quality of digital learning, engagement, and the emotions of students through a safe online environment [2]. The Hong Kong Educational Bureau provided school health guidelines for coronavirus disease prevention, while non-government organisations and the information technology industry provided support programs for grassroots students, such as free computing equipment, Internet technical support, and discounts for Internet services [3]. The ‘Learn Anywhere Distance Learning’ support program and free professional development training were offered to schools and teachers to facilitate remote teaching and class activities. The impacts of the sudden change in teaching approaches on teachers’ subjective wellbeing remain uncertain. Although numerous studies have demonstrated the positive association

between subjective wellbeing and work performance (WP) amongst teachers [4–6], the measurement outcomes have been based on the evaluation of face-to-face teaching.

Prior research has assessed the subjective wellbeing of teachers through different aspects, such as stress level, psychological distress, organisational support, and student interaction [7,8]. The current study focuses on the three aspects of the subjective wellbeing of teachers proposed by the study of Collie et al. [8]: workload wellbeing (WLWB), organisational wellbeing (OWB), and student interaction wellbeing (SIWB). WLWB refers to issues related to workload and stress; OWB refers to teachers' perceptions of the school as an organisation, including teaching and teacher culture and leadership; SIWB refers to teachers' interactions with students and teachers' influence on student behaviour and motivation [8]. Encompassing these three aspects may offer a relatively broad coverage of teachers' subjective wellbeing. For instance, some prior studies have suggested that work stress, organisational stress, and student behaviour are the most relevant factors for the wellbeing of teachers [9,10]. Thus, with the aim of comprehensiveness, we expect that teachers' subjective wellbeing will be successfully evaluated in terms of WLWB, OWB, and SIWB.

The remote working arrangements seemed to increase teachers' autonomy over how they worked. Autonomy is an important element for teachers when creating appropriate learning environments for the diverse needs of students [11]. Therefore, this study paid particular attention to the role of autonomy support (AS) in examining the relationship between teachers' subjective wellbeing and WP. Here, we define AS as allowing teachers to make choices and practice self-initiation [12]. Generally, given the professional independence of teachers, they can make autonomous decisions on what to teach and how to teach to a certain degree [13]. A sense of respect and competence is instilled in teachers, which can improve their wellbeing and may lead to a better performance at work. The outbreak of the pandemic led to a sudden change in the educational sector, that is, online learning. Teachers encountered a new educational style with limited guidelines provided. Thus, the degree to which they could decide their teaching approach and management style for students increased. In other words, by providing heightened autonomy, teachers' subjective wellbeing was enhanced in exchange for better performance. Therefore, we hypothesise that the impact of teachers' subjective wellbeing on WP depends on the level of AS provided to the teachers.

The experiences of shifting to remote work for male and female teachers may be completely different. Most female workers seem to bear the main responsibility for household work, thus leading to a conflict between work and home, particularly during the pandemic [14]. Conversely, some females believe working from home allows flexibility for them to deal with their family matters and job tasks [15]. Male workers hold a contrary opinion to female workers on the arrangements of remote working. Some male workers perceive dealing with their children's mischievous behaviours at home as a type of disturbance while working remotely [16]. The difference in males' and females' WP under the policy of work from home is a controversial social issue [17]. Therefore, we seek to compare male and female teachers in terms of the relationship between subjective wellbeing and WP using AS as a moderator.

In sum, the following deficiencies were identified in the previous research on teaching. Although previous studies have assessed the subjective wellbeing and work outcomes (e.g., WP, work engagement, and work commitment) of teachers during the COVID-19 pandemic [18,19], none of these studies have investigated the relationship between teachers' subjective wellbeing from the perspective of workload, student interaction, and organisational resources and WP during COVID-19. Given the mandatory policy of working from home amongst teachers during the pandemic, teachers experienced a relatively weak fixed boundary between work and family. They could deal with household matters during working hours, which we considered AS in this study. However, to the best of our knowledge, no study has evaluated the moderating role of AS in the relationship between subjective wellbeing and WP amongst teachers participating in online teaching. Furthermore, males

and females are ascribed certain social roles, meaning that they hold different forms of accountability in their family roles. Therefore, it is necessary to identify the differences between males and females in how they executed their autonomy during the pandemic and how this autonomy influenced the relationship between subjective wellbeing and WP. Regretfully, no previous study has investigated such a relationship. To fill this research gap, we propose this empirical study to assess the moderating effect of AS in the relationship between subjective wellbeing and WP in male and female teachers in Hong Kong. This study aimed to (1) examine the effects of three aspects of teachers' subjective wellbeing (i.e., WLWB, OWB, and SIWB) on WP; (2) evaluate the moderating effect of AS on the relationship between the three aspects of teachers' subjective wellbeing and WP; and (3) compare male and female teachers in terms of the relationship between subjective wellbeing and WP under the moderating effect of AS.

1.1. Theoretical Background and Hypotheses

1.1.1. Subjective Wellbeing and Work Performance

Subjective wellbeing refers to an individual's mental state and thoughts regarding their personal life [20]. Teachers' subjective wellbeing is mainly related to work demands and stress, the management of student behaviour, and school policies [21]. Most teachers in Hong Kong encounter heavy workloads due to long working hours [22]. They need to deal with the changing curriculum and school administration, students' learning progress, and problems outside working hours. These responsibilities may confer heavy stress on teachers, particularly during the pandemic. Collie et al. [8] developed a teacher wellbeing scale to assess three main factors affecting teachers' work-related wellbeing, namely WLWB, OWB, and SIWB. In addition, WP is the capability of an individual to perform tasks successfully using resources at work [23]. That is, a high level of WP amongst teachers means that they can successfully handle their work demands and manage students' behaviour using the resources provided by the school. Failure to cope with these problems indicates the low work performance of the teachers. Numerous studies have suggested a positive relationship between wellbeing and WP [24–26]. Haddon [24] found that employees' mental wellbeing is positively correlated with WP. Peiró et al. [26] stated that the performance of 'happy' workers is better than that of 'less happy' workers. Hence, teachers with a high level of subjective wellbeing will have better WP than those with a low level of subjective wellbeing [27]. Accordingly, we propose a model of teachers' subjective wellbeing and WP in which organisations provide sufficient support and distribute reasonable workloads to workers in return for higher productivity and better performance at work [28]. Therefore, our first hypotheses were as follows:

Hypothesis 1a. *A significant positive relationship exists between WLWB and WP amongst male and female teachers.*

Hypothesis 1b. *A significant positive relationship exists between OWB and WP amongst male and female teachers.*

Hypothesis 1c. *A significant positive relationship exists between SIWB and WP amongst male and female teachers.*

1.1.2. Autonomy Support

Autonomy support (AS) is considered to positively affect employees' outcomes [12]. Autonomy has different definitions. In defining autonomy, Hackman and Oldham [29] stated, 'Organisations provide individuals with the ability to schedule work and determine the degree of freedom, independence, and self-determination of work procedures'. Reeve [30] defined autonomy support as interpersonal emotions and behaviour provided by teachers during instruction to identify, nurture, and develop students' intrinsic motivational resources. Teachers with autonomy support allow students to choose between

options, provide them with meaningful justifications for tasks, and minimise the use of stress and control [31]. In these definitions, two main facets are highlighted, that is, control over work schedules and procedures. Work schedule refers to the planned hours of work over a period assigned to a worker for paid work. Work procedures refer to the methods of completing tasks to achieve the goal of the job. AS involves the interpersonal method of top management, in which the perspectives of subordinates are considered, thus providing opportunities for choices and self-initiation by employees. The importance of job autonomy and AS has been illustrated through substantial empirical evidence regarding job demand-control models (e.g., [32–34]).

1.1.3. Moderating Effect of AS

Having defined AS, the question of how AS influences the relationship between subjective wellbeing (i.e., WLWB, OWB, and SIWB) and WP was the focus of our study. We argued that the provision of AS may enhance feelings of respect and develop positive attitudes amongst teachers. AS may reflect the bestowal or generation of teacher power. In this sense, AS is a means to encourage and reinforce teachers' power in a personal or professional sense, not just as a buffer against pressure on teachers [35]. While workers who are provided a high level of AS may feel trusted, those who are provided a low level of AS may feel that professionals are not sufficiently valued by the organisation [36].

Based on this notion, teachers with a high level of AS may present increased subjective wellbeing, because a high level of AS provides teachers with a greater sense of respect. In contrast, teachers with a low level of AS lack the affirmation and appreciation of their competence by their organisations. Thus, teachers with a high degree of AS will demonstrate stronger reactions in terms of their subjective wellbeing, in that their WP will be strongly influenced. The hypothesised moderator effects are presented in Figure 1. Specifically, we posited the following:

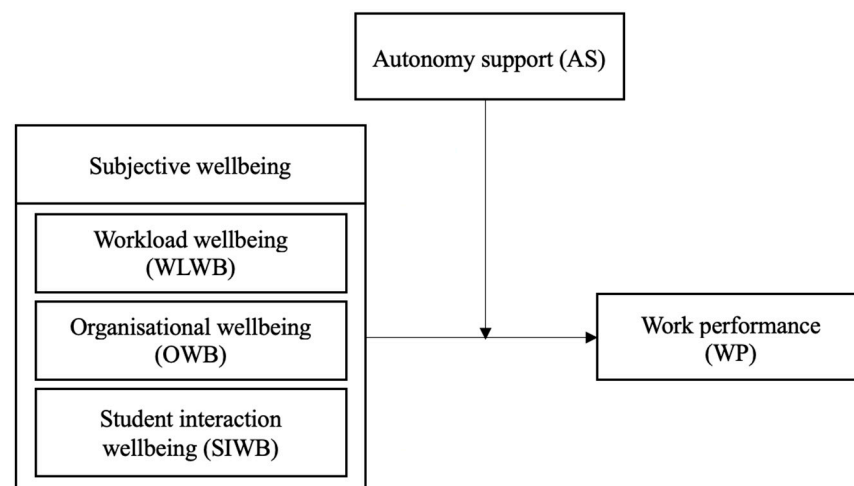


Figure 1. Hypothesised model showing relationships between WLWB, OWB, SIWB, AS, and WP.

Hypothesis 2a. *AS moderates the relationship between WLWB and WP amongst male and female teachers, such that the positive relationship is greater when the level of AS is high but weaker when the level of AS is low.*

Hypothesis 2b. *AS moderates the relationship between OWB and WP amongst male and female teachers, such that the positive relationship is greater when the level of AS is high but weaker when the level of AS is low.*

Hypothesis 2c. *AS moderates the relationship between SIWB and WP amongst male and female teachers, such that the positive relationship is greater when the level of AS is high but weaker when the level of AS is low.*

2. Methods

2.1. Study Design and Ethical Consideration

A cross-sectional study using self-administered questionnaires was designed to collect data from secondary school teachers. The data collection process was approved by the Human Subjects Ethics Sub-committee of the authors' university (approval code: 55236808). Teachers participated in the study on a voluntary basis.

2.2. Measures

The questionnaire had three main sections: (a) subjective wellbeing, (b) WP, and (c) AS. Teachers' subjective wellbeing was classified into three categories: WLWB, OWB, and SIWB [8]. A total of 26 statements were generated on the basis of the review of previous studies. All the questions were presented in Chinese and were taken from the English version of Collie et al.'s psychoeducational assessment of teachers' wellbeing [8], Williams and Anderson's studies [37] on WP, and Baard et al.'s [38] study on AS. Three independent bilingual translators who were not involved in this study conducted the translation to ensure the reliability of the translated questionnaire.

2.2.1. Subjective Wellbeing

WLWB, OWB, and SIWB were assessed using 16 items adapted from Collie et al.'s psychoeducational assessment [8] of teachers' wellbeing to rate teachers' perceptions of their workloads, school arrangements, and student interactions through online teaching during the pandemic. WLWB and OWB were each measured through six items, and SIWB was measured through four items. The subjective wellbeing section started with the question 'How do the following aspects of being a teacher affect your well-being when working from home?'. Participants were asked to rate the 16 items on the basis of a seven-point Likert scale response anchor ranging from 1 (very negatively) to 7 (very positively). The items for WLWB included 'Marking work', 'Administrative work related to teaching', and 'Work I complete outside of school hours for teaching'. The items for OWB included 'Support offered by school administration', 'Communication amongst members of the school', and 'Participation in school-level decision making'. The items for SIWB included 'Relations with students in my class' and 'Classroom management'.

2.2.2. Work Performance

WP was measured using four items adapted from Williams and Anderson [37]. The items read as follows: (1) I perform tasks that are expected of me; (2) I meet the formal performance requirements of the job; (3) I am involved in activities that are relevant to my yearly performance assessment; (4) I do not fail to perform essential duties. A seven-point Likert scale response anchor ranging from 1 (strongly agree) to 7 (strongly disagree) was used for the assessment.

2.2.3. Autonomy Support

AS was assessed using six items adapted from Baard et al. [38]. The items read as follows: (1) My supervisor encourages me to do active sports and/or vigorous exercise in my free time; (2) My supervisor listens to me about my work- or nonwork-related problems; (3) My supervisor provides me with positive feedback when I do my work; (4) My supervisor makes sure I understand what I need to do in my work; (5) My supervisor answers questions about my concerns; (6) My supervisor cares about my work and family issues. A seven-point Likert scale response anchor ranging from 1 (very dissatisfied) to 7 (very satisfied) was used for the assessment.

2.3. Data Collection Procedures

The study was conducted between February 2021 and April 2021, which was during the announcement of the suspension of face-to-face classes and school activities for all kindergartens, primary schools, and secondary schools in Hong Kong. The online question-

naires were distributed to 18 secondary schools on the basis of simple random sampling. Twelve schools agreed to distribute the online questionnaires to their teachers. The overall response rate of this survey was approximately 58%.

2.4. Data Analysis

The reliability of the items in the questionnaire was tested by Cronbach's alpha using SPSS software version 24. Convergent validity was assessed on the basis of factor loadings, composite reliability, and average variance extracted [39]. The differences between male and female participants in subjective wellbeing, WP, and AS were evaluated using independent sample t-tests. The moderating effect of AS was analysed by moderation regression.

3. Results

3.1. Characteristics of the Sample

A total of 313 valid questionnaires were collected. All the participants were full-time teachers. The demographic information of the respondents is shown in Table 1. The respondents consisted of 49.5% male participants and 50.5% female participants. The participants' age, educational level, marital status, living status with children, and working hours per week are shown in Table 1. The age groups of most male participants were >34–44 (25.8%) and >44–54 (25.8%); female participants were mostly in the age range of 18–24 (35.4%). More than 90% of the male and female participants had completed a bachelor's degree or above. The marital status of most males (44.5%) and females (41.1%) was single. About 73% of males and females did not live with children. The working hours of most males and females were greater than 30 to 40 h per week.

Table 1. Demographic information of the male and female participants.

	Male (n = 155)	Female (n = 158)
Age		
18–24	25 (16.1%)	56 (35.4%)
>24–34	31 (20.0%)	28 (17.7%)
>34–44	40 (25.8%)	31 (19.6%)
>44–54	40 (25.8%)	30 (19.0%)
>55–64	19 (12.3%)	12 (7.6%)
>64 or above	0 (0%)	1 (0.7%)
Educational level		
Diploma/higher diploma/associate degree	4 (2.6%)	13 (8.2%)
Bachelor's degree	88 (56.7%)	92 (58.2%)
Master's degree	46 (29.7%)	49 (31.1%)
Doctorate degree or above	17 (11.0%)	4 (2.5%)
Marital Status		
Single	69 (44.5%)	65 (41.1%)
Married without children	20 (12.9%)	30 (19.0%)
Married with children	61 (39.4%)	57 (36.1%)
Single with children	1 (0.6%)	4 (2.5%)
Divorced/separated/widowed without children	4 (2.6%)	2 (1.3%)
Live with children		
Yes	41 (26.5%)	42 (26.6%)
No	114 (73.5%)	116 (73.4%)
Working hours per week		
≤30 h/week	13 (8.4%)	13 (8.2%)
>30–40 h/week	76 (49.0%)	78 (49.4%)
>40–50 h/week	61 (39.4%)	62 (39.2%)
>50 h/week	5 (3.2%)	5 (3.2%)

3.2. Preliminary Analyses

The mean, standard deviation, factor loading, composite reliability, and average variance extracted for all items are presented in Table 2. The Cronbach's alpha coefficient

of each scale ranged from 0.715 to 0.873, indicating a high internal consistency. The factor loadings of all items were between 0.55 and 0.91, which met the criterion for accepting the variables [40]. The results of convergent validity and discriminant validity were acceptable, because the composite reliability was greater than 0.70. Moreover, the average variance extracted was greater than 0.50 (see Table 2).

Table 2. Reliability and convergent validity of measure items.

	Mean	S.D.	Factor Loading	Composite Reliability	Average Variance Extracted
WLWB1	3.61	1.21	0.65		
WLWB2	4.46	1.37	0.77		
WLWB3	4.07	1.24	0.66		
WLWB4	4.05	1.37	0.70	0.761	0.509
WLWB5	3.96	1.40	0.70		
WLWB6	4.02	1.41	0.79		
OWB1	4.43	0.99	0.68	0.871	0.531
OWB2	4.42	1.00	0.70		
OWB3	4.42	1.04	0.65		
OWB4	4.39	0.99	0.79		
OWB5	4.45	1.01	0.77		
OWB6	4.46	1.00	0.77		
SIWB1	4.23	1.09	0.88	0.934	0.779
SIWB2	4.19	1.13	0.88		
SIWB3	4.24	1.08	0.89		
SIWB4	4.24	1.19	0.88		
WP1	4.45	0.91	0.67	0.844	0.577
WP2	4.44	0.75	0.74		
WP3	4.58	0.80	0.79		
WP4	4.39	0.86	0.83		
AS1	3.95	1.42	0.87	0.924	0.675
AS2	3.76	1.52	0.91		
AS3	3.89	1.50	0.57		
AS4	3.81	1.45	0.90		
AS5	3.94	1.55	0.91		
AS6	3.86	1.55	0.71		

Note: WLWB: workload wellbeing, OWB: organisational wellbeing, SIWB: student interaction wellbeing, WP: work performance, AS: autonomy support.

Table 3 shows the results of the Pearson correlation of the five factors (i.e., WLWB, OWB, SIWB, WP, and AS) for male and female participants. An independent-samples *t*-test analysis was used to explore the gender differences in the five factors, including WLWB, OWB, SIWB, WP, and AS (see Table 4). The results showed that the differences in OWB ($t [311] = 2.38, p < 0.02$) and AS ($t [311] = 2.10, p < 0.04$) were statistically significant. Male participants had a statistically significantly higher level of OWB and AS than female participants.

Table 3. Pearson correlation of WLWB, OWB, SIWB, WP, and AS for male and female participants.

Male (<i>n</i> = 155)	WLWB	OWB	SIWB	WP	AS
WLWB	1.00				
OWB	0.39 **	1.00			
SIWB	0.40 **	0.79 **	1.00		
WP	0.29 **	0.56 **	0.49 **	1.00	
AS	0.39 **	0.85 **	0.86 **	0.58 **	1.00
Female (<i>n</i> = 158)	WLWB	OWB	SIWB	WP	AS
WLWB	1.00				
OWB	0.45 **	1.00			
SIWB	0.36 **	0.80 **	1.00		
WP	0.22 **	0.55 **	0.63 **	1.00	
AS	0.43 **	0.87 **	0.85 **	0.59 **	1.00

Note: WLWB: workload wellbeing, OWB: organisational wellbeing, SIWB: student interaction wellbeing, WP: work performance, AS: autonomy support. ** $p < 0.01$.

Table 4. Independent-samples *t*-test analysis.

		<i>n</i>	Mean	Std. Deviation	Std. Error Mean	<i>t</i>	<i>p</i> -Value (2-Tailed)
WLWB	Male	155	4.07	0.73	0.06	0.98	0.33
	Female	158	3.99	0.66	0.05		
OWB	Male	155	4.53	0.75	0.06	2.38	0.02 *
	Female	158	4.33	0.76	0.06		
SIWB	Male	155	4.31	0.79	0.06	1.87	0.06
	Female	158	4.14	0.85	0.07		
WP	Male	155	4.48	0.61	0.05	0.43	0.67
	Female	158	4.45	0.62	0.05		
AS	Male	155	3.98	0.94	0.08	2.10	0.04 *
	Female	158	3.75	0.99	0.08		

Note: WLWB: workload wellbeing, OWB: organisational wellbeing, SIWB: student interaction wellbeing, WP: work performance, AS: autonomy support. * $p < 0.05$.

3.3. Test of Hypotheses

Table 5 shows the results of the moderation regression analysis conducted to examine the relationships amongst WLWB, OWB, SIWB, and WP and the moderating effect of AS on these relationships. In sum, Hypothesis 1c for females and 2b for males and females were supported, whereas 1a, 1b, 1c (males only), 2a, and 2c were rejected.

Table 5. Results of moderation regression analysis of WLWB, OWB, SIWB, WP, and AS for male and female participants.

Hypotheses	Relationship		<i>b</i>	<i>SE</i>	<i>t</i>
H1a	WLWB→WP	Male	−0.05	0.25	−0.21
		Female	0.41	0.24	1.72
H1b	OWB→WP	Male	−0.72	0.42	−1.72
		Female	−1.08	0.33	−3.31 **
H1c	SIWB→WP	Male	0.46	0.42	1.08
		Female	1.19	0.28	4.28 ***
H2a	WLWB×AS→WP	Male	0.03	0.06	0.6
		Female	−0.11	0.06	−1.94
H2b	OWB×AS→WP	Male	0.25	0.1	2.41 **
		Female	0.31	0.09	3.53 **
H2c	SIWB×AS→WP	Male	−0.13	0.1	−1.24
		Female	−0.23	0.07	−3.28 **

Note: *b*: unstandardised beta, *SE*: standard error. ** $p < 0.01$, *** $p < 0.001$.

A significant and positive effect was observed between SIWB and WP amongst females ($b = 1.19, t = 4.28, p < 0.001$). In addition, a significant effect was determined between OWB and WP amongst females ($b = -1.08, t = 0.33, p < 0.01$), and a negative relationship was found, thus rejecting the hypothesis. These findings partially corroborated Hypothesis 1c, which suggested a positive relationship between SIWB and WP. Regarding the moderating effect of AS, AS significantly moderated the effects of males' and females' OWB on WP (males' OWB: $b = 0.25, t = 2.44, p < 0.05$; females' OWB: $b = 0.31, t = 0.09, p < 0.05$) and the effect of females' SIWB on WP (females' SIWB: $b = -0.23, t = 0.07, p < 0.05$). These findings were partially in line with Hypothesis 2b, thus suggesting that AS attenuated the positive implication of high OWB. Figure 2 shows the significant moderating effects of AS on the association between (a) OWB and WP amongst males, (b) OWB and WP amongst females, and (c) SIWB and WP amongst females.

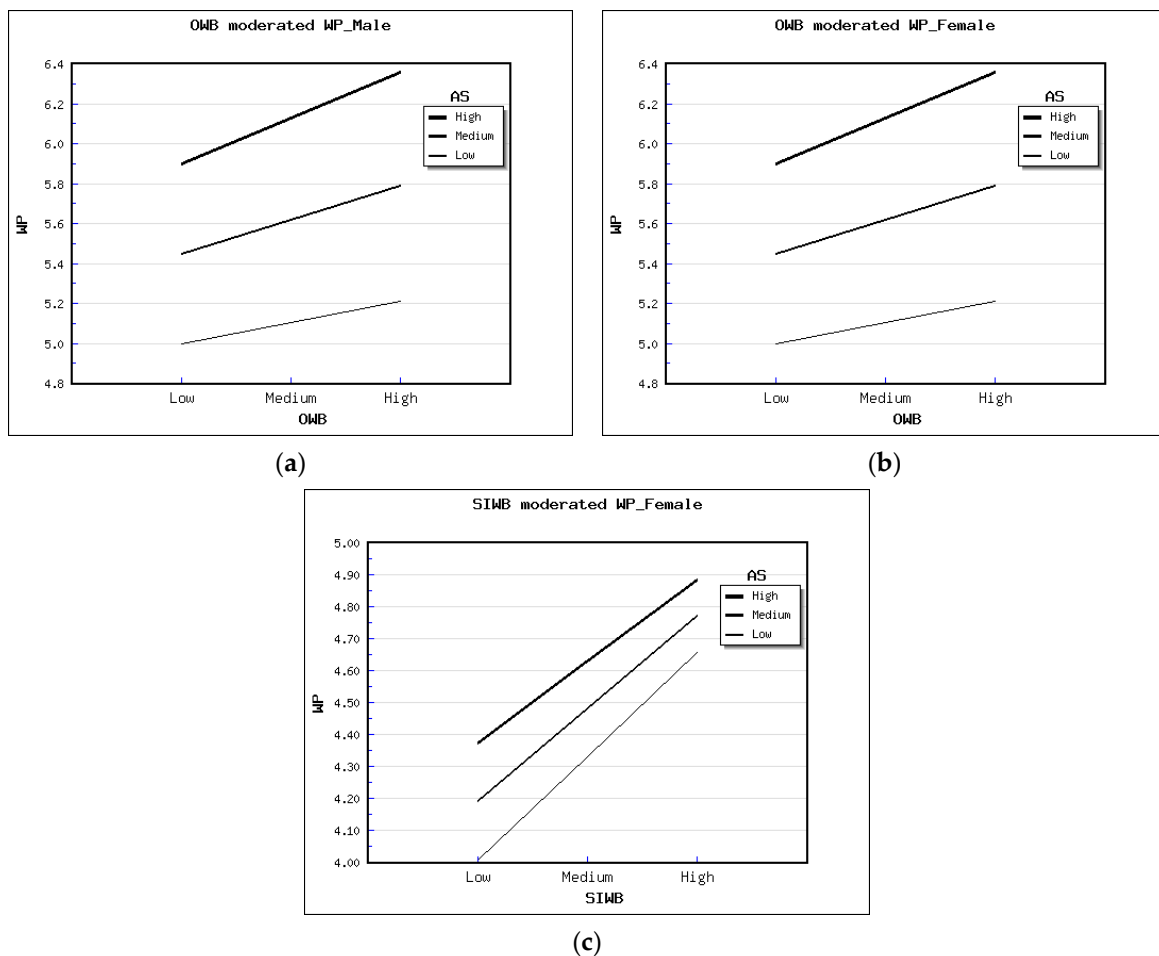


Figure 2. Significant moderating effects of AS on the association between (a) OWB and WP amongst males, (b) OWB and WP amongst females, and (c) SIWB and WP amongst females.

4. Discussion

This cross-sectional study was designed to assess the relationship between WP and three aspects of teachers' subjective wellbeing, namely WLWB, OWB, and SIWB; to determine the moderating role of AS on these relationships, and to compare such relationships between male and female teachers. Drawing from the literature on happy-productive workers, we reasoned that teachers with improved subjective wellbeing would display a better WP and that a high level of autonomy in the work environment would encourage high performance at work. As the wellbeing and performance of males and females during remote work are ongoing controversial issues, a comparison of these aspects was conducted in this study.

Regarding the relationship between WP and WLWB, OWB, and SIWB, our findings suggested that only females' SIWB positively affected their WP, whereas males' SIWB had no significant effect on their WP. Given that the focus of SIWB was the students' behaviour and motivation, the teachers' relationships with their students, and the management of the online class, the female teachers were satisfied in regard to these aspects, which ultimately contributed to an improved WP. Another possible explanation for this was that online teaching can prevent physical disruption in the classroom, and thus female teachers' SIWB improved as well as their WP. This result supports previous research in the teacher wellbeing literature that has linked students' behavioural outcomes (e.g., engagement and emotions) to teacher performance [41]. Surprisingly, we found a significant negative relationship between OWB and WP amongst female teachers, contradicting most previous research, which argued that organisational support has a positive influence on teachers' job performance [42,43]. This result was difficult to explain. No relationship between WLWB and WP amongst male and female participants was found. These results match those observed in earlier studies, which determined no relationship between workload and performance [44]. Workload may not have a direct effect on performance. If the workload does not result in fatigue, the performance will not be affected.

Regarding the moderating effect of AS on the association between WP and WLWB, OWB, and SIWB, we found that WP was enhanced with the moderating effect of AS on OWB for both male and female teachers. Apparently, the influence of a high level of AS on OWB could enhance WP. Consistent with the literature on leader autonomy support [45–47], we interpreted this finding as evidence that the management style of nurturing the inner motivational resources of workers, as well as providing AS, yields increased performance [38]. Given the similar psychological effect, we propose that working with autonomy support can encourage high productivity and performance, and vice versa. Concurrent with self-determination theory [48], humans are inherently motivated to develop their skills, and a lack of environmental support can derail this kind of energy growth [46]. OWB is achieved by the organisation offering support to workers. Individuals working in a highly supportive workplace can function effectively. Autonomy as an incentive provides the self-determined motivation for workers to energise their capability at work [46]. From our results, we understood that AS could be an intrinsic motivation and external factor to boost workers' performance. In addition, the sudden shift from face-to-face teaching to online teaching might have altered the workload management styles among the teachers in Hong Kong due to the lack of immediate, standardised, and clear instructions provided by the management in the early stage of the pandemic. Teachers might have had the flexibility to arrange their own work, and this autonomy might have enhanced their performance.

One unexpected finding was that WP decreased with the moderating effect of AS on SIWB amongst female participants. The results could be explained by the study of Zhou [49], which observed that job autonomy had a "too-much-of-a-good-thing" effect, negatively impacting employees. Warr [50] proposed the vitamin model to challenge the hypothesis that job autonomy was likely to be beneficial. An inverted U-shaped curve was found between job autonomy and employee happiness. Baltes et al. [51] also verified the inverted U-shaped curve relationship between job autonomy and job satisfaction. These studies confirmed that high job autonomy was no longer beneficial to the workers. Similar to the inverted U-curve model of the relationship between job autonomy and job outcomes suggested by Warr [50] and Baltes et al. [51], a high level of autonomy moderating SIWB might lead to low job performance. Furthermore, the moderating effect of AS on SIWB only had a significant and negative impact on WP amongst female participants. More investigations need to be conducted to explore these findings.

Surprisingly, the results did not show a significant moderating effect of AS on the relationship between WLWB and WP for either male or female participants. This result has two possible explanations. Firstly, autonomy in simple tasks might not have a significant impact on performance [52]. We speculated that the autonomy provided to the teachers

during online teaching might have focused on simple tasks only. Thus, the provision of autonomy would not affect the WLWB and WP. Secondly, this study was undertaken in Hong Kong, which has an entirely different work culture compared with other regions, and the workload management style and need for autonomy do not exactly match those in other regions [53]. Therefore, the relationship between WLWB and WP amongst teachers in Hong Kong was not affected by AS. More empirical studies are recommended to investigate the moderating effect of AS on the relationship between WLWB and WP for males and females.

According to the results, autonomy can partially increase the performance of teachers according to their different work environments and demands. This trend suggests that principals need to empower teachers with the appropriate amount of autonomy to maintain their performance during remote working. Otherwise, such performance may diminish.

4.1. Implications

The findings of this study provide theoretical and practical implications for educational management. Specifically, this research contributes additional empirical evidence to the body of knowledge regarding the interplay between teachers' subjective wellbeing from the perspectives of WLWB, OWB, and SIWB; AS; and WP. As for the practical implications, the results validate the notion that the provision of sufficient and appropriate autonomy (i.e., a teacher's control over how they teach) is of importance for improving the WP of teachers during remote working. The outbreak of the pandemic changed conventional education, and online learning has become a ubiquitous way for education to persist. The adoption of online learning may continue in the case of any incident. A comprehensive policy and a strategy regarding teacher performance management during online learning are still lacking. Therefore, optimising the whole online learning process by providing adequate support to teachers is critical.

4.2. Future Research Directions

The present study highlighted several directions for future research. Firstly, further progress is needed to determine the moderating effects of autonomy on different work outcomes (e.g., job satisfaction, job commitment and quality). Future studies can replicate the theoretical framework of this study to evaluate the effects of autonomy on various work-related outcomes. Secondly, several questions remain unanswered at present as to whether the provision of autonomy to teachers is advantageous or disadvantageous, which individuals should be provided with autonomy, and how to determine the appropriate amount of autonomy to be conferred on teachers to optimise online teaching. Lastly, other types of schools, such as higher education institutions, must be considered to understand the moderating role of autonomy on the relationship between teacher wellbeing and WP.

4.3. Limitations

This study was not without limitations. Although the sample size of this study was comparable with those of previously published studies (e.g., [54,55]), a larger sample size could enhance the precision of the results. Given the time constraints, an empirical approach was adopted in this study. A longitudinal study could be conducted to understand the moderating effect of AS on the association between teacher wellbeing and WP. The teachers' comfort and familiarity with the mode of online teaching and the relevant equipment may have significantly affected their subjective wellbeing. However, these factors were not included in the assessment. Furthermore, the variation in educational systems and cultural backgrounds may have contributed to differing views on the same issue. For instance, this study was conducted in the context of Hong Kong's educational system and workplace climate, which are different to those in other places. Hence, the results of this research should be used with caution.

5. Conclusions

The present study set out to determine the moderating role of AS on the relationship between teacher wellbeing and WP amongst male and female secondary-school teachers in Hong Kong during the pandemic. We found that the strong moderating effect of AS on OWB led to high WP for males and females. Moreover, the strong moderating effect of AS on SIWB led to low WP for females. Although the pandemic will not last forever, online teaching may be the next trend in education. The findings of this study could provide insight for educational professionals when preparing personnel and suitable tools for online learning. At this stage, the equipment and operations of online learning have not been fully developed. The relationship between SIWB and WP was weaker for both male and female teachers compared to the relationship between WLWB/OWB and WP, indicating that teachers need to be allowed to flexibly regulate themselves during online teaching to enhance their interaction with students. Finally, the right amount of AS should be determined for teachers to improve their wellbeing and performance at work.

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