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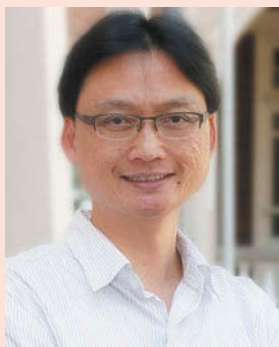
An investigation into the correlates of collective psychological ownership in organizational context

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Abstract: Collective psychological ownership (CPO) refers to a collective sense shared by coworkers that they jointly own the organization. It is an emerging research topic in team work experience. Existing literature on CPO is mostly at theoretical construction level. Empirical work to investigate correlates of CPO is lacking. The current study aimed at investigating the variables correlated with CPO in organizational contexts. *T*-test and ANOVA revealed that there was significant difference in CPO scores for the groups in the following variables: gender, education level, organizational size, job position, and monthly income. Pearson correlations revealed significant positive associations between CPO and the following variables: family economic status, job tenure, hours of work per week, job demands, job resources, membership identification, and work engagement. Multiple regression analyses revealed that family income was significant in all tested models, while job resources and membership identification were the two variables which contributed the most additional *R* square to the models to predict CPO. Findings of the current study provided insights on further studies on the antecedents and consequences of CPO in organizational contexts.

Subjects: Social Sciences; Behavioral Sciences; Economics; Finance; Business and Industry

Keywords: collective psychological ownership; job demands-resources; membership identification; correlates; social service workers



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PUBLIC INTEREST STATEMENT

A collective sense of ownership shared among coworkers may influence people's attitudes and behaviors at work. This article investigated the correlates of an emerging concept called collective psychological ownership (CPO) in organizational contexts. Data collected from a sample of social service workers revealed the factors associated with CPO, which include sociodemographic factors (gender, education level, and family economic status), organizational factors (organizational size, job demands, and job resources), and interactional factors between individuals and the organization (position, monthly income, job tenure, hours of work per week, membership identification, burnout, and work engagement). The findings of this article may help organizations identify intervention points to foster team spirit and enhance workplace well-being.

1. Introduction

Collective Psychological Ownership (CPO) is an emerging group-level concept, which is concerned with the joint sense of possessiveness shared by a group of people. It was first proposed by Pierce and Jussila, who defined CPO as a sense or feeling held by group-mates that the target of ownership is collectively ours (Pierce & Jussila, 2010). They developed the CPO construct basing on their previous work on psychological ownership (PO), which emphasized an individual's sense of ownership (Campbell Pickford, Joy, & Roll, 2016; Pierce, Jussila, & Li, 2017; Verkuyten & Martinovic, 2017). In contrast to PO, CPO emphasizes a group mindset of members to identify themselves through their perceived shared possessions (Pierce & Jussila, 2010, 2011). The targets of CPO can be any collective entities, such as the house, the company, or other items that one owns or co-owns with others. The collective feeling of ownership toward various targets can take place in both work and nonwork contexts. There is a growing recognition that CPO has an important role in the workplace (Campbell Pickford et al., 2016).

Pierce and Jussila proposed their conceptual ideas regarding the roots of CPO, and the routes to CPO (Pierce & Jussila, 2011). Roots are the basis of CPO, which motivate owners to realize their possession toward a target. Routes to CPO are the pathways through which to make their shared sense of possession comes true. In other words, roots explain why CPO exists while routes explain how CPO exists. In line with recent theoretical discussions and preliminary empirical studies on CPO, we also proposed our understandings on the roots of CPO and the routes to CPO in organizational contexts (Pierce et al., 2017; Su, 2017).

1.1. Roots of CPO

We suggested the roots of CPO are first, there is a need to possess and mark one's own possessions. Possessions are part of an extended self (Belk, 1988; Dittmar, 1992), and people marking their possessions is a territorial behavior (Avey, Avolio, Crossley, & Luthans, 2009; Brown, Lawrence, & Robinson, 2005). The need of territorial behaviors can be seen as a consequence of people's perception and expression of "our organization." Second, there is a sense of belongingness, in particular, belonging to a collective entity such as an organization (Baumeister & Sommer, 1997). Shared hardship endurance is a specific factor of CPO, which emphasizes the bonding or commitment of individuals with the organization. The need to belong is a fundamental root for this bonding or commitment. Third, there is a need to control. Pierce described this need as desire for efficacy. People need to feel their control over their possession (Pierce, Kostova, & Dirks, 2001). Coherent with this belief, the feeling of shared decision-making is the other specific factor in our conceptualization of CPO. If people feel that the organization is theirs, they need to feel that they can control the organization by being involved in decision-making process. Finally, there is a need for ones' well-being. People pursue their well-being through their job (Heidrich, 1997; Pates, 2011). This is a reason why employees make effort to ensure that the organization is going in the direction which fits for their pursuit of well-being. They are willing to invest themselves in the organization and even take on hardship with it. When the current job becomes harmful to the staff's well-being or staff lose hope for achieving well-being through the job, their CPO will decrease, and they might show the intention to leave.

1.2. Routes to CPO

We agree with Pierce about the routes to CPO at general level, which are shared control over the target of ownership, collective recognition of shared intimate knowing of the target, and/or the collective recognition of the shared investment of different group members' selves into the target of ownership (Pierce & Jussila, 2011). In organizational contexts, through sharing knowledge and control of the organization, staff are empowered and feel confident claiming the organization as theirs and feel psychologically attached to the organization. Through investing themselves in the organization and jointly taking up challenges with the organization, staff's sense of ownership toward the organization is strengthened.

Recently, there have been growing academic interest in CPO (Pierce & Jussila, 2010; Pierce et al., 2017; Rantanen & Jussila, 2011; Verkuyten & Martinovic, 2017). Several substantial empirical studies have been conducted. Perceiving the shared sense of possessiveness as the single domain of CPO, Pierce developed and validated a four-item scale to measure staff's CPO toward their work team (Pierce et al., 2017). We

defined CPO in organizational contexts as the sense shared by group-mates that they jointly owned their organization (Su, 2017). The organization is indicated as the target of CPO held by the coworkers. Shared feeling of possessiveness is recognized as the conceptual core of the concept, which emphasizes the strong bonding between the individuals and the organization. A self-report multi-item scale was developed to measure CPO in organizational contexts (Su, 2017). Bi-factor exploratory and confirmatory analyses support a one-general-two-specific-factor structure of CPO. The general factor is shared possessiveness, whereas the two specific factors are shared decision-making and shared hardship endurance. Shared decision-making focuses on the core right and responsibility of co-owners in an organization. Shared hardship endurance signifies members' commitment and emotional bonding to the organization. These core features are echoed by the old Chinese saying "fengyutongzhou," which means that people in the same boat should be fully committed to it in both good and bad days. The "boat" is a metaphor of a collective entity.

Previous studies have suggested that CPO is related to job attitude and organizational behaviors (Pierce & Jussila, 2010, 2011). An empirical study revealed a positive relationship between CPO and job commitment, job satisfaction, staff's citizenship behavior, performance effectiveness, and group potency (Pierce et al., 2017). However, rigorous empirical studies on CPO are still lacking (Campbell Pickford et al., 2016; Pierce et al., 2017). In particular, correlates of CPO in organizational contexts are yet to be comprehensively examined (Dawkins, Tian, Newman, & Martin, 2017). The current study aimed to investigate the correlates of CPO. Studies on the antecedents and effects of CPO will be important to the research agenda of CPO.

Since CPO is the group level of PO, the significant correlates of PO revealed by previous studies may shed lights on the correlates of CPO. Some previous studies suggested positive relationships between PO and some organizational variables, such as job satisfaction and job commitment (Mayhew, Ashkanasy, Bramble, & Gardner, 2007), and positive relationship between PO and work engagement (Alok & Israel, 2012; Rapti, 2016). A study revealed that PO may decrease the burnout among nurses (Kaur, Sambasivan, & Kumar, 2013).

In the current study, three categories of variables in organizational contexts were tested on their correlations with CPO: sociodemographic variables, job characteristic variables, and interactional variables between individuals and the organization. Most notably, job demands, membership identification, burnout, and work engagement were the key concepts to be studied.

1.3. Sociodemographic variables

Sociodemographic variables included gender, age, education level, religion, and family economic status. Both men and women have the needs to belong (Baumeister & Leary, 1995; Baumeister & Sommer, 1997) and have needs to possess or to mark their possessions. Thus, there may not be significant gender difference in the level of CPO. An empirical study revealed that there is no significant correlations between CPO and the demographic variables of gender, age, and education (Pierce et al., 2017). Currently, no existing studies have tested the influences of people's religious belief and family economic status on their CPO. People with religious belief tend to be more collective oriented. Thus, they may have a stronger sense of belongingness, which is one root of CPO. Therefore, people with religious belief may have higher CPO with the organization. People with well-off family economic status may feel more secure to take risks or challenges for the organizations, and to endure hardship together with the organizations. Their investment into the organization may lead them through the aforementioned routes to CPO. Therefore, their CPO with the organization may also be higher.

Hypotheses 1: Religious belief will be a positive correlate of CPO (Hypothesis 1a); Family economic status will be a positive correlate of CPO (Hypothesis 1b).

1.4. Job characteristic variables

Job characteristic variables tested include organizational size, job demands, and job resources. Work environment of the organization may affect staff's CPO. Staff working at a small organization may have

more access to intimate knowledge of the organization and feel being more involved in decision-making. Thus, they may have higher CPO. Job demands and job resources were derived from the Job demands-resources (JD-R) model, which is a predominant conceptual framework for understanding occupational behaviors and work outcomes (Iachini, Buettner, Anderson-Butcher, & Reno, 2013). The JD-R model categorizes all job characteristics into either job demands or resources. Job demands refer to those physical, social, or organizational aspects of the job that require sustained physical or mental effort and are therefore associated with certain psychological costs (Crawford, LePine, & Rich, 2010). They include aspects such as workload, time pressure, and difficult physical environments. Job resources refer to those aspects of the job that are facilitative in achieving work goals, stimulating personal growth and development, and reducing job demands and their associated physiological and psychological costs (Crawford et al., 2010). They include aspects such as job control, opportunities for development, participation in decision making, task variety, feedback, and work social support. Specific demands and resources involved may be different across different occupational settings (Bakker & Demerouti, 2007). Staff's perceptions on the high job demands in their job may make them feel less control over their organization. Thus, these staff may have lower CPO. Sufficient job resources may motivate the staff to invest themselves in the organization and to take risks for the organization. These staff may have higher CPO.

Hypotheses 2: Organizational size will be a negative correlate of CPO (Hypothesis 2a); job demands will be a negative correlate of CPO (Hypothesis 2b); job resources will be a positive correlate of CPO (Hypothesis 2c).

1.5. Interactional variables between individuals and the organization

Interactional variables between individuals and the organization include job position, monthly income, job tenure, hours of work, membership identification, burnout, and work engagement. People working at higher job position, with higher income and with longer job tenure, may have higher CPO because they have more intimate knowing and control of the organization. People working longer hours tend to have a higher perceived self-investment in the organization. The intimate knowing, control and perceived self-investment are three routes to CPO as aforementioned and may lead to higher CPO.

Hypothesis 3: Job position will be a positive correlate of CPO (Hypothesis 3a); income will be a positive correlate of CPO (Hypothesis 3b); job tenure will be a positive correlate of CPO (Hypothesis 3c); and hours of work per week will be a positive correlate of CPO (Hypothesis 3d).

Membership identification refers to the shared feeling that members in an organization identify themselves and their coworkers to be members of the organization. The question on membership identification is "Do we feel sharing the identity of being a member of the organization," which distinguishes it from the question on CPO, which is "Do we feel that we jointly own the organization?" Membership identification appears to be an important premise of CPO because it offers a true "group/team" context for the formation of CPO. A sense of shared membership is a basic level of bonding between individuals and the organization, which is a root of CPO. Thus, membership identification is expected to be positively correlated with CPO, though it does not necessarily imply shared decision-making and shared hardship, which are the two specific factors in CPO.

Hypothesis 4: Membership identification will be a positive correlate of CPO.

Burnout has been an important research topic for more than 40 years. Maslach (1996) defined burnout as a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with people in some capacity. She later extended it to a more general form as a construct that consists of three dimensions: exhaustion, cynicism, and lack of efficacy (Maslach, 1996). In the past decade, active development of positive psychology and positive well-being at workplace has given rise to the concept of work engagement, a positive and fulfilling work-related state of mind in occupational health psychology. Work engagement is characterized by vigor, dedication, and absorption (Bakker, 2011; Bakker & Demerouti, 2008; Schaufeli & Bakker, 2004; Schaufeli,

Salanova, González-Romá, & Bakker, 2002). In this study, we tested the relationship between CPO and burnout/engagement. Staff who share the collective sense of ownership toward the organization have a strong bonding with the organization, take more proactive actions for the shared goal of the organization, and get more social support from their coworkers. Thus, CPO may prevent burnout and foster work engagement. The correlates between CPO and burnout/work engagement will provide directions for future management of workplace well-being.

Hypothesis 5: CPO will be a negative correlate of burnout.

Hypothesis 6: CPO will be a positive correlate of work engagement.

2. Methods

2.1. Participants and procedures

Data were collected among social service workers in Guangdong Province of Mainland China in 2016 by snowball and convenience sampling method. Social service workers refer to full-time staff who are employed by nonprofit social service organizations. The respondents were mainly frontline social workers and their supervisors, and all levels of administrative staff. We received 777 completed online questionnaires at the end of April 2016. After data screening, 761 cases were found to be valid. Among the participants, 71.6% were women and 95% were under 35 years old. More than half (64.5%) of the participants were single. Over half (60%) of the participants held a bachelor's degree and more than a half (63.9%) of the participants had professional social work training background. Regarding job positions, 64.7% were frontline social workers. The mean for the participants' job tenure was 2.06 years. Table 1 summarizes the demographic information of the sample.

Table 1. Descriptive statistics of CPO (N = 761)

| Predictor | M (SD) or N (%) |
|---------------------------|-----------------|
| Gender | |
| Male | 216 (28.40) |
| Female | 545 (71.60) |
| Age group | |
| 24 or below | 189 (24.80) |
| 25–29 | 429 (56.40) |
| 30–34 | 111 (14.60) |
| 35–39 | 17 (2.20) |
| 40 or above | 5 (.70) |
| Education level | |
| Secondary school or below | 18 (2.40) |
| Associate degree | 213 (28.00) |
| Bachelor | 460 (60.40) |
| Master or above | 59 (7.80) |
| Religion | |
| None | 667 (87.60) |
| Catholic or Christian | 6 (.80) |
| Buddhism | 51 (6.70) |
| Others | 14 (1.80) |
| Marital status | |
| Single or unmarried | 491 (64.50) |
| Married or cohabiting | 266 (35.00) |

(Continued)

Table 1. (Continued)

| Predictor | M (SD) or N (%) |
|-----------------------------------|------------------------|
| Separated or widowed | 4 (.50) |
| Professional qualification | |
| Social work | 486 (63.90) |
| Occupational therapy | 4 (.50) |
| Physiotherapy | 1 (.10) |
| Business management | 35 (4.60) |
| Others | 235 (30.90) |
| Service users | |
| Teenagers or children | 163 (21.40) |
| The elderly | 165 (21.70) |
| People with disability | 36 (4.70) |
| Ex-mentally ill persons | 21 (2.80) |
| Families | 127 (16.70) |
| Students | 14 (1.80) |
| Others | 235 (30.90) |
| Organizational sizes | |
| Fewer than 20 | 52 (6.80) |
| 20–49 | 97 (12.70) |
| 50–99 | 100 (13.10) |
| 100 or above | 512 (67.30) |
| Job position | |
| Admin assistant | 49 (6.40) |
| Frontline workers | 492 (64.70) |
| Middle manger | 187 (24.60) |
| Senior manager | 33 (4.30) |
| Monthly income (RMB) | |
| 4,000 or below | 468 (61.50) |
| 4,001–5,000 | 195 (25.60) |
| 5,001–6,000 | 52 (6.80) |
| 6,001 and above | 46 (6.00) |
| Family economic status | 3.60 (1.10) |
| Job tenure | 2.06 (1.86) |
| Hours of work | 41.03 (7.96) |
| Job demands | 7.52 (6.53) |
| Job resources | .28 (8.61) |
| Membership identification | 8.33 (2.03) |
| Burnout | 46.41 (7.53) |
| Work engagement | 29.88 (9.37) |

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.

2.2. Measures

2.2.1. CPO

A scale measuring CPO developed in organizational contexts (Cronbach's $\alpha = .901$) (Su, 2017) was adopted. It is a six-item scale. A 4-point Likert-type response is employed, ranging from 1 (I hardly feel this way) to 4 (I strongly feel this way). The two factors are shared decision-making (e.g. "I am involved in

decision making,” “My colleagues feel they are involved in decision making,” and “The organization engages its staff in decision making”) and shared hardship endurance (e.g. “I will choose to stay with the organization even in tough time,” “My colleagues will choose to stay with the organization even in tough time,” and “The organization is keen to keep staff even in tough time”). The total score for the six items represents the score of CPO. The mean CPO score was 12.92 in this sample.

2.2.2. *Job resources*

Using a self-constructed scale (Cronbach’s alpha = .897), participants were asked to indicate the nature of 10 job resources they currently receive, including “supervisors’ support,” “staff training,” “financial resources of the organization,” and “social network of the organization.” A 7-point semantic scale, ranging from “-3” (very inadequate) to “+3” (very adequate) was adopted as the response format. The total score of the 10 items becomes a composite score of job resources. The mean job resources score was .28 in this sample.

2.2.3. *Job demands*

Using a self-constructed scale (Cronbach’s alpha = .900), participants were asked to indicate the nature of nine job demands they currently encounter, including “workload,” “working hour demands,” “organization’s demands on my job performance,” and “physical demands of my job.” A 7-point semantic scale, ranging from “-3” (very low) to “+3” (very high), was adopted as the response format. The total score of the nine items becomes a composite score of job demands. The mean of the items for job demands was 7.52 in this sample.

2.2.4. *Membership identification*

Participants were asked to indicate their nature of membership identification with a newly developed 3-item scale (Cronbach’s alpha = .901). Sample items are “I am a member of the organization,” “My colleagues feel they are members of the organization,” and “The organization takes staff as its members.” A 4-point Likert scale was adopted as the response format, ranging from 1 (I hardly feel this way) to 4 (I strongly feel this way). The total score of the three items represents the score of membership identification. The mean membership identification score was 8.33 in this sample.

2.2.5. *Burnout*

The Maslach Burnout Inventory adopted in this study (Cronbach’s alpha = .822) was established by Ngai (1986) and further modified by Kay S.Y. (2007) among Chinese. The 18-item scale has 3 components, namely emotional exhaustion, depersonalization, and personal accomplishment. Participants’ responses were collected on a 5-point Likert scale, ranging from 1 (strongly agree) to 5 (strongly disagree). After recoding the reverse items, the total score of the 18 items becomes a composite score of burnout. The mean burnout score was 46.41 in this sample.

2.2.6. *Work engagement*

The validated shortened Chinese version of the Utrecht Work Engagement Scale (Fong & Ng, 2012) (Cronbach’s alpha = .942) was adopted. Participants were asked to indicate on a 7-point Likert scale from 0 (never) to 6 (every day) about how often they experienced the feelings at work. The total score of the 9 items becomes a composite score of work engagement. The mean work engagement score was 29.88 in this sample.

2.3. *Data analysis*

T-test, ANOVA, and Pearson correlations were conducted to test the correlates of CPO. Hierarchical multiple regressions were conducted to test the models predicting CPO.

3. Results

3.1. *Correlates of CPO*

Table 2 presents the results of bivariate analyses on the associates of CPO. T-test and ANOVA revealed that there was statistically significant difference in CPO scores for groups in the following

Table 2. Summary of bivariate analyses results for correlates of CPO (N = 761)

| Predictor | CPO (T-test/ANOVA/Pearson correlations) |
|----------------------------------|--|
| Gender | $t(759) = 2.08^*$ |
| Male | 13.43 (4.26) |
| Female | 12.72 (4.19) |
| Age group | $F(4, 756) = 1.04$ |
| 24 or below | 12.55 (4.32) |
| 25–29 | 12.97 (4.06) |
| 30–34 | 13.03 (4.47) |
| 35–39 | 14.29 (3.58) |
| 40 or above | 13.87 (5.71) |
| Education level | $F(3, 746) = 3.19^*$ |
| Secondary school or below | 14.11 (4.32) |
| Associate degree | 13.21 (4.26) |
| Bachelor | 12.58 (4.09) |
| Master or above | 14.03 (4.85) |
| Religion | $F(3, 757) = 1.83$ |
| None | 12.80 (4.21) |
| Catholic or Christian | 13.45 (4.13) |
| Buddhism | 14.16 (4.17) |
| Others | 13.21 (4.51) |
| Organizational sizes | $F(3, 757) = 5.18^{**}$ |
| Fewer than 20 | 14.54 (4.58) |
| 20–49 | 13.53 (4.58) |
| 50–99 | 11.94 (4.12) |
| 100 or above | 12.83 (4.07) |
| Job position | $F(3, 757) = 9.31^{***}$ |
| Admin assistant | 13.37 (4.15) |
| Frontline workers | 12.51 (4.13) |
| Middle manger | 13.32 (4.22) |
| Senior manager | 16.21 (4.03) |
| Monthly income (RMB) | $F(3, 757) = 19.27^{***}$ |
| 4,000 or below | 12.41 (4.11) |
| 4,001–5,000 | 13.26 (4.00) |
| 5,001–6,000 | 12.52 (3.97) |
| 6,001 and above | 17.11 (4.09) |
| Family economic status | .16** |
| Job tenure | .12** |
| Hours of work | .12** |
| Job demands | .09** |
| Job resources | .46** |
| Membership identification | .60** |
| Burnout | -.22** |
| Work engagement | .45** |

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.
 CPO: Collective psychological ownership.

variables: gender, education level, organizational size, job position, and monthly income. The mean score of CPO in the men group was significantly higher than the women group. *Post-hoc* comparisons did not indicate which of the education level groups were different. *T*-test and ANOVA revealed that there was no statistically significant difference in CPO scores for the groups in age and religion. Religious belief was not a correlate of CPO; therefore, Hypothesis 1a was not supported.

Post-hoc comparisons showed that the mean score of CPO for the group of working in organizations with fewer than 20 staff was significantly higher than the groups working in organizations with 50–99 staff and organizations with 100 or above staff. The mean score of CPO for the group working in organizations with 20–49 staff was significantly higher than the group working in organizations with 50–99 staff. The mean score of CPO for senior managers was significantly higher than frontline workers and middle managers. The mean score of CPO for the two higher income groups (6,001 and above) was significantly higher than three lower income groups. Thus, hypotheses 2a, 3a, and 3b were supported.

Pearson correlations revealed significant positive associations between CPO and the following variables: family economic status, job tenure, hours of work per week, job demands, job resources, membership identification, and work engagement, but significant negative association with burn-out. Thus, hypotheses 1b, 2c, 3c, 3d, 4, 5, and 6 were supported. Hypothesis 2b was rejected.

3.2. Hierarchical multiple regression to predict CPO

All significant correlates with CPO were tested as predictors of CPO by hierarchical multiple regression. The correlations among the predictors of CPO are summarized in Table 3. Significant correlations were shown between job demands/job resources/membership identification and sociodemographic variables. Therefore, in assessing the influences of these variables on CPO, the sociodemographic variables were controlled for.

After controlling for the sociodemographic variables and work experience variables, hierarchical multiple regression was performed to assess the ability of job demands, job resources, and membership identification to predict CPO. Job demands were entered in Block 2 to test the influences of job demands on CPO after controlling for the sociodemographic variables and work experience variables. Job resources were entered in Block 3 to test the influences of job resources after controlling for job demands and those variables in Block 1. Membership identification as a psychological variable and its influences on CPO will be tested after controlling for sociodemographic variables and job conditions, and thus, it was entered in Block 4.

Table 4 shows the results of multiple regression tests. The sociodemographic variables included in Block 1 were gender, education level, and family economic status. Work experience variables included in Block 1 were job tenure, job position, monthly income, hours of work per week, and organizational size. Gender is a binary variable which was recoded to a dummy variable (female = 1, male = 0). Education level, job position, monthly income, and organizational size are ordinal variables. Family economic status, job tenure, and hours of work per week are continuous variables. All these variables are appropriate for multiple regression analyses.

The control variables entered at Block 1 explained 8.7% of the variance in CPO. Education level, family economic status, monthly income, and hours of work per week were significant, with monthly income showing the highest β value ($\beta = .200, p < .001$). After entry of job demands at Block 2, the total variance explained by the model became 8.8%, with $\Delta R^2 = .1, F$ for $\Delta R^2 = .907$, and $p = .309$. Education level, family economic status, and monthly income were still significant with monthly income showing the highest β value ($\beta = .194, p < .001$). At Block 3, after the entry of job resources, the total variance explained by the whole model became 28.4%, with $\Delta R^2 = 19.6\%$, F for $\Delta R^2 = 202.649$, and $p < .001$. Monthly income, organizational size, and job resources were significant with job resources showing the highest β value ($\beta = .464, p < .001$). In the final step, after entry of membership identification, the total variance explained by the whole model became

Table 3. Correlations between the hypothesized predictors of CPO (N = 761)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|--------------------------------|----------|----------|---------|---------|----------|---------|---------|--------|--------|---------|----|
| Gender (1) | 1 | | | | | | | | | | |
| Education level (2) | -.054 | 1 | | | | | | | | | |
| Family economic status (3) | .016 | .068 | 1 | | | | | | | | |
| Job tenure (4) | -.038 | .176*** | .021 | 1 | | | | | | | |
| Position (5) | -.060 | -.002 | .133*** | .180*** | 1 | | | | | | |
| Monthly income (6) | -.176*** | .324*** | .149*** | .490*** | .386*** | 1 | | | | | |
| Hours of work (7) | -.099** | .097** | .015 | .194*** | .105** | .194*** | 1 | | | | |
| Organizational size (8) | .050 | .002 | -.045 | .062 | -.137*** | -.060 | -.037 | 1 | | | |
| Job demands (9) | -.024 | .089** | -.006 | .177*** | .071 | .222*** | .289*** | -.006 | 1 | | |
| Job resources (10) | -.031 | -.168*** | .170*** | .000 | .043 | -.004 | .023 | .087** | .108** | 1 | |
| Membership identification (11) | .019 | -.100** | .166*** | .092** | .101** | .125** | .050 | -.011 | .080** | .429*** | 1 |

Note. * $p < .05$; ** $p < .01$; *** $p < .001$

45.1%, with $\Delta R^2 = 16.7\%$, F for change in R square = 224.844, and $p < .001$. Monthly income, organizational size, job resources, and membership identification were significant with membership identification showing the highest β value ($\beta = .462$, $p < .001$). In a conclusion, monthly income was significant in all tested models, while job resources and membership identification contributed more ΔR^2 to the models in predicting CPO.

4. Discussion

4.1. Findings

CPO answers the question of how much we feel that we jointly own the organization with our coworkers. The shared sense of possessiveness among coworkers is the conceptual core of CPO. Empirical studies on the antecedents and effects of CPO in the organizational settings are lacking. Findings of the current study enriched our knowledge about CPO, in particular on its antecedents in organizational contexts.

4.1.1. Hypotheses 1a and 1b

Among the sociodemographic variables, variables significantly correlated with CPO were gender, education level, and family economic status. On the other hand, age group and religion were not significantly correlated with CPO. Therefore, Hypothesis 1b was supported, whereas Hypothesis 1a was not supported. The mean score of CPO for the male group was significantly higher than the female group. *Post-hoc* comparisons tests did not show which of the different education level groups were significantly different. Family economic status was positively correlated with CPO. The result that age was not significantly correlated with CPO is consistent with findings of a previous study ($N = 474$) (Pierce et al., 2017). However, in Pierce's study, CPO was also not significant with gender or education, which contradicted with our findings. It is worth noting that 98% of the participants in Pierce's study were male, which may have compromised their conclusions. A plausible explanation for the gender difference in the current study is that traditionally men are more power and work oriented than women. They may have stronger needs of claiming their possessions in work context. Those with higher educational level may have more career choices and thus less willingness to take risks for the current organization. As a result, they may have lower CPO. Without heavy economic burdens from their families, workers from better family economic status may feel more secure to take risks for the organizations. This may partially explain a higher CPO among more well-off workers. Contrary to our assumptions, staff with a religious belief did not show higher CPO than those without. These results will require future studies.

4.1.2. Hypotheses 2a–2c

Among the tested job characteristic variables, organizational size, job demands, and job resources were significant correlates of CPO. Hypotheses 2a and 2c were supported. Staff working in the smallest organizations had higher level of CPO than staff from bigger organizations. Staff working at a small size organization may have more access to intimate knowing of the organization and thus may have higher CPO. Job resources were also positively correlated with CPO. Sufficient job resources may motivate the staff to invest themselves in the organization and to take risks for the organization, and leading to higher CPO. Unexpectedly job demands were positively correlated with CPO, and thus, Hypothesis 2b was not supported. A plausible explanation for the positive relationship between job demands and CPO is that job demands may urge the staff to take more responsibilities for the organization, and to invest more in it. In return, the staff may get a stronger sense of achievement and pride out of it, and hence higher CPO.

4.1.3. Hypotheses 3–6

Among the interactional variables between individuals and the organization, job position, monthly income, job tenure, hours of work per week, membership identification, and work engagement were positively correlated with CPO. Job tenure was not a significant correlate of CPO in Pierce's study (Pierce et al., 2017). However, 97% of the participants in their sample stayed in the organization for longer than 3 years while in our sample, the mean of the job tenure is 2.06 years ($SD = 1.86$). A plausible interpretation is that the impacts of job tenure on CPO may

Table 4. Summary of hierarchical regression analyses for variables predicting CPO (N = 761)

| Predictor | CPO | | | |
|--------------------------------|----------|---------|------------|------------|
| | Model 1 | Model 2 | Model 3 | Model 4 |
| Gender | -.037 | -.038 | -.017 | -.041 |
| Education level | -.108** | -.108** | -.017 | .022 |
| Family economic status | .131*** | .132*** | .044 | .006 |
| Job tenure | .028 | .026 | .026 | .005 |
| Job position | .017 | .016 | .011 | .013 |
| Monthly income | .200*** | .194*** | .192*** | .136*** |
| Hours of work | .082* | .073 | .072* | .064 |
| Organizational size | -.069 | -.069 | -.115*** | -.097** |
| Job demands | | .036 | -.022 | -.025 |
| Job resources | | | .464*** | .277*** |
| Membership identification | | | | .462*** |
| R ² | .087 | .088 | .284 | .451 |
| ΔR ² | NA | .001 | .196 | .167 |
| F for change in R ² | 8.781*** | .907 | 202.649*** | 224.844*** |

Notes: * $p < .05$; ** $p < .01$; *** $p < .001$.
 CPO: Collective psychological ownership.

be more significant among workers with shorter tenure, say in the first few years. The impacts of job tenure on CPO may diminish afterward. Burnout was negatively correlated with CPO. Hypotheses 3a–3d, 4, 5, and 6 were supported. People working at higher job position, with higher income, and for longer job tenure appeared to have higher CPO because they may have more intimate knowing about the organization and stronger bonding with the organization. Longer hours of work may reflect their investment of themselves in the organization, as well as their CPO toward the organization. Membership identification may strengthen the staff's sense of belongingness toward the organization, and hence higher CPO. People with high CPO may be less likely to burnout and be more engaged at work. With a strong bonding with the organization, they can get more social support from their coworkers and invest themselves more proactively for the shared goals of the organization.

4.1.4. Predictors of CPO

To test the hypotheses for the antecedents of CPO, hierarchical multiple regression models were tested. As shown in Table 4, the antecedent variables explained nearly half of variance in CPO. Job resources and membership identification were the two variables which contributed more ΔR^2 to the models predicting CPO. The positive impacts of more job resources to the social service profession appeared to be the most significant. To raise CPO, creating a sense of shared membership among coworkers is necessary. Besides, monthly income was significant in all tested models, which suggests that offering reasonable compensation is also instrumental to nurturing CPO.

4.2. Practical implications

This study tested the correlates of CPO in organizational contexts; the findings of the current study may provide directions to foster CPO in organizational contexts as well as to further study the impacts of CPO. For example, to increase the income level and job resources and to develop the shared identity toward the organization among staff may help foster their CPO. Moreover, to decrease burnout and increase work engagement have been identified as important parallel goals for enhancing workplace well-being. The positive correlations between CPO and work engagement and the negative correlations between CPO and burnout warrant future

investigations, especially on the viability of using CPO as the intervention focus for reducing burnout and enhancing engagement.

4.3. Limitations of the study

There are some limitations with the current study. First, this study is a cross-sectional study, which limits the conclusions one can make about causality. With respect to causality, we cannot be sure that the antecedents caused CPO or vice versa. Longitudinal and experimental studies are required to draw causal inferences. Second, all measures are self-report. Some judgments can be biased. Nevertheless, since CPO is a subjective feeling, self-report is an appropriate assessment approach. Third, we only examined associates and antecedents of CPO on staff's well-being in nonprofit organizations. Future similar studies are needed in the commercial and governmental sectors. Finally, the data collection adopted a snowball and convenience approach rather than a random sample. Representativeness of the sample and generalization of the results are compromised.

In summary, despite the aforementioned limitations, the findings of the current study will contribute to future investigations on the antecedents and consequences of CPO in organizational contexts. The findings also suggest potential intervention points for fostering workplace well-being.

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Authorship

Siu-Man Ng: designed and advised on implementation of the study and edited the article.

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