Original Article

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Exploring the pathway of a social network in promoting the individual performance of core members of social organizations caring for the elderly: A moderated mediation model of social support and self-efficacy

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SUMMARY: The high performance of core members of social organizations (SOs) caring for the elderly can enhance the quality of management and services, thereby improving the life satisfaction of older adults residing there. However, the factors influencing the performance of core members and their pathways remain unclear. This research seeks to uncover how social support mediates and self-efficacy moderates the association between a social network and individual performance of core members of SOs caring for the elderly. A cross-sectional survey was conducted from June to August 2023 in Shanghai, China, and data on participants' demographics, social network, social support, individual performance, and self-efficacy were collected. Hierarchical stepwise regression, bootstrap analysis, and simple slope method analysis were used to test potential mediating and moderating effects. After adjusting for confounders, the total effect of a social network on core members' individual performance (β = 0.078, 95% CI: 0.052-0.103) consisted of a direct effect (β = 0.059, 95% CI: 0.030-0.087) as well as an indirect effect mediated through social support (β = 0.019, 95% CI: 0.006-0.033). In addition, self-efficacy was identified as a moderating factor in the relationship between a social network and individual performance, with higher levels of self-efficacy diminishing the influence of a social network on performance outcomes. An extensive social network can enhance social support for core members of SOs caring for the elderly, thereby improving individual performance. Concurrently, targeted interventions should be developed to draw on self-efficacy to activate social network resources and to have a synergistic effect on individual performance.

Keywords: social capital, work performance, care services

1. Introduction

As aging of the global population intensifies, social organizations (SOs) caring for the elderly, as a form of non-governmental organization providing nursing and health care services for older people, have become crucial in addressing the shortcomings of governmental and private care providers (*1,2*). In China, by the end of 2023, there were 387,000 institutions and facilities caring for older adults, with 8.23 million beds available (*3*). This phenomenon is particularly evident in Shanghai, China. As one of China's megacities, Shanghai had a population of 5.6805 million individuals age 60 and older by the end of 2023, representing 37.4% of the total population. The city is home to 700 elderly care institutions, with a combined total of 166,900 beds available (*4*). These organizations provide specialized long-term care services for specific elderly demographics, such as those who are disabled or partially disabled. Additionally, they integrate medical and rehabilitation resources to advance the integration of medical and elderly care, thereby effectively enhancing standards to ensure the health of the local elderly population. In these organizations, the core members, including the organization's legal representative, director, and administrative personnel, bear responsibility for overall management, policy

formulation, financial oversight, and human resource management. Previous research has indicated that these core members influence the care standards and conditions in SOs caring for the elderly through strategic institutional design and team motivation. This helps to enhance the quality of organizational services and the satisfaction levels of older individuals within the organization. Clearly, these core members represent a critical group that deserves attention.

As professionalization within SOs caring for the elderly progresses, the significance of the individual performance of core members has garnered attention from numerous scholars. Individual performance is characterized by the contributions of and influence exerted by these core members, grounded in their professional responsibilities and manifested through their expertise, skills, and collaborative behaviors (*5,6*). Within the context of providing care for older adults, the individual performance of core members plays a pivotal role in optimizing the process of providing care, maintaining team stability, and enhancing the institution's ability to mitigate risks. For older individuals residing in SOs caring for the elderly, ineffective management by core members can lead to a lack of activities, reduce the social participation of older people, and exacerbate adverse health outcomes such as loneliness and depressive symptoms (*7,8*). Previous research has examined individual performance to explore the factors influencing the effectiveness of core members across diverse organizational contexts, and it has yielded mixed findings. A non-interventional study conducted in Poland and Bhutan identified several determinants impacting the performance of business executives, such as managerial vision, evocativeness, membership, and organizational commitment (*9*). Data from 228 administrators in the Yangtze River Delta region of China found that role stress was significantly correlated with managers' innovative performance, and this effect was more pronounced among female managers (*10*). However, the determinants affecting the individual performance of core members within SOs caring for the elderly have yet to be adequately understood.

Considering the significant role that the individual performance of core members plays in improving the operational efficiency of organizations and enhancing the quality of life for older residents, individual performance needs to be comprehensively assessed. This includes exploring influencing factors and their pathways of action, as well as the robust statistical validation of these relationships.

1.1. Conceptual framework

Initially introduced by Bourdieu (*11*), social capital theory highlights the interrelationship between social networks, resource acquisition, and social status. Coleman (*12*) further developed the concept by defining social capital as a public or collective resource that aids individuals or groups in achieving their objectives. At the micro level, research on social capital primarily examines the relational characteristics of individual actors and the influence of their social status on the social capital they can access. At the macro level, research focuses on the structural characteristics of the social networks in which actors are embedded and how interactions and constraints within these networks affect individuals' capacity to access social resources (*13*).

Social capital theory is widely acknowledged as an appropriate theoretical framework for analyzing work performance and has consequently been utilized in numerous related studies (*14-16*). Prior research has demonstrated that variations in social capital can predict self-reported work performance, work engagement, and mental health status among general practitioners at both the individual and group level (*17*). Taken together, findings from social capital research across diverse fields (*18,19*) have revealed that network stressors, such as inadequate structural dimensions (*e.g.*, sparse networks and singular connections), deficient relational dimensions (*e.g.*, low trust and insufficient reciprocity), and lacking cognitive dimensions (*e.g.*, inconsistent goals and information asymmetry), undermine core members' ability to access essential resources and information. Conversely, robust social networks can augment core members' perceived control and organizational commitment, thereby enhancing their work performance through the mechanisms of sharing knowledge and mutual resource support. The current study examines SOs caring for the elderly as a contextual framework for cultivating social capital, with a particular emphasis on social capital at the micro level. This study aims to analyze the impact of the quality of core members' social networks on their work performance.

1.2. Research hypotheses

As mentioned above, a social network represents a crucial component of social capital at the micro level, embodying the relatively stable relational systems established among individuals within society through interactions such as friendships, academic associations, and business partnerships (*15*). The operational characteristics and environments of SOs caring for the elderly necessitate collaboration with entities such as health departments, hospitals, and community organizations to foster synergistic development. This feature leads to opportunities for employees within the organization to establish external connections and enhance their social networks. Empirical evidence indicates that an employee's social network within an organization has a positive influence on their job performance, as individuals with a robust social network can access and draw on additional resources, thereby enhancing their workplace competitiveness (*6*).

Conversely, inadequate social networks can result in a deficiency of essential resources for individuals and also hinder effective communication and collaboration with team members, ultimately diminishing work performance (*20*). Consequently, the following **Hypothesis 1 (H1)** is proposed: A social network positively predicts individual performance.

The social network is posited as a precursor to social support, as it is through social support that individuals access resources such as spiritual, material, and intellectual assets derived from social relationships. Prior research has demonstrated that the breadth and depth of an individual's social network within an organization, encompassing both the quantity and quality of interpersonal relationships, are positively correlated with the levels of emotional, informational, and instrumental support received. This multifaceted social support serves to mitigate work-related stress, enhance the efficiency of resource acquisition, and augment employee competence, thereby substantially enhancing work performance. Therefore, we propose **Hypothesis 2 (H2)**: Social support mediates the relationship between a social network and individual performance.

As a mechanism of human agency, self-efficacy pertains to an individual's confidence in their ability to engage in a specific behavior or achieve a specific goal within a particular domain (*21*), *i.e.*, "I can do it." According to the halo effect in psychology, such self-efficacy facilitates the garnering of trust from others and substantially improves an individual's persuasiveness (*22*). SOs caring for the elderly, characterized by the diverse needs of their care recipients, necessitate periodic innovation in service models by core members of the organization. Concurrently, the intricate interpersonal interactions among core members, older adults, their families, and caregivers invariably contribute to work-related stress and threaten the core members' confidence in their work. Numerous studies have demonstrated that self-efficacy positively influences job performance (*22, 23*). Individuals with a high level of self-efficacy display an enhanced capacity to swiftly adapt to novel demands and sustain consistent job performance within dynamic work settings, such as those characterized by technological advances or organizational changes. Moreover, specific characteristics linked to self-efficacy in core members, such as the capacity to inspire and mobilize, frequently spread throughout the team *via* the organizational leader's self-assurance and positive disposition. These enhance the overall team morale and predispose core members to adeptly lead their teams toward attaining desired objectives.

Resources, information, and knowledge acquired through a social network enable core members to swiftly access essential information, such as market dynamics and technological trends, thereby facilitating more efficient responses to complex issues (*24*). On the one hand, a strong social network can provide emotional encouragement and material help to core members when they face challenges, thus increasing their confidence in their abilities (*25*). On the other hand, by coming into contact with high performers in a social network, core members can indirectly learn problem-solving methods and attitudes, which enhances their ability to access resources (*26*). In addition, recognition from peers within the social network allows core members to attribute their successes to their competencies, reinforcing their self-efficacy. Social networks contribute to developing core members' confidence in their abilities by providing both resource stability and psychological support, which in turn motivates them to tackle challenges and achieve superior performance levels.

Therefore, we propose **Hypothesis 3 (H3)**: Self-efficacy has a moderating effect between a social network and individual performance; **Hypothesis 4 (H4)**: Self-efficacy has a moderating effect between a social network and social support; **Hypothesis 5 (H5)**: Self-efficacy has a moderating effect between social support and individual performance.

In summary, this study develops a moderating mediator model to examine the individual performance of core members within SOs caring for the elderly. It explores the association between the size of core members' social networks and their individual performance, it examines the mediating influence of social support within this relationship, and it validates the moderating effect of self-efficacy. The hypothesized model is shown in Supplementary Figure S1 (*https://www.biosciencetrends.com/action/getSupplementalData.php?ID=271*).

2. Materials and Methods

2.1. Participants

This study used multi-stage stratified sampling to collect data. Between June and September 2023, core members at SOs caring for the elderly in Shanghai, China, were selected to serve as participants. To ensure the sampling area was representative, Xuhui District, Jing'an District, and Pudong New District were chosen as survey locations based on their geographic positioning and levels of economic development. From each district, a minimum of 20 SOs caring for the elderly were selected according to the development level of SOs within these areas. For each organization, 3 to 5 core members were selected to participate in the survey. The inclusion criteria for participants were: (1) core members such as founders, leaders, legal representatives, and other managers of the organizations and (2) individuals who voluntarily agreed to participate in this study. The exclusion criteria were: (1) individuals who could not provide full responses to the questionnaire and (2) individuals who had been part of the organization for less than one year.

Data were collected by trained and experienced

investigators. Under the guidance of the civil affairs department staff, these investigators visited SOs caring for the elderly to conduct face-to-face interviews with the participants. Once data were collected, the researchers meticulously reviewed and screened the responses to exclude those of substandard quality, specifically: (1) questionnaires completed in less than two minutes, (2) those exhibiting internal logical inconsistencies, and (3) those with incomplete responses. The study surveyed a total of 69 SOs caring for the elderly; as a result, a sample of 213 qualified core members was statistically analyzed.

2.2. Measurement

2.2.1. A social network

The Social Network Scale used in this study is an adaptation of the World Bank's Social Capital Assessment Tool (*27*), which is primarily designed to quantify the number of external social connections of respondents. Specifically, for core members of SOs caring for the elderly, we assessed the number of participants' acquaintances across several domains: civil affairs departments, health commissions, healthcare administrations, neighborhood councils, other government departments, federations of SOs, and other SOs caring for the elderly, encompassing a total of seven categories. For each category, a five-point Likert scale (1-5) was utilized to classify the number of acquaintances of core members (0, 1-5, 6-10, 11-15, and 16 or more), yielding a cumulative score ranging from 7 to 35. A higher score indicates a greater level of social networking. In our study, the Social Network Scale demonstrated a Cronbach's alpha of 0.912, indicating a high level of internal consistency. This scale has undergone extensive validation in prior research conducted across various regions (*6,14,28*).

2.2.2. Social support

The Social Support Scale is a five-item self-report instrument designed to assess the extent of financial, material, emotional, technical, and informational support that individuals receive from friends and colleagues (*27*). Answers are scored using a Likert scale from 1 (strongly disagree) to 5 (strongly agree), and the sum of all item scores constitutes the total score on the Social Support Scale, ranging from 5 to 25 points. Greater social support is represented by a higher score. The scale demonstrated good internal consistency in the current sample, with a Cronbach's alpha of 0.848.

2.2.3. Self-efficacy

The Self-efficacy Scale, devised by Thomas *et al*. (*23*), is widely used to assess perceived personal competence. In the current study, this scale was used to evaluate the self-efficacy of core members at SOs caring for the elderly, focusing on innovation self-efficacy (items 1-3), persuasion self-efficacy (items 4-8), and adaptability self-efficacy (items 9-13). The items were answered by participants using a 5-point Likert scale, where 1 meant strongly disagree and 5 meant strongly agree. The overall self-efficacy score was calculated by summing the scores of all items, with higher scores indicating greater self-efficacy. In this study, the Self-efficacy Scale had a Cronbach's alpha of 0.923.

2.2.4. Individual performance

Based on prior measurement tools for assessing employee performance (*29,30*) and integrating the specific work characteristics of SOs caring for the elderly, this study developed a questionnaire aimed at evaluating the individual performance of core members within these organizations. The questionnaire's development involved multiple rounds of expert consultation to ensure its scientific rigor and practical applicability. The instrument primarily assesses the external influence of core members involved in managing SOs caring for the elderly. It includes items such as: "Have you personally received any awards related to providing care for older adults?" "Has the team you lead received any recognition related to providing care for older adults?" "Have you or your team been featured in the media for the care you provided?" "Are you a member of an association in the area of caring for older adults?" and "Have you participated in drafting or soliciting specifications for providing care for older adults?" Responses are recorded as "No (1 point)" or "Yes (2 points)," and the total score is derived by summing the points across the five items.

2.2.5. Covariates

This study considered various factors that could influence the outcomes, including demographic and occupational variables. Specifically, data were collected on participants' sex (male or female), age group ($\leq$ 40 years, 41-49 years, $\geq$ 50 years), level of education (junior high school or lower, high school, and college or higher), and marital status (married or other). Participants' professional status was classified based on their title, which was categorized as "no" or "yes (junior or above)." Additionally, information was gathered regarding whether participants had received management-related training in the preceding year and the time spent working in the area of providing care for older adults.

2.3. Statistical analysis

Continuous variables were expressed as the mean $\pm$ standard deviation (M $\pm$ SD), while categorical variables were represented by frequency and percentage.

Differences between variables were evaluated using the *t*-test and ANOVA, while Pearson's correlation analysis was used to explore the connections between a social network, social support, self-efficacy, and individual performance. The mediating role of social support in the relationship between a social network and individual performance and the moderating role of self-efficacy were initially assessed using hierarchical stepwise regression. Additionally, data were mean-centered for the calculation of interaction terms. Mediation and moderation models were evaluated using Model 4 and Model 59 from PROCESS version 4.1. The mediation effect was analyzed using the bootstrap method, while the moderation effect was assessed using the simple slope method (*31*).

To evaluate the robustness of the results of linear regression analysis, we performed binary logistic regression analyses to validate the associations among a social network, social support, self-efficacy, and individual performance. Initially, the original continuous independent and dependent variables were transformed into categorical variables. Based on the data distribution, the mean value was utilized to classify the data into "low level (0)" and "high level (1)" categories for a social network, social support, self-efficacy, and individual performance. Additionally, potential confounding effects of covariates were controlled for in the robustness analyses. All statistical tests were performed using SPSS version 23.0, and a P-value<0.05 was deemed statistically significant.

3. Results

3.1. Demographic characteristics

As shown in Table 1, 51 (23.9%) of the core members within the SOs caring for the elderly were male, while 162 (76.1%) were female. Over one-third (35.2%) of the respondents were between 40 and 49 years of age. A substantial proportion of the core members possessed a college degree or higher (81.2%) and were married (86.4%). More than half of the participants held a job title (55.9%) and had undergone management training within the past year (60.6%). In addition, a significant proportion of individuals (57.7%) had been employed in occupations related to caring for older adults for over six years.

Univariate analysis revealed significant differences in social support scores solely related to the age of the respondents. Moreover, the individual performance scores of core members differed significantly based on how long they were engaged in work related to caring for older adults.

3.2. Correlation analysis

Supplementary Table S1 (*https://www.biosciencetrends.com/action/getSupplementalData.php?ID=271*) presents the findings of Pearson's correlation analysis, indicating that a more extensive social network is significantly linked to better scores for social support ($r = 0.497$, $P < 0.001$), individual performance ($r = 0.431$, $P < 0.001$), and self-efficacy ($r = 0.376$, $P < 0.001$) among participants. Moreover, social support positively correlated with individual performance and self-efficacy. Individual performance positively correlated with self-efficacy.

3.3. Mediating role of social support in a social network and individual performance

In this study, a hierarchical stepwise regression analysis was performed on the control variables that differed significantly in the univariate analysis of variance. Findings indicated that core members of SOs caring for the elderly with a more extensive social network were more likely to receive higher levels of social support ($\beta = 0.508$, $P < 0.001$). Moreover, in stratified stepwise regression analysis where individual performance was the explanatory variable, the level of one's social network was found to positively predict individual performance ($\beta = 0.381$, $P < 0.001$), thereby substantiating Hypothesis 1. Additionally, participants who provided care to older adults for a longer period had a higher likelihood of achieving elevated individual performance levels. As a result of incorporating social support into the regression model, the R^2 value went up from 0.251 to 0.277, and the standardized regression coefficient for a social network decreased from 0.381 to 0.288. This suggests that social support mediates the relationship between a social network and individual performance (Table 2A).

The mediating effect was evaluated using the bootstrap method, specifically employing Model 4 in PROCESS version 4.1, with a resampling rate of 5,000 iterations. Results indicated that social networks had a total effect of 0.078 on individual performance, with a 95% confidence interval (CI) between 0.052 and 0.103. The indirect mediating effect *via* social support was calculated to be 0.019, with a 95% CI of 0.006 to 0.033. These findings indicate that social support is a significant mediator in the relationship between the social network of core members of SOs caring for the elderly and individual performance, accounting for 24.44% of the variance in the total effect. Consequently, Hypothesis 2 was confirmed, as detailed in Table 3.

This study performed a robustness analysis using binary logistic regression, as shown in Supplementary Table S2 (*https://www.biosciencetrends.com/action/getSupplementalData.php?ID=271*), which presents results comparable to those obtained from hierarchical stepwise regression. In the fully adjusted model, respondents with a more extensive social network (OR = 2.206; 95% CI: 0.999-4.872), social support (OR = 3.076; 95% CI: 1.439-6.773), and self-efficacy (OR = 2.515; 95% CI: 0.705-3.257) were more likely to exhibit high

Table 1. Demographic characteristics and scores ($N = 213$)

Variables	N (%)	Social network		Social support		Individual performance		Self-efficacy	
		M ± SD	*t/F*	M ± SD	*t/F*	M ± SD	*t/F*	M ± SD	*t/F*
Sex									
Male	51 (23.9)	16.02 ± 7.77	1.535	21.47 ± 3.35	-0.125	6.76 ± 1.39	0.225	58.57 ± 6.16	2.738*
Female	162 (76.1)	14.19 ± 6.17		21.54 ± 3.29		6.72 ± 1.34		55.40 ± 7.52	
Age (years)									
≤ 39	69 (32.4)	13.65 ± 5.71	1.151	22.65 ± 2.68	7.041*	6.43 ± 1.21	2.449	55.93 ± 8.01	0.343
40-49	75 (35.2)	15.24 ± 7.62		21.28 ± 3.27		6.87 ± 1.34		55.81 ± 7.30	
50-59	69 (32.4)	14.94 ± 6.26		20.65 ± 3.60		6.87 ± 1.45		56.75 ± 6.70	
Level of education									
Junior high school or lower	14 (6.6)	10.71 ± 3.56	3.157*	21.86 ± 2.93	1.454	6.64 ± 1.22	0.324	52.64 ± 7.69	1.835
High school	26 (12.2)	13.73 ± 6.50		20.50 ± 4.08		6.92 ± 1.60		57.00 ± 8.04	
College or higher	173 (81.2)	15.08 ± 6.73		21.64 ± 3.18		6.71 ± 1.32		56.31 ± 7.15	
Professional title									
Yes	119 (55.9)	15.34 ± 7.04	1.176	21.61 ± 3.24	0.459	6.85 ± 1.33	1.481	56.76 ± 6.71	1.350
No	94 (44.1)	13.73 ± 5.95		21.40 ± 3.37		6.57 ± 1.36		55.39 ± 8.01	
Marital status									
Married	184 (86.4)	15.03 ± 6.66	2.264*	21.46 ± 3.37	-0.659	6.81 ± 1.34	2.263*	56.27 ± 7.33	0.558
Other	29 (13.6)	12.07 ± 5.81		21.90 ± 2.83		6.21 ± 1.26		55.45 ± 7.43	
Management training									
Yes	129 (60.6)	16.32 ± 6.96	5.180**	21.60 ± 3.51	0.415	6.99 ± 1.38	3.656**	57.43 ± 6.81	3.206*
No	84 (39.4)	12.03 ± 5.08		21.40 ± 2.95		6.32 ± 1.19		54.20 ± 7.70	
Time spent working (years)									
≤ 5	90 (42.3)	13.96 ± 6.37	0.824	21.77 ± 3.37	0.437	6.37 ± 1.24	8.624**	56.18 ± 7.34	0.608
6-10	64 (30.0)	15.02 ± 6.25		21.38 ± 2.97		6.73 ± 1.34		55.43 ± 7.48	
≥ 11	59 (27.7)	15.24 ± 7.36		21.31 ± 3.54		7.27 ± 1.35		56.90 ± 7.19	

*$P < 0.05$, **$P < 0.001$.

Table 2. Results of hierarchical stepwise regression

A	Social support				Individual performance		
	Model 1	Model 2			Model 1	Model 2	Model 3
Age	-0.099	-0.139**		Marital status	-0.077	-0.034	-0.022
Social network		0.508**		Management training	-0.198*	-0.083	-0.085
				Time spent working	0.224*	0.221**	0.226**
				Social network		0.381**	0.288**
				Social support			0.189*
F	2.103	38.130**		*F*	9.659**	17.390**	15.897**
R^2	0.010	0.266		R^2	0.122	0.251	0.277
ΔR^2	0.005	0.259		ΔR^2	0.109	0.236	0.260
B	Social support				Individual performance		
	Model 1	Model 2	Model 3		Model 1	Model 2	Model 3
Age	-0.099	-0.143*	-0.143**	Marital status	-0.077	-0.025	-0.020
Social network		0.420**	0.436**	Management training	-0.198*	-0.075	-0.059
Self-efficacy		0.236**	0.227**	Time spent working	0.224*	0.226**	0.229*
SN*SE			-0.051	Social network		0.270**	0.274**
				Social support		0.166*	0.169**
				Self-efficacy		0.187*	0.184*
				SN*SE			-0.133*
				SS*SE			-0.034
F	2.103	31.910**	24.078**		9.659**	13.583**	10.816**
R^2	0.010	0.314	0.316		0.122	0.283	0.298
ΔR^2	0.005	0.304	0.303		0.109	0.263	0.270

*P < 0.05, **P < 0.001, A: Results of mediation analysis by hierarchical stepwise regression; B: Results of moderation analysis by hierarchical stepwise regression. SN: social network, SE: self-efficacy, SS: social support.

levels of individual performance. Moreover, respondents who were employed in providing care for older adults for 11 years or longer had higher levels of individual performance than core members employed in providing care for older adults for five years or less.

3.4. Moderating effects of self-efficacy on a social network and individual performance

Table 2B summarizes the results from the analysis of moderating effects. The interaction term between a social network and self-efficacy did not significantly predict social support (β = -0.051, P = 0.399). Similarly, the interaction term between social support and self-efficacy did not significantly predict individual performance (β = -0.034, P = 0.689), leading to the rejection of Hypotheses 4 and 5. Conversely, the interaction term between a social network and self-efficacy emerged as a significant negative predictor of individual performance (β = -0.133, P = 0.023), indicating that self-efficacy is a negative moderating factor between a social network and individual performance.

Building on the aforementioned results, the moderating effect was further examined in Model 59 in PROCESS version 4.1 using the bootstrap method. As shown in Supplementary Table S3 (*https://www.biosciencetrends.com/action/getSupplementalData.php?ID=271*), the 95% CIs for the moderating effects across all three levels of the pathway linking a social network to individual performance do not include zero.

Table 3. Results of mediating effect analysis with the Bootstrap method

	Effect size	Bootstrap SE	95% CI	*P* value
Total effect	0.078	0.013	0.052, 0.103	< 0.001
Direct effect	0.059	0.014	0.030, 0.087	< 0.001
Indirect effect	0.019	0.007	0.006, 0.033	< 0.001

This indicates that self-efficacy serves as a moderating factor between a social network and individual performance. The simple slope analysis depicted in Figure 1 reveals that core members with a higher level of self-efficacy who have a more extensive social network will experience a decrease in their individual performance relative to participants with a lower level of self-efficacy, aligning with Hypothesis 3. The final moderated mediation model is shown in Figure 2. The discriminant validity of the variables was further tested by performing confirmatory factor analyses (CFAs) on the observed data. The measurement model fit the data acceptably (χ^2/df = 2.71, RMSEA = 0.078, SRMR = 0.074, CFI = 0.923, TLI = 0.916).

4. Discussion

Despite the mounting empirical evidence supporting the impact of a social network on individual performance within organizations, the mediating and moderating pathways are still not yet adequately understood. In this study, we developed a moderating mediation model

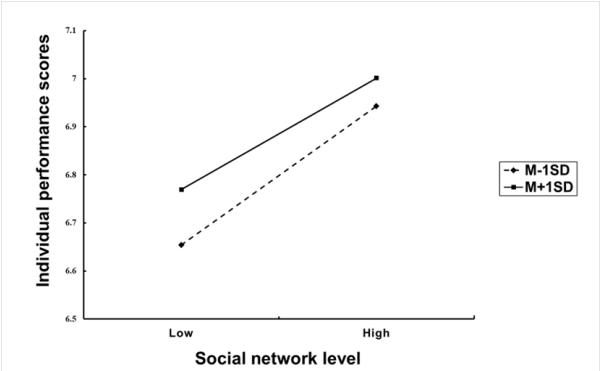

Figure 1. The moderating role of self-efficacy between a social network and individual performance. This figure illustrates how self-efficacy moderates the relationship between a social network (divided into low and high levels) and individual performance. The solid line (M+1SD) represents the scenario where self-efficacy is one standard deviation above the mean, and the dotted line (M-1SD) represents self-efficacy one standard deviation below the mean.

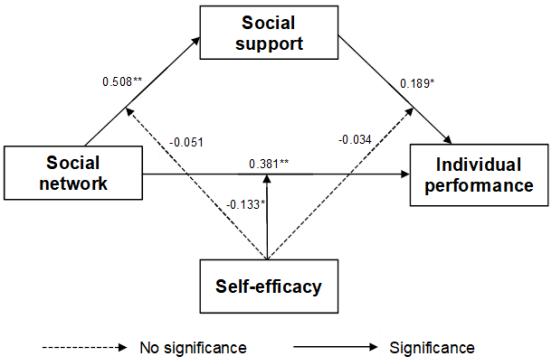

Figure 2. The moderated mediation model. A social network affects individual performance directly (path coefficient = 0.381) and indirectly *via* social support (social network → social support: 0.508; social support → individual performance: 0.189). Self-efficacy moderates paths (social network → individual performance: -0.133). Dotted lines indicate non-significant moderation effects, **P* < 0.05, ***P* < 0.001.

focusing on the performance of core members of SOs caring for the elderly. Findings indicated that social networks have a significant positive relationship with the individual performance of core members of SOs caring for the elderly, with social support serving as a partial mediator in this relationship. Moreover, self-efficacy moderates the relationship between a social network and individual performance. Specifically, higher levels of self-efficacy among core members attenuate the positive effect of a social network on individual performance.

4.1. Differences in individual performance

This study assessed the levels of individual performance of these core members by evaluating external factors influencing those involved in the management of caring for older adults. The average score for respondents' individual performance was 6.72 ± 1.35, indicating a low to medium level of performance. A prior study found that the leadership performance of managers in US nursing homes, a key metric for job performance, had a mean score of 3.62 on a 5-point scale, with high-performing managers associated with significantly lower employee turnover rates and partially better nursing quality outcomes (*32*). Existing studies have predominantly focused on employee performance and factors influencing it in medical facilities, educational settings, and companies (*33-37*). Performance assessment standards for core members of SOs caring for the elderly in China are typically established by the organizations or their respective parent departments (*6*). These standards lack uniformity across different organizations, and performance outcomes need to be more closely integrated with the salaries and positions of core members. The findings of this study offer additional empirical evidence regarding the levels of job performance within this demographic.

In univariate analysis, married participants had higher individual performance scores. This finding aligns with previous research, such as a cross-sectional study conducted in Anhui Province, China, which revealed that married core members at nursing facilities were likelier to receive awards or recognition for their work (*6*). From a mechanistic perspective, emotional support from spouses or families of married individuals contributes to sustained work engagement and enhanced performance levels. Moreover, core members with prior managerial training also had higher individual performance scores. The knowledge acquired during training, encompassing organizational strategic planning, human resource management, and financial management, proved advantageous in enabling core members to implement standardized processes and enhance work efficiency.

Moreover, the evidence indicates that experience in providing care for older adults positively influences the individual performance of core members, as demonstrated in multiple rounds of analysis. A previous meta-analysis corroborates these findings, revealing that triage by a senior physician in hospitals enhances hospital performance metrics and patient satisfaction (*38*). A study involving 112 non-profit providers of care for the elderly in Japan found that managers with over a decade of management experience were more inclined to implement stringent budget control strategies to enhance their organizations' financial outcomes (β=0.27, P<0.01) (*39*). Within SOs caring for the elderly, core members with extensive experience can attract social resources to the organization, facilitating stable partnerships with volunteer organizations and hospitals (*e.g.*, regular volunteer activities) and broadening the scope of services offered (*40,41*).

4.2. Mediating effects of social support

This study discovered that the size of a social network among core members of SOs caring for the elderly positively predicts their individual performance. Although previous research has focused on different populations, it has extensively documented the influence of a social network on the job performance of organizational core members. Data collected from a survey of 340 female leaders employed in a multinational organization highlighted that managerial performance is affected not only by leaders' personal traits and leadership styles but also by the configuration of their social network (*42*). Pilar *et al*. (*43*) performed a social network analysis and found that extensive external connections significantly enhanced physicians' performance at both the individual and team level. This improvement was attributed to seeking advice through social networks outside the workplace. Focusing on charity shop managers in the UK, a comprehensive study revealed that interacting with colleagues and volunteers can alleviate managers' dissatisfaction with their status and have a positive effect on job satisfaction and performance (*44*). Similarly, a study conducted in China indicated that core members of an organization interact with external entities through the sharing of information, collaboration, and decision-making, highlighting the critical role of building a social network in enhancing performance (*45*). Establishing connections with government departments, medical facilities, and other SOs caring for the elderly is essential for the effective operation of SOs caring for the elderly. Suppose that core members create a diverse social network both within and outside the organization, such as strong ties with medical teams, family members, and industry organizations. In that case, there will be significant improvements in performance metrics, including service quality, operational cost control, and employee stability (*28,46*).

Social support serves as a mediating variable in the relationship between a social network and individual performance. Within SOs caring for the elderly, care recipients range widely in age and have varying levels of functioning, resulting in varied care needs and differing levels of organizational competence (*16,47*). The managerial roles of core members are marked by high stress and emotional exhaustion, necessitating emotional, instrumental, and cognitive support through a social network to mitigate burnout and enhance managerial resilience. In the current study, the measurement tool for social support incorporates multiple sources, including financial, material, emotional, technological, and informational support. Specifically, an extensive social network offers core members opportunities for exchanges with peers (*e.g.*, industry seminars), professional guidance from superiors (*e.g.*, training on policy interpretation), and the building of trust within the team. These forms of social support can be effectively translated into enhanced work effectiveness (*14*). For instance, when core members encounter conflicts with the families of care recipients, a legal advisor's social support can assist the member in reaching a resolution (*48*). In situations involving issues with staff motivation, exchanging experiences among peers can lead to innovative management strategies for core members.

4.3. Moderating effect of self-efficacy

The current findings corroborated the moderating role of self-efficacy in the relationship between a social network and individual performance, indicating that elevated levels of self-efficacy attenuate the positive impact of a social network on individual performance. Contrary to our findings, a study in southern China found that managers with higher self-efficacy experienced a stronger positive impact on performance from aligning their work passions than those with lower self-efficacy (*49*). Similarly, findings from South Korea identified self-efficacy as a significant predictor of nursing performance, accounting for 21.9% of the variance (*50*). Prior research has demonstrated that some occupational aspects, including job satisfaction, job knowledge, and personality traits, enhance performance by augmenting self-efficacy (*51-53*). This variance can be attributed to two primary factors. On the one hand, within the framework of social cognitive theory, self-efficacy reflects a person's belief in their own capabilities. Individuals with high self-efficacy are inclined to depend on internal resources, such as personal experience and decision-making skills, rather than external social network resources for problem-solving. For example, core members with high self-efficacy may rely solely on personal experience when devising management programs, potentially failing to engage with healthcare facilities or other SOs caring for the elderly (*54*). In resolving employee conflicts, an over-reliance on personal authority, rather than employing mediation strategies through peer networks, may intensify team conflicts (*55*).

On the other hand, when individuals believe their abilities are adequate to address challenges, the perceived value of a social network as an "alternative resource" is diminished. In managing SOs caring for the elderly, core members with high self-efficacy may independently devise reforms to enhance care processes. However, they often face obstacles in implementation due to insufficient feedback from caregivers (*56*). Additionally, core members who excessively depend on their personal experience may overlook innovative case studies from industry networks, potentially resulting in a rigid management model (*57*). An important point to emphasize is that this negative regulation does not undermine the positive role of self-efficacy but rather highlights its dynamic interaction with social networks. In future practice, SOs caring for the elderly need to bolster core members' self-efficacy, enhance their understanding of the strategic importance of social network resources,

and develop incentive mechanisms that encourage core members to convert their self-confidence into a catalyst for activating network resources.

4.4. Practical contributions

In addition to the aforementioned theoretical contributions, this study offers practical implications for improving the individual performance of core members of SOs caring for the elderly and for enhancing the quality of care. Firstly, multi-level social networking channels should be established and maintained. SOs caring for the elderly should regularly facilitate cross-departmental and cross-level communication activities, such as "management salons" to dismantle information silos within the organization. Concurrently, a dedicated online collaboration and knowledge-sharing platform should be created, enabling core members to initiate discussions, disseminate information, and seek assistance at any time. Secondly, the organizational provision of social support needs to be enhanced. SOs caring for the elderly should develop a comprehensive, multi-dimensional support framework. This framework should include "senior mentors" who possess an in-depth understanding of the organization's operations, as well as "cross-border consultants" sourced from external entities. Beyond offering guidance on professional skills, these mentors and consultants should also provide emotional and cognitive support. Finally, differentiated attention is paid to the boundary effects of self-efficacy. On the one hand, SOs caring for the elderly should facilitate the empowerment of core members with low self-efficacy by encouraging them to actively seek support and draw on network resources. This can be achieved through targeted programs such as "Social Capital Workshops" and "Interpersonal Communication Training," aimed at optimizing their performance. On the other hand, core members with high self-efficacy should be given challenging tasks and opportunities for change. Organizations can assign them more independent and complex projects, such as cross-departmental reforms and process optimizations, to stimulate their intrinsic motivation.

4.5. Limitations and future prospects

This study had several limitations. One such limitation was that the cross-sectional design used in this study precluded our ability to explicitly investigate the causal mechanisms linking a social network and individual performance. Future studies should consider utilizing a longitudinal design to rigorously test the proposed moderated mediation model. Another limitation is that this study posited and examined the moderating role of self-efficacy in the relationship between a social network and individual performance. However, the literature suggests that some career-related aspects, such as job satisfaction, job knowledge, and personality traits, can augment performance levels by enhancing self-efficacy. Future research should explore the mediating role of self-efficacy in the association between individual performance by core members and its impacts across other domains. The data analyzed in this study were obtained from SOs caring for the elderly in Shanghai. Future studies should compare situations across regions and cities with different levels of economic development to examine potential differences in the mediating and moderating effects identified in this study across regional strata.

In addition, this study posits that self-efficacy will attenuate the positive impact of social networks on the individual performance of core members of SOs caring for the elderly. However, a point that needs to be acknowledged is self-efficacy's role in facilitating job performance as documented in the literature. Consequently, the generalizability and replicability of these findings warrant further investigation using samples from diverse cultural contexts.

5. Conclusion

This study has elucidated how social networks influence individual performance, emphasizing the mediating role of social support, particularly among core members of SOs caring for the elderly. Notably, heightened self-efficacy among these core members mitigates the positive impact of a social network on individual performance. Theoretically, this research adds to the literature by substantiating the mediating effect of social support and the moderating effect of self-efficacy, thereby enhancing our understanding of the relationship between the social networks and individual performance of core members of SOs caring for the elderly. Practically, these findings offer crucial insights for devising and implementing comprehensive intervention strategies aimed at enhancing the quality of care and the performance of core membership teams within these organizations.

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