

MULTILEVEL CORRELATES OF TURNOVER INTENTION

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**A multilevel investigation of the association between collective psychological ownership as**

**psychosocial resources and social workers' turnover intention**

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## **Abstract**

Using a multilevel approach and a nationally representative sample of 5,478 social workers from 813 social service organisations in China, this study investigated the association between collective psychological ownership (CPO), an emerging construct of psychosocial resources characterised by sharedness, and social workers' turnover intention by controlling for psychological demands (i.e. emotional exhaustion and role ambiguity) and psychological resources (i.e. self-perceived autonomy, self-perceived and composite person-organisation value congruence, and self-perceived and composite social support). The results showed that CPO conceptualised as both individual- and organisational-level psychosocial resources were negatively associated with social workers' turnover intention. The findings of the study will draw implications for keeping social workers and other helping professionals in their organisations by practicing coworkers' shared agency and joint actions defined in terms of collective decision-making and hardship endurance.

**Keywords:** Collective psychological ownership, job demands-resources model, multilevel approach, organisational management, psychosocial resources, turnover intention

## **Teaser text**

In view of the great cost brought by a high level of turnover rate, the management of social service organisations is keen to learn about the antecedents leading to social workers' turnover intention

in relation to the complex interplay of different psychological demands and resources in organisational contexts. Using a nationally representative sample of 5,478 social workers from 813 social service organisations in China and a multilevel approach to analysing data at individual and group levels, this study investigated the association between collective psychological ownership (CPO), an emerging construct of psychosocial resources characterised by shared agency and joint action, and social workers' turnover intention by controlling for psychological demands and resources. In this article, psychological demands refer to emotional exhaustion and role ambiguity; psychological resources refer to self-perceived autonomy and to person-organisation value congruence and social support understood on both individual and group levels. The results showed that CPO conceptualised as both individual and organisational psychosocial resources were negatively associated with social workers' turnover intention. The findings of the study will inform the research on and practice of human resources management in social service organisations.

**A multilevel investigation of the association between collective psychological ownership as psychosocial resources and social workers' turnover intention**

Social workers' intention to leave the current organisation constitutes an important concern for social workers' wellbeing and organisational management (Jiang et al., 2019). Holding a high level of turnover intention would adversely influence social workers' job performance and strongly predict their actual act of turnover (Shields and Ward, 2001). In view of the great cost brought by high turnover rate, social service organisations are keen to learn about the antecedents leading to social workers' turnover intention (Hussein et al., 2014; McFadden, 2020). Turnover intention conceptualised as workers' thinking about leaving the current organisation and their actions taken to find new jobs (Su, 2020) is the result of a complex interplay of different psychological demands and resources in organisational contexts (see Chang et al., 2013; Choi et al., 2013). However, there has not been any multilevel investigation on studying both individual- and organisational-level antecedents of social workers' turnover intention with respect to the emerging construct of collective psychological ownership. Using a multilevel approach and a nationally representative sample from China, the study aimed to investigate how collective psychological ownership (CPO), which is conceptualised as both individual- and organisational-level psychosocial resources, can contribute to the job demands-resources model in relation to decreasing social workers' turnover intention.

### **Psychological job demands-resources and social workers' turnover intention**

The job demands-resources (JD-R) model (Demerouti et al., 2001) maybe one of the most parsimonious conceptual frameworks that has categorised psychological predictors of social workers' turnover intention into two groups: psychological demands and psychological resources and explicate how these psychological demands and resources work with two work-related states (i.e. burnout and work engagement) to influence employees' turnover intention (Su, 2020; Su et al., 2020a). Psychological demands refer to those psychological factors that require sustained physical or mental efforts of social workers and are thus associated with certain psychological costs such as turnover intention. Role ambiguity and emotional exhaustion are typical psychological demands encountered by social workers (Kim and Kao, 2014). Role ambiguity denotes the level of clarity perceived by individuals regarding the predictability of outcome or responses to their behaviors and the existence of behavioral requirements guiding individuals' behaviors in organisational contexts (Rizzo et al., 1970), whereas emotional exhaustion refers to the feeling of being emotionally over extended and depleted of one's emotional resources (Maslach, 1996). A study conducted by Kim and Kao (2014) showed the positive association between role ambiguity and social workers' turnover intention, and a study by Kim and Lee (2009) also revealed the positive relationship between emotional exhaustion and social workers' turnover intention.

Psychological resources are functional in achieving work goals, supporting people's growth

and mitigating the negative effects of job demands. Autonomy, person-organisational value congruence (POVC), and social support are psychological resources that may decrease the turnover intention of social workers. Autonomy emphasises the degree of freedom enjoyed by workers in making decisions about structuralising their jobs (Hackman and Oldham, 1976); POVC focuses on the degree of fit between the values of workers and those of their organisations; social support refers to the support that workers receive from different parties (i.e. coworkers, immediate supervisors, project directors, etc.) at work (Verplanken, 2004). While autonomy is often conceptualised as an individual-level phenomenon, POVC and social support can exist as individual-level and collective-level phenomena in organisational contexts. In this connection, POVC is also understood as an organisational phenomenon of averaging value congruence between workers and the organisation (Mustafa et al., 2017). Likewise, social support also refers to composite psychological resources of organisational social support (Williams et al., 2004).

Autonomy, POVC and social support operationalised as self-perceived psychological resources have been supported by research studies as negative associates of turnover intention (Kim and Stoner, 2008; Van Vianen et al., 2008). Meanwhile, POVC and social support understood as composite psychological resources have been revealed as effective organisational factors for decreasing turnover intention in non-social work professions (Mustafa et al., 2017). The findings of these studies suggested that the following scenarios are all conducive to decreasing workers'

turnover intention: 1) workers enjoy personal agency in terms of making decision about their own work; 2) workers' personal values are congruent with the organisational values or their organisation is characterized by a high level of value congruence between workers and the organisation; and 3) workers enjoy a high level of social support at work or their organisation is characterised by a supportive work climate. Nevertheless, these psychological resources have their limitations for overlooking the 'shared agency' of social workers. Shared agency valuing interpersonal trust and acting together emphasises how coworkers proactively practice their joint actions based on their shared rationales and understanding of existing shared conditions in the organisation for achieving their shared goals (Schmid, 2013). Collective psychological ownership (CPO) is attracting increasing academic interest in its influences on organisational behaviors and workplace wellbeing for providing a mechanism of practicing shared agency in organisational context. Some recent studies (Su, 2020; Su et al., 2020a) have incorporated CPO into the JD-R model and suggested extra values added by CPO for explaining social workers' turnover intention with empirical findings.

### **Collective psychological ownership (CPO) and social workers' turnover intention**

The term CPO was originally proposed in psychological ownership theory as a territorial sense of possessiveness held by teammates that they own their working group (Pierce and Jussila, 2011). This territorial notion of CPO highlights an entitlement sense of shared possessiveness, as

it pays no attention to the shared rights and responsibilities of co-owners, and thus may nurture groupthink and discourage reflexive learning of coworkers (Pierce et al., 2018). Su and Ng (2018) refined CPO in a less-territorial notion in non-Western cultures as a shared sense of ownership held by coworkers that they jointly own the organisation. According to Su and Ng (2018), CPO answers the questions of ‘How much do coworkers feel that they share the ownership of the organisation?’ and “To what extent is their co-ownership of the organisation manifest in shared experience?” (Su et al., 2020a; Su et al., 2021; Su and Ng, 2018).

Su and Ng (2018) have developed a bi-factor structure of CPO, which on the one hand keeps the psychological co-ownership as a general factor of CPO but on the other hand emphasises two specific factors as important attributes of CPO: shared decision-making and shared hardship endurance. According to Su and Ng (2018), shared decision-making highlights the rights and responsibilities of co-owners in relation to the organisation, and shared hardship endurance signifies members’ joint commitment and emotional bonding to the organisation even in challenging times. This notion of CPO highlighting the collective values of ‘non-exclusionary sharedness’ (Schmid et al., 2013) promoted among individuals, groups or departments within the organisations places an emphasis on the shared agency of coworkers, and thus keeps open to evolving learning and continuous reflections for the collective benefits (Su et al., 2021).

Some empirical studies have revealed that CPO characterised by sharedness may function as

psychosocial resources to mitigate the influences of psychological demands on social workers' turnover intention (Su, 2020; Su et al., 2020a), which can help decrease turnover intention of social workers for two reasons. First, the two specific factors of CPO may mitigate the territorial sense of possessiveness and highlight the shared agency and joint action of coworkers in practicing their decision-making and hardship endurance. This can help prevent various asocial behaviors such as groupthink and resistance to sharing and changes from taking place in organisations (Pierce et al., 2018). Second, the two specific factors of CPO which request coworkers' attentions to the shared rights and responsibilities of co-owners (Su et al., 2021) may avoid their misunderstanding of taking co-ownership as 'a sense of entitlement' (Hams, 2011) in organisational context.

However, existing studies on examining the association between CPO and turnover intention have their limitations for conceptualising CPO merely as individuals' perceptions about a group-level phenomenon and thus taking it as the base for measuring the shared sense of ownership in their organisation according to their personal feelings and work experiences (Su et al., 2021). There has not been any study on measuring CPO as a group-level phenomenon although the concept was originally conceptualised along this line.

Against this backdrop, this study used a multilevel approach and a nationally representative sample from China to investigate the association between collective psychological ownership (CPO) operationalised as both self-perceived and composite psychosocial resources and social

workers' turnover intention by controlling for psychological demands (i.e. role ambiguity and emotional exhaustion) and psychological resources (i.e. autonomy, and self-perceived and composite POVC and social support). The social work profession in China has experienced a fast-growing but challenging time since the government declared its strong determination to develop the profession in 2006 (Gao and Yan, 2015). Yet, many factors are still jeopardizing the development of the profession in China, including a lack of clear guidance to ensure the quality of service provision, the dominant role played by the government in terms of controlling the distribution of resources, and a low level of public recognition enjoyed by the profession, which lead to an ambiguous professional identity among social workers (Niu and Haugen, 2019). In this connection, the turnover of social workers in China has become one of the serious issues attracting growing academic attention (Jiang et al., 2019).

Some covariates have been taken into consideration based on the findings of the existing literature. As prior studies revealed that job position is positively associated with self-perceived CPO (Su and Ng, 2018) and negatively associated with turnover intention (Lu et al., 2016), we control job position as a covariate when testing the association between social workers' CPO and their turnover intention. In view that the population of social workers in China is quite young and characterised by the imbalance of gender ratio and uneven distribution of educational attainments (Jiang et al., 2019; Su et al., 2021), it is deemed necessary to control these demographic

information (i.e. gender, age, and educational attainment) as covariates as well. Based on the literature review, we formulated the following hypotheses for the study:

**H1.** Self-perceived CPO will negatively correlate with social workers' turnover intention in a multilevel model after controlling for psychological demands of role ambiguity and emotional exhaustion, psychological resources of autonomy, and self-perceived and composite POVC and social support, job position, and demographic information of gender, age, and educational attainment.

**H2.** Composite CPO will negatively correlate with social workers' turnover intention in a multilevel model after controlling for psychological demands of role ambiguity and emotional exhaustion, psychological resources of autonomy, self-perceived and composite POVC and social support, and self-perceived CPO, job position, and demographic information of gender, age, and educational attainment.

## **Method**

### **Sample**

This study used the first wave of cross-sectional data available from the China Social Workers Longitudinal Study 2019 (CSWLS 2019), which planned to collect individual data from participants who are social workers and organisational data from the person-in-charge of the social service organisations (SSOs) every three years, and the first round of data collection was

implemented from June to October in 2019 (Liu et al., 2020). All procedures performed in this study were in accordance with the ethical standards of the Research Ethics Committee of the University where the third author is affiliated with and all participants were well informed about the objectives of the research and signed a consent form before joining the research.

This study used both individual and organisational data collected in the first wave of CSWLS 2019. The CSWLS 2019 received 5,965 individual questionnaires filled in by social workers employed by 979 SSOs located in 56 cities in China, yielding a high valid survey response rate of 98.59%. The survey targeted those participants who identified themselves as a professional social worker and worked in a specific social work service field for at least three months at the time of the study. Among all the collected individual questionnaires ( $N=5,965$ ), 5,943 can be paired with their organisational data (org.  $N=954$ ). Only paired-up individual- and-organisational data were used for the study upon satisfying the following three criteria. First, the number of employed staff in 2018 was reported in the organisational questionnaire; second, at least two different sets of individual and organisational questionnaires from the same SSOs were collected, and finally, there existed no missing data of turnover intention and CPO. The study turned out using 5,478 individual questionnaires paired up with 813 organisational questionnaires. In other words, this study excluded 456 individual questionnaires which did not satisfy the three criteria mentioned above. Using the dataset with matched questionnaires for individual and organisational questionnaires

( $N=5,943$ ), Little's missing completely at random (MCAR) test was conducted. It turned out that data for organisational size, turnover intention and CPO were missing completely at random (Little's MCAR test:  $X^2=14.33$ ,  $df=7$ ,  $p > 0.05$ ).

Descriptive characteristics for the variables are reported in Table 1. The sample consisted of 21% of male social workers and 79% females. The mean of age is 30.89 ( $SD=7.82$ ). Most of the participants (56.2%) had a bachelor's degree. Over half (55.6%) of the participants were frontline workers and 44.4% were social workers with a supervisory role. The mean of organisational size was 31 ( $SD=73.27$ ) and the mean of participants from each organisation was 7 ( $SD=5.98$ ) respectively.

This study has taken into consideration the endogeneity issue with regard to the use of cross-sectional data collected in the first wave of the CSWLS conducted in 2019. Other than the cause of omitted variables bias, endogeneity can also be caused by simultaneity, when the dependent variable and the explanatory variables are determined simultaneously in a system (Wooldridge, 2010). It is considered important to address the issue of endogeneity at least in the research design, which may help mitigate its influence on the findings (Ketokivi and McIntosh, 2017). As longitudinal data can help alleviate endogeneity (Roberts and Whited, 2013), the research study team of the CSWLS planned to collect data every three years. The second strategy employed to mitigate the impact of endogeneity is to use the control variable approach (see Shang et al., 2017),

leveraging a wide variety of variables collected to help understand factors that are perceived theoretically or supported empirically to influence the topic of interest. Although longitudinal data is not yet available for this study, the control variable approach is used to mitigate endogeneity. Informed by the JD-R model, factors of psychological resources and psychological demands that were revealed to be associates of turnover intention were included in the conceptual model; covariates (i.e. job position, gender, age, and educational attainment), which were supported by prior studies for being related to CPO and turnover intention, were controlled in the testing model. Some variables were omitted in this study to avoid the issue of multicollinearity, where income was omitted as the income of social workers in China is highly consistent with their rank of job positions ( $r > .9$ ), and job tenure was excluded for its strong correlation with age ( $r > .9$ ) among social workers in China.

## Measures

*Turnover intention* was measured by four items, among which three items were derived from the four-item scale of intention to leave (Nissly et al., 2005): “In the next six months I intend to leave this organisation,” “In the next three years I intend to leave this organisation,” and “I occasionally think about leaving this organisation.” These three items were rated on a five-point Likert-type scale, ranging from 1=strongly disagree to 5=strongly agree. The last item was developed by the expert panel of the CSWLS 2019: “Were you looking for another job in the past

one month?” Participants were asked to respond to this item by yes or no, which were recoded as 4 and 2 points respectively. The mean of these four items represents the turnover intention of participants, and a higher score implies a higher intention to leave the current organisation. The Cronbach’s alpha for the four items was 0.73.

*Role ambiguity* was measured by five items from the role ambiguity scale developed by Rizzo et al. (1970). Responses were rated on a five-point Likert-type scale, from 1=strongly disagree to 5=strongly agree. After re-coding of the scores, the higher the score, the higher the level of role ambiguity they feel. The Cronbach’s alpha for the scale was 0.81.

*Emotional exhaustion* was measured by nine items drawn from the 22-item Chinese version of the Maslach’s Burnout Inventory-Human Service Survey (MBI-HSS), which was developed by Maslach et al. (1986) and validated in China by Li et al. (2003). A seven-point Likert-type scale (0=never and 6=once every day) was used to rate the degree of emotional exhaustion. The Cronbach’s alpha for the nine items was .91.

*Autonomy* was measured by two items drawn from the subscale of decision authority in the Chinese version of the Job Content Questionnaire (JCQ) (Karasek et al., 1998): ‘I have a lot to say about what happens on my job’ and ‘I have a lot of freedom to decide how I do my work’. Participants made a response by a five-point Likert-type scale from 1 (strongly disagree) to 5 (strongly agree). The Cronbach’s alpha for the two items in the sample was .75.

*Self-perceived POVC* was measured by two self-report items originally developed in Chinese by the expert panel of CSWLS 2019: “I agree with the values of our organisations” and “My values are congruent with the values of most of my colleagues”. Participants were asked to respond how much they agree with these two items by a five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Participant’s scores of P-O value congruence were calculated by averaging their scores for these two items and thus resulted in a range of 1 to 5. The Cronbach’s alpha for these two items in the sample was .81.

*Self-perceived social support* was measured by the Social Support Scale developed by House et al. (1979), which specified a variety of social support employees receiving from their immediate supervisors, project/program directors, coworkers, and director of the organisation. The Social Support Scale was used in Chinese context in prior published research studies (Jiang, 2019). Participants were asked to use six items to report social support they received from each of the four parties mentioned above by a five-point Likert-type scale ranging from 1=very unsupportive to 5=very supportive. The scores of job resources ranged from 1 to 5. The Cronbach’s alpha for Social Support Scale in the sample was .95.

*Self-perceived collective psychological ownership* was measured by the seven-item Chinese version of a bi-factor scale developed by Su and Ng (2018), which consists of one item merely loading on the general factor of a shared sense of ownership, three items loading on the

specific factor of shared decision-making and three items loading on shared hardship endurance. The item solely loading on the general factor was ‘I feel like we are co-owners of the organisation’. An example item for the shared decision-making factor was ‘My colleagues feel they are involved in decision-making’ and that for the shared hardship endurance factor was ‘The organisation is keen to keep staff even in tough times’. Participants were asked to respond by a four-point Likert-type scale ranging from 1 (I hardly feel this way) to 4 (I strongly feel this way). The total scores of the six items loading on the two specific factors were the values of CPO. The item purely loading on the general factor was used for concurrent, criterion validity checking. The Cronbach’s alpha for the six items in the sample was .82.

In view that aggregating individual survey data is an acknowledged way to measure group-level phenomena (Van Mierlo et al., 2009), this study measured composite phenomena by aggregating individual-level survey data. We used a reference-shift model approach (Chan, 1998), which is the recommended approach to capturing constructs (i.e. *POVC*, *social support*, and *CPO* as composite organisational phenomena) that are conceptually defined in terms of shared perceptions of a group-level construct (Van Mierlo et al., 2009). Specifically, in this study, each organisation was counted as a group, individual social workers from each organisation responded to organisation-referent items for each measured construct, asking them to assess on the organisation’s position on the construct of interest. Thus, the organisation-level construct scores

were calculated by averaging the individual group members' scores per organisation.

To assess the appropriateness of this aggregation procedure, we used the intraclass correlations of ICC(1) and ICC(2) (Bliese, 2000), and the interrater agreement index  $r_{WG(J)}$  (James et al., 1984). ICC(1) represents the proportion of variance in a variable that is explained by group membership, ICC(2) provides an estimate of the reliability of the group means, and  $r_{WG(J)}$  indicates within-group agreement in terms whether group members provided similar rating on the construct in an absolute sense. Regarding interpretation, ICC(1)-values between 0.05 and 0.20 are considered typical (Bliese, 2000), those ICC(2)-values between 0.40 and 0.75 are fair to good, and those  $>0.75$  are excellent (Fleiss, 1986); The  $r_{WG(J)}$ -values between 0.51 and 0.71 are considered to indicate moderate agreement and between 0.71 and 0.90 strong agreement (LeBreton and Senter, 2008).

[Insert Table 1 about here]

[Insert Table 2 about here]

### **Data analysis**

First of all, Harman's single-factor test (Podsakoff et al., 2003) was adopted to statistically assess the extent to which common method variance may be a problem. Second, as ICC(1) represents the proportion of variance in a variable that is explained by group membership, the unconditional models in multilevel regression analyses (i.e. with the mixed model procedure in

SPSS 26.0) were used to examine ICC(1) for POVC, social support, and CPO. The output of Level 2 variance and residual variance in unconditional models for predicting DVs of POVC, social support and CPO were used to calculate ICC(1) (i.e.  $ICC(1) = \text{group-level intercept variance} / (\text{residual variance} + \text{group-level intercept variance})$ ). ICC(2) for POVC, social support, and CPO were calculated by the Spearman-Brown formula using ICC(1) and mean of number of participants from each organisation. The results of  $r_{WG(J)}$  for POVC, CPO and social support were calculated by the tool for computing interrater agreement (IRA), which was developed by Biemann and Voelpel (2012).

We then conducted Bi-variate Pearson tests to show the correlations of study variables in order to gain a preliminary understanding of how the study variables are related to each other. The last step was to use multilevel regression analysis to examine the multilevel predictors of social workers' turnover intention and test the hypotheses. In the multilevel regressions to predict turnover intention, we centered individual continuous predictors within organisation and used mean scores for composite variables in three tested models: Model 1 consists of demographic information, job position, psychological demands of job ambiguity and emotional exhaustion, and psychological resources of autonomy, self-perceived POVC, composite POVC, self-perceived social support, and composite social support. Self-perceived CPO was added in Model 2 and composite CPO was added in Model 3.

## Results

The results of Harman's single factor test showed no problem with common method bias in this data set since the total variance extracted by one factor is 28.08% and it is less than the recommended threshold of 50%. ICC(1), ICC(2), and *median* of  $r_{WG(J)}$  across all 813 organisations for POVC, social support and CPO scores are shown in Table 2. The *median* value of  $r_{WG(J)}$  all indicated strong agreement within the same organisation, and the ICC(1)-values all fell into the acceptable range and the ICC(2)-values were good for three composite constructs. Therefore, the figures of ICC(1), ICC(2), and  $r_{WG(J)}$  justified the conduct of averaging the individual scores for calculation of the composite scores of the three variables. Table 3 displays the results of Bi-variate Pearson tests, which has informed a preliminary understanding of the association between turnover intention and other study variables. Except role ambiguity, social workers' turnover intention was significantly associated with all other study variables. Specifically, Bi-variate Pearson tests showed that social workers' turnover intention was negatively associated with gender, age, and job position, negatively associated with all tested psychological resources, and positively associated with educational attainment and emotional exhaustion.

[Insert Table 3 about here]

Table 4 presents the results of multilevel regressions for turnover intention. In model 1, individual social workers' turnover intention was regressed on psychological demands of

emotional exhaustion, and psychological resources of autonomy, self-perceived POVC, self-perceived social support, composite POVC and composite social support, controlling for demographic information (i.e. gender, age, and educational attainment), and job position. Relatively older social workers reported a lower intention to leave the organisation. Compared with those with a master's degree or above (level 5), social workers finishing senior secondary school and vocational training certificate (VTC) (level 1) reported lower level of turnover intention. Frontline social workers reported a higher level of turnover intention than those with a manager or supervisory role. Emotional exhaustion was positively associated with social workers' turnover intention. All psychological resources in Model 1 were negatively associated with social workers' turnover intention.

In Model 2, controlling all factors in Model 1, social workers' turnover intention was regressed on their self-perceived CPO. Social workers with a higher level of perceived CPO reported a lower level of turnover intention and thus Hypothesis 1 was supported. In Model 3, social workers' turnover intention was regressed on the composite CPO after controlling for predictors in Model 2, which suggested that composite CPO added value to Model 3 in decreasing turnover intention of social workers after controlling for the influence of psychological demands and psychological resources including the influence of self-perceived CPO. Therefore, Hypothesis 2 was supported.

[Insert Table 4 about here]

### **Discussion**

The findings of this study provided empirical support for the proposed hypotheses. They may also draw implications for strengthening the power of the JD-R model and the less-territorial notion of ownership theory in informing human service management, and keeping social workers and other helping professionals in their organisations by practicing coworkers' shared agency and joint actions defined in terms of collective decision-making and hardship endurance.

The first major finding of the study was that self-perceived CPO was negatively associated with turnover intention of social workers after controlling for psychological demands of role ambiguity and emotional exhaustion, psychological resources of autonomy, and self-perceived and composite POVC and social support, job position, and demographic information of gender, age, and educational attainment. Perceptions held by individual social workers in relation to their shared ownership with coworkers about their working organisation are important for keeping social workers to stay in the current organisation. This finding was consistent with prior studies about the positive effects of self-perceived CPO manifested in shared decision-making and shared hardship endurance in organisational contexts, such as reducing turnover intention (Su et al., 2020a) and burnout (Su et al., 2020b), and enhancing work engagement of social service workers (Su and Ng, 2019).

The second major finding was that this is the first empirical study to measure CPO as a group-level concept and support the effects of composite CPO as psychosocial resources for enhancing organisational outcomes. Prior studies (Su, 2020; Su et al., 2020a) only took CPO as a self-perceived phenomenon. The statistical figures of ICC(1), ICC(2) and  $r_{WG(J)}$  in this study supported the appropriateness of aggregating the composite CPO score based on individual survey data and thus empirically supported the reliability and validity of CPO as a group-level concept. This is a breakthrough for the conceptual development of CPO and the less-territorial notion of psychological ownership theory. Based on this finding, a less-territorial and group-level concept of CPO is expected to mitigate the effects caused by the dark side of territorial psychological ownership in the form of groupthink, for example. Third, the study revealed that CPO as composite psychosocial resources was negatively associated with turnover intention of social workers after controlling for the influence of self-perceived CPO and other psychosocial resources of autonomy, POVC, and social support in the JD-R model. This finding suggested the extra value added by the composite CPO to the psychological dimension of the JD-R model in explaining turnover intention, which implied that it is important to construct CPO among group members as group-level psychosocial resources rather than merely enhancing individual social workers' self-perceptions of co-ownership and autonomy, and their self-perceived and composite POVC and social support. This finding expanded the application of the JD-R model in organisational management with the

evidence of empirical data. The significant effects of psychological demands and resources on turnover intention revealed by this study will also strengthen the power of the JD-R model in explaining organisational behaviors.

Finally, in the tested models, after controlling other individual- and organisational-level composite factors, emotional exhaustion was still positively associated with turnover intention, value congruence and social support conceptualized as individual- and organisational-level phenomena were negatively associated with turnover intention of social workers. Using a multilevel approach of research design, these findings strengthened the findings of existing literature (Kim and Stoner, 2008; Van Vianen et al., 2008) with regard to the importance of emotional exhaustion, value congruence, and social support for keeping social workers in their jobs. Moreover, this study highlighted the significant roles of these predictors of social workers' turnover intention in a more comprehensive model using a multilevel approach.

To our surprise, role ambiguity was not a significant predictor of social workers' turnover intention in our tested models. This finding was in contrast to existing studies (Kim and Kao, 2014). One possible explanation for this finding may be accounted by a high level of role ambiguity of social work in China, as the profession is still at its early developmental stage (Gao and Yan, 2015; Niu and Haugen, 2019; Su et al., 2020a). The management of SSOs in China has to confront ambiguities caused by different sets of objectives and guidelines imposed by different authorities

including the funders, which can hardly be thoroughly addressed by single SSO unless and until the social work profession itself will witness significant improvement. It is therefore deemed important for non-profit-making SSOs in China to recruit social workers whose values are more aligned with their own organisational values, mission and vision (e.g. Posner, 2010). The situation of the third sector and the government sector in the developed economies in the West is further complicated by their adoption of business values and principles from the for-profit sector as part of the process of privatisation and hybridization (Zychlinski et al, 2020). Confronting all sorts of ethical conflicts and organisational and environmental ambiguities in the delivery and evaluation of social services in different societal context, SSOs may consider it strategic to promote CPO characterised by shared agency and joint actions (e.g. Gallagher and Tollesfen, 2019) whilst thoroughly addressing the emotional exhaustion of helping professionals including social workers.

The findings of the study may have profound practical implications for informing organisational management in social work and other values- and ethics-driven human helping professions by supporting CPO as a self-perceived as well as a composite group-level concept for practicing shared agency of coworkers in organisational contexts. On organisational level, it is suggested to enhance self-perceived CPO held by frontline social workers in particular by involving them in decision-making and taking responsibilities for their collective actions. It is also important for leaders of SSOs to cultivate an organisational climate characterised by sharedness

by emphasizing shared agency of all coworkers in decision-making and hardship endurance. The promotion of “we-narratives” among the coworkers can help sustain their practice of shared or joint agency within a larger organisational framework of commitments (Gallagher and Tollefsen, 2019).

However, this study has several limitations warranting attention. First, this study was a cross-sectional one, which limited the generalisation of the conclusions of the findings in spite of using a nationally representative sample. Longitudinal studies are needed to draw causal inferences on the relationship between CPO and turnover intention. Second, the issue of endogeneity is another concern of this study. Although we addressed the issue from a theoretical point of view and by means of controlling some covariates based on the findings of existing literature, there are still chances that endogeneity may be caused by some omitted variables or potential simultaneity may bias our interpretation of the findings. Longitudinal study and relevant statistical techniques are warranted for future research to better handle the issue of endogeneity. Third, the scales used in this study to measure the major variables were self-reported tools, which may lead to common method bias in the findings. Although Harman’s single-factor test was adopted to assess the extent of common method variance of the study, the sensitivity of the test is still doubted (Podsakoff et al., 2003). Fourth, this study was conducted in a national context where the social work profession is still at its preliminary stage of professional development. Fifth, as cultural factors may affect

people's turnover intention (Wong and Cheng, 2020), future studies are needed to investigate the influence of CPO on turnover intention in other human helping professions and in different cultural backgrounds. Finally, future studies are needed to investigate the role played by CPO in the relationship between job position and autonomy, and in relationship between autonomy and turnover intention.

### **Conclusion**

In conclusion, this study showed the association between CPO and social workers' turnover intention using a multilevel approach and a nationally representative sample from China. The findings of the study revealed the role of CPO in reducing turnover intention by means of promoting shared agency of social workers in terms of shared decision-making and shared hardship endurance that can be materialised in an organisational context. Whether CPO characterised by sharedness will enhance the development of a less-territorial notion of psychological ownership theory and the JD-R model for organisational management in human helping professions situated in different cultural background is an area worth further studying.

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Table 1. Sociodemographic characteristics of participants (Indi.  $N=5,478$ , Org.  $N=813$ )

	<i>N/Mean</i>	<i>%/SD</i>
<b>Individual characteristics</b>		
Gender		
<i>Female</i>	4336	79.2
<i>Male</i>	1142	20.8
Age	30.89	7.82
Educational attainment		
<i>level 1 (lowest)</i>	46	.8
<i>level 2</i>	370	6.8
<i>level 3</i>	1570	28.7
<i>level 4</i>	3077	56.2
<i>level 5 (highest)</i>	415	7.6
Job position		

# MULTILEVEL CORRELATES OF TURNOVER INTENTION

<i>Social workers with a management/supervisory role</i>	2430	44.4
<i>Frontline social workers without any management roles</i>	3048	55.6
Role ambiguity	3.12	.87
Emotional exhaustion	1.38	.98
Autonomy	3.56	.73
Self-perceived POVC	3.91	.62
Self-perceived social support	4.10	.76
Self-perceived CPO	13.03	3.71
Turnover intention		
<b>Org. characteristics</b>		
Number of selected participants from each org.	7.06	5.98
Org. size	31.45	73.27
Composite POVC	3.91	.30
Composite social support	4.10	.42
Composite CPO	13.02	2.08

*Note.* Indi.=individual; Org.=organization; POVC=person-organization value congruence; CPO=collective psychological ownership.

Table 2. Intraclass correlation coefficients and within group agreement of composite independent variables of turnover intention

IVs	<i>Median of <math>r_{WG(J)}</math></i>	Group-level intercept variance (subject=org. ID)	Residual Variance	ICC(1)	ICC(2)
POVC	.91	.04	.35	.11	.47
Social support	.91	.11	.48	.19	.62
CPO	.86	2.91	11.08	.21	.66

*Note.* IVs= independent variables; org.=organization;  $r_{WG(J)}$ = interrater agreement index; ICC=intraclass correlation

MULTILEVEL CORRELATES OF TURNOVER INTENTION

Table 3. Correlations among the study variables (Indi.  $N=5,478$ , Org.  $N=813$ )

	1	2	3	4	5	6	7	8	9	10	11	12	13
1.Turnover intention	1												
2.Gender <sup>a</sup>	-.04**	1											
3.Age	-.17***	0.00	1										
4.Educational attainment	.11***	0.01	-.15***	1									
5.Job position <sup>b</sup>	-.09***	.09***	.15***	.19***	1								
6.Role ambiguity	0.02	0.02	-.04**	0.00	-0.02	1							
7.Emotional exhaustion	.22***	-.04**	-.16***	.05***	0.01	.03**	1						
8.Autonomy	-.09***	.05***	.04**	.08***	.19***	-0.01	-.05***	1					
9.Self-perceived POVC	-.23***	.03*	.08***	0.02	.08***	-0.01	-.17***	.28***	1				
10.Composite POVC	-.22***	0.01	0.00	-0.01	.08***	0.00	0.00	0.00	0.00	1			
11.Self-perceived social support	-.18***	0.00	0.01	-.08***	-.09***	-.03*	-.23***	.06***	.30***	0.00	1		
12.Composite social support	-.22***	0.00	0.00	-.11***	-0.02	0.00	0.00	0.00	0.00	.42***	0.00	1	
13.Self-perceived	-.24***	.09***	.10***	.03*	.16***	-0.01	-.12***	.27***	.41***	0.00	.22***	0.00	1

# MULTILEVEL CORRELATES OF TURNOVER INTENTION

CPO														
14.Composite CPO	-.22***	.08***	0.00	0.00	.15***	0.00	0.00	0.00	0.00	.56****	0.00	.41***	0.00	1

*Note.* <sup>a</sup> male = 1 and female = 0; <sup>b</sup> social workers with a management/supervisory role = 1 and frontline social workers without any management roles = 0.

Table 4. Multilevel regression analyses of individual-level turnover intention on psychological demands and psychological resources (Indi.  $N=5,478$ , Org.  $N=813$ )

	Model 1		Model 2		Model 3	
	Estimates	SE	Estimates	SE	estimate	SE
<b>Fixed part:</b>						
Intercept	5.326***	0.164	5.340***	0.164	5.250***	0.163
<b>Control variables:</b>						
Gender (Ref: male)	-0.003	0.022	-0.014	0.022	-0.019	0.022
Age	-0.016***	0.001	-0.016***	0.001	-0.016***	0.001
Educational attainment						
<i>level 1: Junior secondary school or below</i>	0.165	0.115	0.151	0.114	0.144	0.113
<i>level 2: Senior secondary school or VTC</i>	-0.171**	0.051	-0.177***	0.051	-0.186***	0.050
<i>level 3: Bachelor's degree</i>	-0.110**	0.038	-0.115**	0.038	-0.125**	0.038
<i>level 4: Master's degree or above</i>	-0.064	0.035	-0.066	0.035	-0.074	0.035
Job position (Ref: managers/supervisors)	0.058**	0.019	0.036	0.019	0.029	0.019
<b>Psychological demands:</b>						
Role ambiguity	0.007	0.011	0.011	0.011	0.011	0.011
Emotional exhaustion	0.123***	0.010	0.121***	0.010	0.121***	0.010
<b>Psychological resources:</b>						
Autonomy	-0.034*	0.014	-0.009	0.014	-0.011	0.014
Self-perceived POVC	-0.206***	0.017	-0.147***	0.018	-0.147***	0.018
Composite POVC	-0.329***	0.041	-0.335***	0.041	-0.240***	0.046
Self-perceived social support	-0.116***	0.015	-0.100***	0.015	-0.100***	0.014
Composite social support	-0.248***	0.030	-0.246***	0.030	-0.219***	0.030
<b>Predictors:</b>						
Self-perceived CPO			-0.034***	0.003	-0.035***	0.003
Composite CPO					-0.029***	0.007
<b>Random part:</b>						
Residual	0.359***	0.008	0.341***	0.008	0.333***	0.007
CPO's slope variance			.001*	.000	.001**	.000
2Log Likelihood	9319.897		9123.826		9102.138	

# MULTILEVEL CORRELATES OF TURNOVER INTENTION

Akaike's information Criterion (AIC)	9353.897	9161.826	9144.138
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*Note.* All continuous independent variables were centered prior to the model building process. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .