

Demographic Variations in Leadership Behavior: Analyzing Gender, Workplace Experience, and Regional Differences in China's Service Industry

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ABSTRACT

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As China accelerates its macroeconomic transformation toward a high-value, knowledge-intensive service economy, cultivating adaptive leadership capabilities among workforce practitioners has become an institutional priority. While the Educational Business Curriculum (EBC) provides foundational cognitive and technical competencies, the manifestation of these competencies into observable workplace leadership behavior is frequently moderated by key demographic factors. Grounded in the Transformation-Knowledge, Skills, Personality Quality-Leadership Behaviour (T-KSP-L) Conceptual Framework, this quantitative study investigates differences in leadership behaviour among service sector professionals across three critical demographic dimensions: gender, accumulated workplace experience, and provincial location (Beijing, Zhejiang, and Guangdong). Utilizing independent-samples t-tests and one-way Analysis of Variance (ANOVA), three primary null hypotheses were tested. The findings revealed a statistically significant difference in leadership behavior based on gender ($t(386) = 2.466, p = 0.001$), with male practitioners recording higher mean scores ($M = 4.1132, SD = 0.8025$) than female practitioners ($M = 3.8781, SD = 1.0739$). This outcome is analyzed through the lens of Social Role Theory, organizational tracking, and unequal access to executive mentorship (Cooke, 2013; Eagly, 1987; Zhou, 2025). Workplace experience demonstrated a highly significant effect ($F(4, 383) = 10.037, p = 0.001$); Scheffé post-hoc analyses indicated that senior practitioners (7-8 years, $M = 4.206$, and ≥ 9 years of experience, $M = 4.194$) exhibited substantially higher leadership behavior scores compared to novice cohorts (1-2 years, $M = 3.475$, and 5-6 years, $M = 3.429$), strongly supporting Experiential Learning Theory (Day, 2001; Kolb, 2015). Conversely, provincial location yielded no statistically significant difference ($F(2, 385) = 0.593, p = .553$), suggesting an

increasing homogenization of corporate governance standards, digital management platforms, and leadership expectations across China's primary economic hubs (Bing, 2023; Van Laar et al., 2020). The study integrates qualitative focus group insights to contextualize these statistical patterns, offering actionable implications for equitable talent pipelines, tenure-tiered leadership interventions, and standardized business curriculum design.

1. Introduction

Over the past four decades, the global economic architecture has experienced a fundamental structural realignment, shifting away from resource-intensive manufacturing toward high-value, technology-enabled, and service-driven economic models (National Bureau of Statistics of China, 2025). Within this global transition, the People's Republic of China presents a unique macroeconomic case study. Having successfully served as the "world's factory" during its initial phase of economic opening, China is actively executing a strategic transition toward a modern service economy to sustain GDP growth, boost domestic consumption, and avoid the middle-income trap (National Bureau of Statistics of China, 2023, 2025; Yan, 2020). This structural evolution has transformed the national labor market. Contemporary service environments rely intrinsically on complex interpersonal interactions, digital system coordination, and adaptive decision-making, placing unprecedented demands on workforce practitioners to demonstrate transformational, ethical, and execution-oriented leadership behaviors (Moeller, 2010; Yang, 2022).

To build this necessary human capital, higher education institutions and professional vocational systems across China have substantially expanded Educational Business Curriculum (EBC) and national "dual-creation" (innovation and entrepreneurship) programs (MOE, 2018; Wang & Mangmeechai, 2022). However, empirical literature consistently highlights a persistent "know-do" gap between educational inputs and actual workplace performance. Service industry employers frequently report that while recent university graduates possess foundational business knowledge, they often struggle to translate this conceptual understanding into practical execution, strategic team management, and adaptive leadership in authentic corporate environments (Foster & Stapleton, 2012; Widiastuti et al., 2023).

Importantly, the conversion of educational business skills into measurable workplace performance is significantly influenced by demographic factors. Leadership behavior is really shaped by individual backgrounds, organizational roles, and cultural expectations, as Eagly and Chin (2010) pointed out. Even though China has made quick socio-economic progress, women still face challenges in advancing their careers, finding mentors, and reaching executive levels (Bai et al., 2022; Cooke, 2013; Zhou, 2025). Similarly, people at different points in their careers have different abilities to connect what they learn in formal training with real-world work, which depends a lot on their experience (Billett, 2024; DeRue & Wellman, 2009; Ng & Feldman, 2010). On top of that, China's huge economic landscape includes places with very different development styles some are state-run political centers, others are private e-commerce hotspots, and some are major export zones, bringing up questions about how leadership varies across regions (Jiang et al., 2023; Tong & Tang, 2025).

While much of the existing literature evaluates business education at the institutional or curricular level, there remains a lack of empirical research exploring how key demographic factors influence leadership outcomes within China's service industry (Zhang, 2025). To fill this gap, this study examines how self-reported leadership behaviors vary across three significant demographic variables: gender, workplace experience, and regional location (specifically Beijing, Zhejiang, and Guangdong). Using data from 388 active service sector professionals and insights gathered from focus groups, the research aims to provide practical, evidence-based recommendations for curriculum developers, HR professionals, and policymakers committed to promote inclusive and effective leadership development pathways.

2. Literature Review

The theoretical foundation for evaluating demographic variations in leadership behavior integrates Social Role Theory (Eagly, 1987), Experiential Learning Theory (Kolb, 2015), Leadership Development Theory (Day, 2001; Day et al., 2014), and Contingency Theories of Leadership (Northouse, 2022; Yukl, 2013).

2.1. Gender and Leadership Behavior

The relationship between gender and leadership behaviors continues to be a significant focus within organizational psychology and management studies (Abdallah, 2024; Eagly & Chin, 2010). Alice Eagly's Social Role Theory (Eagly, 1987) suggests that societal expectations regarding gender roles influence individual development and shape opportunities within organizations. Traditionally, society often associated leadership with traits such as confidence, competitiveness, and a willingness to take risks-qualities, that are often associated with men (Eagly & Karau, 2002, 2024). Conversely, women have historically been encouraged to emphasize qualities such as empathy, promoting harmony, collaboration, and supporting their teams (Eagly & Karau, 2002).

In China's contemporary labor market, the intersection of rapid economic development and traditional cultural expectations creates a complex environment for female professionals (Cooke, 2013; Wu et al., 2025). Although women have achieved nearly equal enrollment in higher education, structural barriers and subtle forms of gender discrimination continue to influence their experiences within corporate environments (Bai et al., 2022; Wu et al., 2025; Zhou, 2025). Female practitioners often encounter unequal opportunities to engage in informal networking with executives, secure sponsorship from leaders, and participate in high-profile strategic projects (Cooke, 2013). Since leadership behaviors are developed and recognized through repeated exposure to decision-making roles, these structural inequalities can directly impact women's self-confidence in leadership and their behavioral expression of leadership qualities (Eagly et al., 2003; Hallinger et al., 2016; Kumasey et al., 2014). Importantly, comprehensive meta-analyses reveal that women in executive roles tend to excel in transformational, participative, and ethical leadership styles (Brown et al., 2005; Eagly et al., 2003). Therefore, examining gender differences in self-reported leadership behaviors offers valuable insights into whether educational curricula and corporate environments provide equitable opportunities for leadership development.

2.2. Workplace Experience

Leadership is widely recognized not as an unchangeable personality trait, but as a set of skills and behaviors that matures over time through continuous application, problem-solving, and reflection (Boyatzis, 1982; Day, 2001; Mumford et al., 2000). This developmental process aligns directly with David Kolb's Experiential Learning Theory (Kolb, 2015), which defines learning as a continuous four-stage cycle involving concrete experience, reflective observation, abstract conceptualization, and active experimentation.

In service-industry environments where tasks vary and customers are actively involved, having formal business education provides a clear knowledge base. (Business Fundamentals, Management Principles) (Anderson & Krathwohl, 2001; Drucker, 2007). However, developing intuitive, tacit professional judgment from explicit knowledge takes extensive workplace experience (Billett, 2024; DeRue & Wellman, 2009; Ford & Teachout, 1995). As professionals gain experience, they encounter a variety of operational challenges, navigate organizational politics, resolve interpersonal conflicts within teams, and observe the long-term outcomes of strategic choices (Dokko et al., 2008; Shahzad et al., 2024). This accumulation of experiential knowledge allows seasoned professionals to demonstrate superior execution capabilities, emotional self-regulation, and strategic leadership compared to less experienced colleagues (Ng & Feldman, 2010).

2.3. Provincial Location and Regional Economic Ecosystems

China's vast economic geography features marked regional diversity in industrial structure, commercial maturity, digital infrastructure, and institutional governance (Jiang et al., 2023; Tong & Tang, 2025; Wang & Xia, 2025). To capture this geographic diversity, this study examines service sector practitioners across three major economic engines:

- i. **Beijing:** As the political and cultural hub of China, Beijing is characterized by a significant concentration of headquarters for state-owned enterprises (SOEs), government ministries, technology unicorns, and knowledge-intensive professional services firms (The State Council of the PRC, 2024). The operational environment in the city emphasizes strategic policy alignment, corporate governance, and a clearly defined organizational hierarchy.
- ii. **Zhejiang:** Zhejiang represents the vanguard of China's private sector, notable for its dynamic SMEs, digital platforms like Hangzhou's e-commerce centers, and grassroots entrepreneurial efforts (National Bureau of Statistics of China, 2023). Its management approaches focus on agility, digital integration, and responsiveness to market changes.
- iii. **Guangdong:** As the primary export and cross-border trade hub within the Guangdong-Hong Kong-Macao Greater Bay Area, Guangdong boasts well-established industrial supply chains, a significant presence of foreign-invested enterprises, and extensive international commercial networks (Shenzhen Government Online, 2024). Its management practices exemplify global integration and support high-volume commercial operations.

According to Contingency Theories of Leadership, effective leadership practices vary depending on environmental and organizational conditions (Northouse, 2022; Yukl,

2013). Recent economic studies suggest that rapid national digitization, the adoption of standardized corporate software such as ERP systems, and standardized educational policies could be leading to a widespread convergence of management practices across major economic centers. (Bing, 2023). Determining whether leadership behavior differs across these three distinct provinces is crucial for assessing whether business education and management training require localized customization or standardized national delivery.

2.4. Research Hypotheses

To empirically evaluate these demographic dynamics, this study tests three core null hypotheses:

Hypothesis 1: There is no significant difference in Leadership Behavior based on gender among service industry practitioners.

Hypothesis 2: There is no significant difference in Leadership Behavior based on working experience levels among service industry practitioners.

Hypothesis 3: There is no significant difference in Leadership Behavior across provincial locations (Beijing, Zhejiang, Guangdong) among service industry practitioners.

3. Research Methods

3.1. Research Design

This study utilized a mixed-method design involving a quantitative survey supported by qualitative focus group discussions (Creswell & Creswell, 2018; Creswell & Plano Clark, 2018). A comparative approach is suitable for studying differences in a continuous dependent variable (Leadership Behavior) across naturally formed groups based on categories like gender, work experience, and location, where experimental manipulation is neither possible nor ethical. (Ardiyanto et al., 2023).

3.2. Target Population, Sampling and Sample Size

The target population comprised active practitioners employed across seven core service sub-sectors in China: warehousing/logistics, information services, securities/investment, professional services (legal/accounting/consulting), waste management, healthcare/social assistance, and arts/entertainment (National Bureau of Statistics of China, 2023). Participants were required to have completed higher-education business programs or corporate management training.

Sample size was determined using the Krejcie and Morgan (1970) sampling formula for large populations ($N > 10,000,000$). Given a combined business entity population of 10,576,756 across Beijing (24.20%), Zhejiang (40.90%), and Guangdong (34.90%), the statistical formula established a minimum sample requirement of $S = 384$ at a 95% confidence level ($d = 0.05$). The questionnaires were randomly distributed to different groups, and 388 responses were collected, fully completed and usable. Table 1 displayed the population and sample distribution across the selected provinces.

Table 1: Population and Sample Distribution Across Selected Provinces

Region / Province	Active Business Entities	Population %	Completed Responses (N=388)
Beijing	2,556,400	24.20%	142 (36.59%)
Zhejiang	4,325,956	40.90%	113 (29.13%)
Guangdong	3,694,400	34.90%	133 (34.28%)
Total	10,576,756	100.00%	388 (100.00%)

3.3. Respondent Demographic Profile

Table 2 presents the final sample (N = 388), which showed a balanced demographic distribution across organizational levels, qualifications, tenure, and gender. The gender distribution shows that 59.5% of respondents are male, while 40.5% are female. In terms of educational background, 39.0% hold postgraduate or professional qualifications, 37.4% have a bachelor's degree, and 23.6% have completed high school or possess diploma credentials.

In organizational roles, shareholders make up the largest group at 24.5%, followed by entrepreneurs at 23.2%, top management at 16.8%, ordinary staff at 15.2%, middle management at 13.9%, and supervisors at 9.4%. Finally, the respondents' working experience varies, with 20.36% having 1-2 years, 23.45% with 3-4 years, 17.78% with 5-6 years, 16.20% with 7-8 years, and 22.16% with nine or more years of experience.

Table 2: Demographic distribution of the respondents (N=388)

Category	Details	Number (Total N=388)	Percentage (%)
Gender	Male	231	59.5
	Female	157	40.5
Education Level	Postgraduate/Professional Qualifications	151	39.0
	Bachelor's degree	145	37.4
	High School / Diploma	92	23.6
Organizational Roles	Shareholders	95	24.5
	Entrepreneurs	90	23.2
	Top Management	65	16.8
	Ordinary Staff	59	15.2
	Middle Management	54	13.9
	Supervisors	25	9.4
Working Experience	1-2 Years	79	20.4
	3-4 Years	91	23.4
	5-6 Years	69	17.8
	7-8 Years	63	16.2
	≥9 years	86	22.2

3.4. Instrumentation and Data Cleaning

Leadership Behavior was measured using the operationalized subscale from the T-KSP-L research instrument. Responses were gathered on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) (Jebb et al., 2021). The subscale demonstrated high psychometric reliability, with a Cronbach's alpha of $\alpha = 0.993$ and corrected item-total correlations between 0.696 and 0.836 during pilot and formal survey testing.

Data were entered into IBM SPSS Version 29. Normality testing was conducted using the Shapiro-Wilk test ($p = 0.001$), accompanied by evaluations of skewness (-1.260) and kurtosis (1.691). Following guidelines by Hair et al. (2022) and Pallant (2020), skewness values within 2.0 and kurtosis values within ± 3.0 confirm that the distribution is sufficiently normal for parametric inferential testing (t-tests and ANOVA).

3.5. Data Analysis Procedures

To test H01, an Independent-Samples t-test was conducted to compare mean Leadership Behavior scores between male and female practitioners (Ardiyanto et al., 2023). To test H02 and H03, one-way Analyses of Variance (ANOVA) were performed across the five working experience categories and three provincial locations, respectively (Ahmed & Hamarai, 2022). For statistically significant ANOVA outcomes, Scheffé post-hoc tests were conducted to identify specific group mean differences. All tests were evaluated against a significance threshold of $p = 0.05$.

4. Results

4.1 Comparative Analysis of Leadership Behavior Based on Gender (Hypothesis 1)

The first hypothesis stated that there is no significant difference in Leadership Behavior based on gender among service industry practitioners. An independent-samples t-test was performed to evaluate mean score differences between male and female respondents. Table 3 displays the statistical output.

Table 3: Independent-Samples t-Test of Leadership Behavior Based on Gender

Gender	N	Mean (M)	Std. Deviation (SD)	t-value	Sig. (p)
Male	231	4.1132	0.8025	2.466	.001*
Female	157	3.8781	1.0739	-	-

*Note: $p < 0.05$. Mean difference = 0.2351; $df = 386$.

The statistical analysis revealed that male practitioners recorded a higher mean score for Leadership Behavior ($M = 4.1132$, $SD = 0.8025$) than female practitioners ($M = 3.8781$, $SD = 1.0739$). The mean difference of 0.2351 was statistically significant, $t(386) = 2.466$, $p = .001$. Because the p-value was less than 0.05, H_{01} was rejected. This confirms that gender remains a statistically significant demographic factor associated with variations in self-reported leadership behavior among service sector professionals in the sampled provinces.

4.2 Inferential Analysis of Leadership Behavior Based on Working Experience (Hypothesis 2)

The second hypothesis stated that there is no significant difference in Leadership Behavior based on working experience levels among service industry practitioners. A one-way ANOVA was executed across five working experience categories. Table 4 summarizes the ANOVA results.

Table 4: One-Way ANOVA of Leadership Behavior Across Working Experience

Source of Variation	Sum of Squares	df	Mean Square	F-value	Sig. (p)
Between Groups	31.615	4	7.904	10.037	0.001*
Within Groups	301.585	383	0.787	-	-
Total	333.200	387	-	-	-

*Note: $p < 0.05$.

The one-way ANOVA demonstrated a statistically significant difference in Leadership Behavior across working experience groups, $F(4, 383) = 10.037$, $p = 0.001$. Consequently, H_{02} was rejected. To identify specific group mean differences, a Scheffé post-hoc comparison test was conducted. Table 5 presents the post-hoc matrix.

Table 5: Scheffé Post-Hoc Matrix for Mean Leadership Behavior Across Working Experience

Tenure Category	1-2 Years (M=3.475)	3-4 Years (M=3.800)	5-6 Years (M=3.429)	7-8 Years (M=4.206)	≥9 Years (M=4.194)
1-2 Years	-	NS	NS	Sig. (*)	Sig. (*)
3-4 Years	NS	-	NS	NS	NS
5-6 Years	NS	NS	-	NS	Sig. (*)
7-8 Years	Sig. (*)	NS	NS	-	NS
≥9 Years	Sig. (*)	NS	Sig. (*)	NS	-

*Note: $p < 0.05$ denotes statistically significant mean differences via Scheffé post-hoc test. NS = Not Significant.

The Scheffé post-hoc comparisons revealed that practitioners with 7-8 years of experience ($M = 4.206$, $SD = 0.983$) and those with 9 years or more of experience ($M = 4.194$, $SD = 0.983$) recorded significantly higher Leadership Behavior scores compared to novice practitioners with 1-2 years of experience ($M = 3.475$, $SD = 0.934$). Additionally, practitioners with 9 years or more of experience demonstrated significantly higher leadership behavior scores compared to mid-career practitioners with 5-6 years of experience ($M = 3.429$, $SD = 0.789$). These results indicate that leadership competence increases significantly as practitioners gain substantial workplace experience.

4.3 Analysis of Leadership Behavior Across Provincial Locations (Hypothesis 3)

The third hypothesis stated that there is no significant difference in Leadership Behavior across provincial locations (Beijing, Zhejiang, Guangdong) among service industry practitioners. A one-way ANOVA was performed to compare mean leadership behavior scores across the three geographic regions. Table 5 presents the ANOVA summary.

Table 5: One-Way ANOVA of Leadership Behavior Across Provincial Locations

Source of Variation	Sum of Squares	df	Mean Square	F-value	Sig. (p)
Between Groups	1.024	2	0.512	0.593	0.553
Within Groups	332.176	385	0.863	-	-
Total	333.200	387	-	-	-

*Note: NS = Not Significant at $p > 0.05$ level.

The one-way ANOVA indicated no statistically significant difference in Leadership Behavior scores across Beijing ($M = 4.04$, $SD = 0.91$), Zhejiang ($M = 3.98$, $SD = 0.94$), and

Guangdong ($M = 4.02$, $SD = 0.93$), $F(2, 385) = 0.593$, $p = 0.553$. Because the p -value exceeded the 0.05 significance threshold, H_{03} was supported. This finding demonstrates that geographic location does not exert a significant direct influence on self-reported leadership behavior among service sector professionals in the sampled locations.

5. Discussion

5.1 Gender Divergence

The statistical rejection of H_{01} confirms that gender is significantly associated with self-reported leadership behavior among service industry practitioners in China. However, interpreting this mean difference (0.2351) requires careful theoretical contextualization. This finding should not be interpreted as evidence that male professionals possess inherently superior leadership capability. Extensive meta-analytic research consistently demonstrates that female leaders perform equally effectively, frequently exhibiting higher transformational, participative, and ethical leadership behaviors (Eagly et al., 2003; Hallinger et al., 2016).

Instead, this statistical divergence aligns with Social Role Theory (Eagly, 1987) and reflects structural characteristics within China's service sector. Qualitative insights gathered during small-group focus group discussions (FGDs) clarified the organizational mechanisms behind these numbers. Participants noted that while lower and middle-level operational roles display high gender balance, senior executive positions, strategic planning committees, and high-visibility corporate assignments remain disproportionately male-dominated (Cooke, 2013; Zhou, 2025). Consequently, male practitioners often accumulate greater access to executive mentorship, decision-making responsibility, and strategic leadership exposure early in their careers. As one focus group participant observed:

"Male managers are more frequently encouraged to take charge of high-risk strategic projects, whereas female managers are often guided toward supportive operational or administrative coordination roles."

These organizational dynamics can influence self-efficacy and reported leadership behaviors. Therefore, curriculum implementation and corporate HR frameworks must ensure equal access to leadership simulations, executive coaching, and strategic project delegation for all professionals regardless of gender (Eagly & Chin, 2010; Kumasey et al., 2014).

5.2 Tenure and Experiential Growth: The Core of Practical Development

The rejection of H_{02} provides strong empirical support for Experiential Learning Theory (Kolb, 2015) and contemporary leadership development frameworks (Day, 2001; Day et al., 2014; Mumford et al., 2000). The Scheffé post-hoc results clearly demonstrate that leadership competence develops progressively with tenure, showing significant increases at the 7-8 year and ≥ 9 year milestones.

Focus group participants provided context for this developmental trajectory, explaining that entry-level practitioners (1-2 years) often focus on mastering routine technical tasks and adapting formal business school concepts to workplace realities. As practitioners cross the 7-year experience mark, accumulated exposure to complex problem-solving,

crisis management, team negotiation, and cross-departmental coordination transforms explicit knowledge into tacit leadership competence (DeRue & Wellman, 2009; Ng & Feldman, 2010). Interestingly, the data revealed a slight plateau in leadership behavior scores among mid-career practitioners (5-6 years, $M = 3.429$). Focus group discussions suggested that this phase often corresponds to the "middle-management squeeze," where mid-level supervisors face competing operational demands, role ambiguity, and career transition challenges before breaking through into senior executive confidence. These findings indicate that business education should not be treated as a single, one-time event; organizations must implement structured, tenure-tiered professional development programs to support practitioners through key career transitions.

5.3 Tenure and Experiential Growth: The Core of Practical Development

The support for H_{03} indicates that provincial location (Beijing, Zhejiang, Guangdong) does not significantly differentiate leadership behavior among service sector professionals. At first glance, this finding appears counterintuitive, given the distinct economic typologies of Beijing (state-led policy hub), Zhejiang (private digital enterprise), and Guangdong (global trade export frontier) (Jiang et al., 2023; Tong & Tang, 2025).

However, focus group discussions provided a compelling explanation: rapid national digitization, standardized corporate governance frameworks, and nationwide higher education quality standards have driven substantial regional convergence in business practices. Modern service enterprises across Beijing, Hangzhou, and Shenzhen operate using similar Enterprise Resource Planning (ERP) systems, performance metrics, and digital management tools (Bing, 2023; Van Laar et al., 2020). Furthermore, high workforce mobility among educated managers across tier-one economic centers facilitates the cross-pollination of corporate cultures. From a curricular perspective, this regional homogenization implies that the T-KSP-L framework can be implemented consistently across major Chinese provinces without requiring drastic regional customization.

6. Conclusion

This study evaluated the demographic factors influencing leadership behavior among service sector practitioners in three major provinces of China (Beijing, Zhejiang, Guangdong). By testing three core null hypotheses against empirical survey data ($N = 388$) and focus group insights, the study established that gender ($t = 2.466$, $p = 0.001$) and workplace experience ($F = 10.037$, $p = 0.001$) significantly moderate self-reported leadership behavior, whereas provincial location ($F = 0.593$, $p = 0.553$) exerts no significant effect. The results highlight that while formal EBC provides the necessary cognitive foundation, leadership behavior matures through accumulated workplace experience and is shaped by organizational opportunity structures. Addressing gender disparities in strategic access and aligning curriculum delivery with career tenure milestones will enable educational institutions and corporate enterprises to build robust, inclusive, and adaptive leadership pipelines capable of supporting China's expanding service economy.

Ethics Approval and Consent to Participate

The researchers have received ethics approval to conduct the research. Consent from participants was obtained from all participants prior to conducting the research.

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Conflict of Interest

The authors declare there are no conflicts of interest.

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