

THE IMPACT OF SOCIAL SUPPORT ON GENDER-ROLE PRESSURE AMONG AMATEUR FEMALE BASKETBALL ENTHUSIASTS

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Abstract: This study aims to explore the current participation status and psychological reconstruction mechanisms of members within the amateur female basketball community in Beijing. Through a questionnaire survey of 517 female basketball enthusiasts, utilizing Structural Equation Modeling (SEM) and variance analysis, the study found that: Social support (family, teammates, and community) has a significant positive predictive effect on athletic identity and sports self-efficacy, and effectively weakens gender stereotypes. The study further confirms the chain influence path of "social support → psychological resources → threat reduction," in which the mediating effect of sports self-efficacy is particularly prominent. Furthermore, high-frequency training and active technical display strategies significantly enhance participants' sense of identity and reduce gender-role pressure. This study provides empirical evidence for breaking gender barriers in basketball and constructing equal discourse power for women in sports.

Keywords: Amateur female basketball; Social support; Athletic identity; Sports self-efficacy; Psychological empowerment

1 INTRODUCTION

1.1 Research Background and Problem Statement

For a long time, basketball has been labeled with "masculine" tags such as strong confrontation and high physical demand; women often face invisible constraints of gender stereotypes during participation [1,2]. However, with the progress of social concepts, a large number of active amateur female basketball communities have emerged in Beijing, where women have begun to challenge traditional concepts through technology and collaboration on the court [3].

1.2 Research Purpose and Significance

Based on a comprehensive analysis of existing literature and questionnaire surveys, this study aims to deeply understand the participation of amateur female basketball members in Beijing. Through quantitative analysis, it explores how support from family, teammates, and the community helps women cope with gender bias by reconstructing psychological cognition (identity and efficacy), using this as an entry point to observe how women reconstruct gender roles and power relations [4].

2 QUESTIONNAIRE DESIGN AND SURVEY

The questionnaire design is based on a comprehensive analysis of existing literature, aiming to deeply understand the participation and psychological experiences of Beijing amateur female basketball community members in training, competitions, and community activities. It explores how female basketball enthusiasts challenge gender stereotypes and reconstruct gender roles and power relations through basketball practice. The questionnaire first focuses on the demographic characteristics of respondents (age, occupation, etc.), as well as their participation status and strategy choices in training, competitions, and communities.

Table 1 Sources of Dimensions

Dimension	Corresponding Question No.	References
Family Support	Q13-Q16	Blumenthal J A [5]; Qiao Yanbin [6]
Teammate Support	Q17-Q20	
Community Support	Q21-Q24	
Athletic Identity	Q25-Q31	Li Menglong [7]
Sports Self-Efficacy	Q32-Q38	Wang Caikang [8]
Gender-Role Pressure	Q39-Q45	Bai Yanxue [9]

Next, it measures the level of support from family, teammates, and the community; the respondents' sense of identity as "basketball enthusiasts"; their confidence and self-efficacy when facing gender bias, training, and competition challenges; and the impact of gender-role pressure on their psychology and behavior. The sources of the scales referred to for each dimension are shown in Table 1. Item descriptions were contextually revised for the amateur female basketball environment and scored using a 5-point Likert scale, ranging from "completely disagree" to "completely agree."

Data collection was conducted efficiently through the Wenjuanxing platform. Questionnaires were determined invalid if the completion time was less than 90 seconds, if 95% of the options were the same, or if the answers were identical. A total of 568 data sets were collected, of which 517 were valid and 51 were invalid, resulting in an effective recovery rate of 91.02%.

3 RELIABILITY AND VALIDITY ANALYSIS

3.1 Reliability Analysis

Reliability refers to the consistency and dependability of test results. Cronbach's Alpha was used for testing. A value above 0.8 indicates high reliability; 0.7–0.8 is good; 0.6–0.7 is acceptable; and below 0.6 is poor.

As shown in Table 2, the Cronbach's α values for each dimension are: Family Support (0.842), Teammate Support (0.867), Community Support (0.861), Athletic Identity (0.890), Sports Self-Efficacy (0.901), and Gender-Role Pressure (0.917). All are above 0.8, indicating a high level of reliability and suggesting the questionnaire is reliable.

Table 2 Reliability Analysis of Each Dimension

Dimension Division	Number of Items	Cronbach's α Value
Family Support	4	0.842
Teammate Support	4	0.867
Community Support	4	0.861
Athletic Identity	7	0.890
Sports Self-Efficacy	7	0.901
Gender-Role Pressure	7	0.917

3.2 Validity Analysis

The KMO and Bartlett's Test of Sphericity were used for validity analysis. A value above 0.8 indicates excellent validity; 0.7–0.8 is good; 0.6–0.7 is average; and below 0.6 is poor.

The results in Table 3 show a KMO value of 0.958, which is greater than 0.8. In Bartlett's test, $p < 0.001$, indicating the presence of correlated factors and suitability for factor analysis.

Table 3 KMO and Bartlett's Test

KMO Measure of Sampling Adequacy		0.958
Bartlett's Test of Sphericity	Approx. Chi-Square	9992.124
	df	528
	Significance (value)	0.000

3.3 Factor Analysis

Based on Kaiser's criterion, only factors with eigenvalues greater than 1 were retained. Exploratory Factor Analysis (EFA) was performed on 33 items. Six factors were extracted, with variance explanation rates after rotation of 14.595%, 13.459%, 13.256%, 8.583%, 8.409%, and 8.035%, respectively. The cumulative variance explanation rate after rotation was 66.337%. Principal Component Analysis and Varimax rotation were used to optimize the factor structure.

Factor matrix analysis using orthogonal rotation improved the correspondence between factors and variables. A factor loading absolute value of ≥ 0.4 was used as the threshold for significance, see Table 4 and Table 5.

Factor 1 (Gender-Role Pressure): loadings 0.736–0.788. Factor 2 (Sports Self-Efficacy): loadings 0.659–0.739. Factor 3 (Athletic Identity): loadings 0.667–0.733. Factor 4 (Teammate Support): loadings 0.715–0.763. Factor 5 (Community Support): loadings 0.703–0.776. Factor 6 (Family Support): loadings 0.699–0.744. All loadings are well above 0.4.

Table 4 Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	13.161	39.881	39.881	13.161	39.881	39.881	4.816	14.595	14.595
2	2.304	6.982	46.863	2.304	6.982	46.863	4.441	13.459	28.054
3	1.981	6.003	52.866	1.981	6.003	52.866	4.374	13.256	41.310
4	1.624	4.922	57.788	1.624	4.922	57.788	2.832	8.583	49.893
5	1.480	4.484	62.272	1.480	4.484	62.272	2.775	8.409	58.302
6	1.341	4.065	66.337	1.341	4.065	66.337	2.651	8.035	66.337
7	0.642	1.945	68.282						
8	0.614	1.859	70.141						
9	0.578	1.751	71.892						
10	0.566	1.714	73.606						
11	0.543	1.645	75.251						
12	0.517	1.567	76.818						
13	0.500	1.515	78.333						
14	0.490	1.485	79.819						
15	0.475	1.438	81.257						
16	0.465	1.410	82.666						
17	0.456	1.383	84.049						
18	0.433	1.312	85.361						
19	0.416	1.260	86.621						
20	0.404	1.224	87.845						
21	0.383	1.161	89.006						
22	0.376	1.139	90.145						
23	0.361	1.094	91.240						
24	0.355	1.076	92.316						
25	0.325	0.986	93.302						
26	0.308	0.932	94.234						
27	0.302	0.916	95.150						
28	0.294	0.892	96.042						
29	0.286	0.867	96.909						
30	0.277	0.839	97.748						
31	0.271	0.821	98.569						
32	0.244	0.740	99.309						
33	0.228	0.691	100						

Table 5 Rotated Factor Loading Matrix

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Family support 1						0.729
Family support 2						0.744
Family support 3						0.699
Family support 4						0.715
Teammate support 1				0.751		
Teammate support 2				0.763		
Teammate support 3				0.715		
Teammate support 4				0.729		
Community support1					0.735	
Community suppor2					0.776	
Community suppor3					0.703	
Community suppor4					0.757	
Sports identity 1			0.733			
Sports identity 2			0.700			
Sports identity 3			0.697			
Sports identity 4			0.667			
Sports identity 5			0.696			
Sports identity 6			0.705			
Sports identity 7			0.720			
Sports self-efficacy 1		0.721				
Sports self-efficacy 2		0.659				
Sports self-efficacy 3		0.691				
Sports self-efficacy 4		0.725				
Sports self-efficacy 5		0.709				
Sports self-efficacy 6		0.739				
Sports self-efficacy 7		0.699				
Gender-role pressure 1	0.736					
Gender-role pressure 2	0.762					
Gender-role pressure 3	0.788					
Gender-role pressure 4	0.763					
Gender-role pressure 5	0.753					
Gender-role pressure 6	0.726					
Gender-role pressure 7	0.694					

4 DESCRIPTIVE ANALYSIS

4.1 Basic Sample Information

In terms of age, respondents aged 19-26 account for 62.5%, with those aged 19-22 accounting for 31.9% and those aged 23-26 accounting for 30.6%. This indicates that the sample is primarily composed of young groups, and the age structure of the sample shows a trend toward youthfulness. Regarding occupation/identity, students account for 44.5% and office workers account for 33.9%. These two groups combined make up nearly 80%, indicating that the sample is mainly composed of university students and people in the early stages of their careers. In terms of basketball experience, more than half of the respondents (51.3%) have more than three years of playing experience, while those with 1-3 years of experience account for 34.2% and those with less than 1 year account for 14.5%, showing that the sample as a whole has a certain foundation in basketball participation. Regarding community types, school clubs/teams account for the highest proportion (36.8%), followed by online interest groups combined with offline activities (34.4%), while community/neighborhood interest groups account for 28.8%. The distribution across these three types of communities is relatively balanced, reflecting the realistic paths through which female basketball enthusiasts participate in basketball activities through multiple channels, see Table 6.

Table 6 Basic Sample Information

Name	Option	Frequency	Percentage
Age	U18 and 18	43	8.32%
	Age 19-22	165	31.91%
	Age 23-26	158	30.56%
	Age 27-30	98	18.96%
	31 years and above	53	10.25%
Occupation	Student	230	44.49%
	Office worker	175	33.85%
	Public institution	45	8.70%
	Freelance work	54	10.44%
	Other	13	2.51%
Basketball experience	Option	subtotal	ratio
	Less than 1 year	75	14.51%
	1-3 year	177	34.24%
	More than 3 years	265	51.26%
	School clubs/school teams	190	36.75%
Community type	Community/neighborhood interest groups	149	28.82%
	Online interest groups combined with offline activities	178	34.43%

4.2 Participation Status

Those who train 2-3 times per week account for the highest proportion at 47.2%, while those who train ≥ 4 times account for 22.8%, indicating that most respondents have embedded basketball into their daily routines. In terms of training methods, the highest proportion involves actively following the coach/captain at 71.6%, and more than half (57.1%) actively try new techniques or tactics. Helping teammates practice accounts for 42.9%, showing that technical learning and mutual assistance are primary in training scenarios. Organizational matters (participating in arrangements, providing feedback, and tactical discussions) each account for less than 30%, suggesting that women still primarily play executive or assistant roles in the training process, and their involvement in decision-making is relatively limited. When encountering gender undervaluation, the most common strategy is to work hard to win trust, accounting for 32.9%, followed by seeking support from teammates or community members at 24.9%. Combined, these two exceed half of the responses, while directly ignoring bias only accounts for 13.2%, and actively assuming leadership roles accounts for less than 10%. It can be seen that when facing prejudice, respondents are more inclined to respond with individual strength and peer alliances rather than directly competing for power positions. This reflects that the prevailing mindset is to "prove oneself first, then talk about discourse power", see Table 7.

Table 7 Training Participation Status

Name	Options	Frequency	percentage
number of trainings per week	Once or less	155	29.98%
	2-3 time	244	47.20%
	4 times or more	118	22.82%
Actions taken during training to participate in or influence the training	Actively follow the coach/captain in training	370	71.57%
	Take the initiative to try new moves or tactics	295	57.06%
	Help other team members practice	222	42.94%
	Participate in training organization or arrangement	90	17.41%
	Take the initiative to offer training suggestions or feedback	153	29.59%
	Discuss or make decisions with tactics	149	28.82%
The main coping strategy in training due to gender underestimation or bias	Win trust through diligent performance	170	32.88%
	Seek support from teammates or community members	129	24.95%
	Prove your ability by adopting tactical or technical strategies	103	19.92%
	Take the initiative to assume responsibility or a leadership role	47	9.09%

Name	Options	Frequency	percentage
	Ignore biases and focus on your own performance	68	13.15%

In terms of competition frequency, 12.77% of respondents never participate in games, meaning nearly 90% participate in at least one formal or semi-formal competition annually. Among these, the proportion of 1-3 times is the highest at 54.55%, and 4-6 times accounts for 23.02%, indicating that most people are quite active in participating in competitions. Regarding role distribution, support players account for 46.34%, while core/starting players account for 34.59%. However, 26.83% participate in tactical discussions or coaching teammates, and post-game reviews and pre-game preparations each have about 20% participation. This indicates that although female members are not the primary offensive players on the court, they actively intervene in the competition process through tactical discourse and logistical collaboration. Facing gender bias on the court, actively displaying techniques and abilities remains the primary response (36.36%), followed by using tactical strategies to win recognition (23.50%), while actively assuming organizational or leadership responsibilities only accounts for 10.86%. Consistent with the training scenario, this presents a convergent logic where "letting the ball talk" takes precedence over "letting the identity talk". Overall, competitions have become an important field for female players to verify their strength and expand their roles, but breakthroughs in core decision-making power are still in the early stages, see Table 8.

Table 8 Competition Participation Status

Name	Options	Frequency	Percentage
Number of times one participates in the competition each year	Never	66	12.77%
	1-3 times	282	54.55%
	4-6 times	119	23.02%
	7 times or more	50	9.67%
The role played in the competition	Key players/starters	156	34.59%
	Support players	209	46.34%
	Participate in tactical discussions or guide teammates	121	26.83%
	Assist in pre-competition preparations (equipment, division of labor)	90	19.96%
	Participate in the post-match review or summary	98	21.73%
	Only participate in the competition and not in any other affairs	89	19.73%
	Take the initiative to showcase your skills and capabilities	164	36.36%
	Seek support from teammates	92	20.40%
The main coping strategy in the competition when gender is underestimated or biased	Win recognition by adopting tactical strategies	106	23.50%
	Take the initiative to assume organizational or leadership responsibilities	49	10.86%
	Ignore biases and focus on the game	40	8.87%

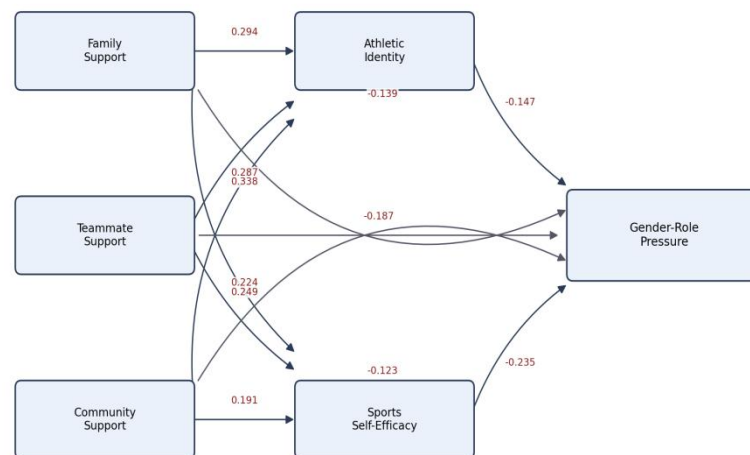
Regarding the frequency of community activities, those participating 1-2 times per month account for the highest proportion at 58.80%, and those participating 3 times or more account for 31.72%. Nearly 90% of respondents maintain community interaction at least once a month, showing high participation stickiness. In terms of activity content, participating in collective training has the highest proportion at 77.99%. Technical exchange/learning accounts for 52.56%, reflecting a strong demand for skill improvement among female players beyond training. Social gatherings and tournament observation account for 40.81% and 34.83% respectively. In contrast, organizing or initiating activities only accounts for 15.17%, and guiding newcomers or sharing experience accounts for 23.50%. This suggests that currently, female members in the community appear more as participants, and organizational and inheritance functions have not yet fully unfolded. Overall, community activities provide space for women to continuously participate in basketball, but there is still room for improvement in role diversification and leadership cultivation, see Table 9.

Table 9 Community Activity Participation Status

Name	Options	frequency	Percentage
The number of times one participates in community activities each month	0 time	49	9.48%
	1-2times	304	58.80%
	3times or more	164	31.72%
Things that are usually done in community activities	Participate in group training	365	77.99%
	Watch the game/event observation	163	34.83%
	Technical exchange/learning	246	52.56%
	Social gathering	191	40.81%
	Organize or initiate activities	71	15.17%
	Guide newcomers or share experiences	110	23.50%

5 STRUCTURAL EQUATION MODEL VERIFICATION

This study further employs Structural Equation Modeling (SEM) for data analysis. Through AMOS 24.0 software, a model was constructed to examine the impact of family support, teammate support, community support, athletic identity, and sports self-efficacy on gender-role pressure. The structural equation measurement model is shown in Figure 1.

**Figure 1** Structural Equation Measurement Model

The model fit was evaluated using several commonly used fit indices, and all results indicate that the model fits well. The CMIN/DF value is 1.347, which meets the criterion of being less than 3, suggesting that the ratio of the model's chi-square value to its degrees of freedom is appropriate and the fit is good. The RMSEA value is 0.026, which is well below 0.10, demonstrating excellent model fit and indicating small model error with high suitability. The SRMR value is 0.032, below 0.05, further verifying the good fit of the model and indicating small residuals with superior fit performance.

The GFI is 0.928 and the AGFI is 0.917; both are higher than 0.9, showing high overall model fit and good adaptability. The PGFI value is 0.796, indicating a good balance between model complexity and fit effectiveness. NFI, IFI, TLI, and CFI all exceed 0.9, reaching 0.937, 0.983, 0.981, and 0.983 respectively; this suggests the model's fit is very effective, with all indices within the ideal range, meaning the model fits the data well. The PNFI and PCFI values are 0.853 and 0.895 respectively, both higher than 0.5, further validating the superiority of the model fit. Therefore, the model fit indices all meet the criteria for a good fit, indicating that the model has high adaptability, see Table 10.

Table 10 Model Fit Results

Common indicators	Criteria	Value
CMIN/DF	<3	1.347
RMSEA	<0.10	0.026
SRMR	<0.05	0.032
GFI	>0.9	0.928

Common indicators	Criteria	Value
AGFI	>0.9	0.917
PGFI	>0.5	0.796
NFI	>0.9	0.937
IFI	>0.9	0.983
TLI	>0.9	0.981
CFI	>0.9	0.983
PNFI	>0.5	0.853
PCFI	>0.5	0.895

Path coefficients show that the three types of social support have significant positive impacts on athletic identity and sports self-efficacy: for every 1-unit increase in family, teammate, and community support, athletic identity increases by 0.294, 0.287, and 0.224 respectively (all $p < 0.001$), and sports self-efficacy increases by 0.338, 0.249, and 0.191 respectively (all $p < 0.001$). This indicates that the more diverse the sources of support, the more women are able to incorporate playing basketball into their self-concept and form stable expectations of "I can play well."

The negative paths of athletic identity and sports self-efficacy toward gender-role pressure are also significant: for every 1-unit increase in athletic identity, the sense of threat decreases by 0.147 ($p < 0.05$); for every 1-unit increase in self-efficacy, the sense of threat decreases by 0.235 ($p < 0.001$). The latter has a larger effect size, indicating that competence confidence is the most direct resource for resisting prejudice. Furthermore, family, teammate, and community support all have independent negative effects on the sense of threat, with coefficients of -0.139, -0.187, and -0.123 respectively ($p < 0.05$). This shows that support can work indirectly through psychological mediators and also directly buffer the pressure brought by stereotypes. Overall, the model validates the "social support → psychological resources → threat reduction" chain mechanism, providing two feasible paths for intervention: strengthening affirmation from significant others and enhancing women's athletic identity and efficacy, see Table 11.

Table 11 Model Test Results

Route	Unstandardized path coefficient	Standardized Path Coefficient	S.E.	C.R.	P
Family support → Athletic identity	0.294	0.294	0.058	5.083	***
Teammate support → Athletic identity	0.287	0.302	0.053	5.430	***
Community support → Athletic identity	0.224	0.239	0.054	4.190	***
Family support → Sports Self-Efficacy	0.338	0.361	0.054	6.273	***
Teammate support → Sports Self-Efficacy	0.249	0.280	0.048	5.180	***
Community support → Sports Self-Efficacy	0.191	0.217	0.049	3.935	***
Athletic identity → Gender-Role Pressure	-0.129	-0.147	0.051	-2.539	0.011
Sports Self-Efficacy → Gender-Role Pressure	-0.220	-0.235	0.057	-3.857	***
Family support → Gender-Role Pressure	-0.122	-0.139	0.056	-2.162	0.031
Teammate support → Gender-Role Pressure	-0.155	-0.187	0.050	-3.114	0.002
Community support → Gender-Role Pressure	-0.101	-0.123	0.048	-2.092	0.036

Note: $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Bootstrap 95% confidence intervals show that all three total indirect effects do not include 0, indicating that athletic identity and sports self-efficacy play a significant mediating role in the process of social support inhibiting gender-role pressure. Specifically, the total effect of family support is -0.234, with a total indirect effect of -0.112 (accounting for 38%), including the path via athletic identity (-0.038) and the path via self-efficacy (-0.074); the latter's contribution is approximately twice that of the former. The total effect of teammate support is -0.247, with a total indirect effect of -0.092 (accounting for 37%); the effect sizes of the two mediating paths are similar, indicating that affirmation from peers can both enhance identity and increase competence confidence. The total effect of

community support is -0.172, with a total indirect effect of -0.071 (accounting for 41%), which is the highest mediation proportion among the three types of support, suggesting that the community mainly reduces the sense of threat through psychological mechanisms rather than direct buffering.

Overall, the mediating contribution of sports self-efficacy is generally greater than that of athletic identity, once again verifying that competence confidence is the core resource for resisting gender prejudice. Simultaneously, all three types of support exhibit a significant "support → psychological resources → threat reduction" chain path, providing a clear starting point for subsequent interventions: while providing external support, it is necessary to simultaneously design activity sessions that enhance identity and efficacy to maximize the buffering effect, see Table 12.

Table 12 Mediation Effect Analysis

	Estimate	SE	Lower	Upper
Total Effect of Family Support	-0.234	0.058	-0.358	-0.129
Total Effect of Teammate Support	-0.247	0.057	-0.37	-0.145
Total Effect of Community Support	-0.172	0.05	-0.282	-0.085
Family Support → Gender-Role Pressure	-0.122	0.05	-0.237	-0.037
Teammate Support → Gender-Role Pressure	-0.155	0.051	-0.271	-0.07
Community Support → Gender-Role Pressure	-0.101	0.039	-0.189	-0.034
Total indirect effect 1 (Family)	-0.112	0.03	-0.181	-0.062
Family Support → Athletic Identity → Gender-Role Pressure	-0.038	0.017	-0.083	-0.013
Family Support → Sports Self-Efficacy → Gender-Role Pressure	-0.074	0.023	-0.136	-0.039
Total indirect effect 2 (Teammate)	-0.092	0.027	-0.153	-0.048
Teammate Support → Athletic Identity → Gender-Role Pressure	-0.037	0.016	-0.08	-0.013
Teammate Support → Sports Self-Efficacy → Gender-Role Pressure	-0.055	0.019	-0.102	-0.025
Total indirect effect 3 (Community)	-0.071	0.025	-0.132	-0.031
Community Support → Athletic Identity → Gender-Role Pressure	-0.029	0.014	-0.069	-0.009
Community Support → Sports Self-Efficacy → Gender-Role Pressure	-0.042	0.018	-0.09	-0.015

Combined with the results of the structural equation section, the three layers of support: family, teammates, and community, can significantly reduce women's gender-role pressure, and this effect is partly realized through athletic identity or sports self-efficacy. External affirmation must first be transformed into the identity confirmation of "I belong to basketball" and the competence belief of "I can play well" to truly weaken the psychological pressure that "girls are not suitable for playing basketball". This mechanism provides an operable path for breaking the symbolic order of "basketball = male sport": first, using the family as a pivot, continuously provide positive feedback in daily scenarios such as watching games, drop-offs, and social sharing to reduce the source of gender confrontation anxiety; second, establish institutional arrangements within the team for rotations, tactical discussions, and data disclosure to allow women to accumulate self-efficacy through visible technical contributions. Finally, utilize the communication advantages of the community to make "non-player" roles, such as women organizing activities, guiding newcomers, and officiating, or more explicit, expanding the public visibility of "basketball women". When the support system, identity, and competence beliefs form a closed loop, women will no longer be mere "exceptions" on the court but become legitimate subjects of basketball discourse, thereby loosening and reconstructing the "male-exclusive" gender boundary.

6 DIFFERENCE ANALYSIS

One-way ANOVA shows that basketball enthusiasts with different training frequencies have significant differences in athletic identity, sports self-efficacy, and gender-role pressure ($p < 0.05$). Specifically, those training 4 or more times per week have the highest athletic identity score at 3.75, which is significantly higher than the 3.15 for those training 1 time or less. Sports self-efficacy shows the same trend, with the high-frequency group reaching 3.59 and the low-frequency group only 3.06. At the same time, the more frequent the training, the lower the gender-role pressure: 2.93 for the 4+ times group and 3.23 for the 1 time or less group. The results indicate that increasing training volume not only strengthens women's internalization of the "basketball enthusiast" identity but also enhances their confidence in dealing with prejudice, thereby effectively weakening the stereotype pressure of "girls are not suitable for playing basketball", see Table 13.

Table 13 Differences in Training Frequency

	Number of trainings per week (Average ± SD)			F	p
	Once or less (n=155)	2-3times (n=244)	4times or more (n=118)		
Athletic Identity	3.15±1.06	3.31±1.00	3.75±0.76	13.376	0.000**

	Number of trainings per week (Average $\pm$ SD)			F	p
	Once or less (n=155)	2-3times (n=244)	4times or more (n=118)		
Sports Self-Efficacy	3.06 $\pm$ 1.08	3.23 $\pm$ 1.01	3.59 $\pm$ 0.84	9.729	0.000**
Gender-Role Pressure	3.23 $\pm$ 1.03	3.00 $\pm$ 0.98	2.93 $\pm$ 1.01	3.701	0.025*

Note: * $p < 0.05$ ** $p < 0.01$

One-way ANOVA found significant differences in athletic identity, self-efficacy, and threat perception among female basketball players with different response styles ($p < 0.05$). The two groups with the highest levels of athletic identity are those who choose to work hard to win trust (3.50) and those who choose to actively assume responsibility or leadership roles (3.48); both are significantly higher than the group that chooses to directly ignore prejudice (3.04). It is evident that responding to prejudice through visible technical contributions or role advancement makes it easier to internalize basketball as a core self-identity. Sports self-efficacy shows the same trend: the group choosing to perform hard scores the highest at 3.42, while the group choosing to ignore remains the lowest at 3.01. This indicates that active proof strategies can directly transform confrontation experiences into "I can do it" competence beliefs, while avoidance strategies fail to provide the same efficacy return.

The difference in gender-role pressure is even more prominent: women who choose to "ignore prejudice and focus on themselves" have the highest threat perception (3.56), which is significantly higher than the other four groups. Although avoidance seems low-key, it actually causes the stereotype to be continuously magnified at the psychological level. Conversely, demonstrating through techniques, tactics, or seeking collective endorsement can transform external questioning into quantifiable and observable strength feedback, thereby truly weakening the negative effects of prejudice.

Overall, the response strategy on the training ground is not just a technical choice but also an identity strategy. Publicly proving ability through action and striving for visible roles enhances identity and efficacy more than not responding, while simultaneously reducing stereotypes, see Table 14.

Table 14 Differences in Response Strategies to Gender Bias in Training

	The main coping strategy in training due to gender underestimation or bias (Average $\pm$ SD)					F	p
	Win trust through diligent performance (n=170)	Seek support from teammates or community members (n=129)	Prove ability by adopting tactical or technical strategies (n=103)	Take the initiative to assume responsibility or a leadership role (n=47)	Ignore biases and focus on performance (n=68)		
Sports identity	3.50 $\pm$ 0.93	3.37 $\pm$ 0.99	3.29 $\pm$ 1.00	3.48 $\pm$ 0.93	3.04 $\pm$ 1.13	2.975	0.019*
Sports self-efficacy	3.42 $\pm$ 0.92	3.25 $\pm$ 1.06	3.15 $\pm$ 1.03	3.33 $\pm$ 0.92	3.01 $\pm$ 1.12	2.45	0.045*
Gender-role pressure	2.91 $\pm$ 0.99	3.02 $\pm$ 1.00	3.04 $\pm$ 0.97	2.98 $\pm$ 0.95	3.56 $\pm$ 1.05	5.36	0.000**

Note: * $p < 0.05$ ** $p < 0.01$

Variance analysis shows that the five competition response strategies differ significantly across the three psychological indicators ($p < 0.01$). Regarding athletic identity, those who choose to actively display techniques and abilities score the highest at 3.53, significantly higher than the groups assuming organizational responsibility or ignoring bias; the latter has a mean of only 2.75, the lowest among all strategies. It is evident that counterattacking on the spot with visible scoring, defense, or key passes best strengthens the self-positioning of "I belong to the court," while evasive silence instead severs the identity link.

In terms of sports self-efficacy, the group displaying techniques is also the highest at 3.45, and the group ignoring bias is the lowest at 2.81. Competition scenarios have more spectators, more intense confrontation, and more distinct immediate feedback; active proof can directly write successful experiences into competence memory.

Regarding gender-role pressure, the score for the group ignoring bias is as high as 3.74, significantly higher than the other four groups. If on-court prejudice does not receive an explicit response, it will continue to magnify at the psychological level; providing answers on the spot through technical display, tactical design, or collective endorsement can transform questioning into supportive evidence, thereby suppressing the sense of threat.

Overall, in the context of competition, "letting the ball talk" through publicly visible performance of ability best provides an immediate counterattack to the undervaluation by opponents or spectators, yielding the greatest gains across the three fronts of identity, efficacy, and threat perception, see Table 15.

Table 15 Differences in Strategies for dealing with gender Bias in Competitions

The main coping strategy in the competition when gender is underestimated or biased (Average $\pm$ SD)	F	p
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	Win trust through diligent performance (n=164)	Seek support from teammates (n=92)	Prove ability by adopting tactical or technical strategies (n=106)	Take the initiative to assume responsibility or a leadership role (n=49)	Ignore biases and focus on performance (n=40)		
Sports identity	3.53±0.88	3.36±0.93	3.47±0.96	3.07±1.12	2.75±1.10	6.806	0.000**
Sports self-efficacy	3.45±0.91	3.24±1.04	3.36±0.92	3.01±1.08	2.81±1.23	4.495	0.001**
Gender-role pressure	2.96±0.98	2.97±0.96	2.92±0.98	3.26±1.07	3.74±1.06	6.303	0.000**

Note: * $p < 0.05$ ** $p < 0.01$

Variance analysis shows that different frequencies of community activity participation result in significant differences in athletic identity, sports self-efficacy, and gender-role pressure ($p < 0.01$). Those participating more than 3 times per month have the highest athletic identity score at 3.66, significantly higher than the 1-2 times group and the 0 times group. Sports self-efficacy also shows a linear increase, with the 3+ times group at 3.55, significantly higher than the 3.06 of the 0 times group. Regarding gender-role pressure, the 0 times group scores the highest at 3.37, while the 3+ times group is at 2.74. Community activity is not just extra training or socializing; it is a key arena for continuously obtaining identity confirmation and competence evidence, and it provides group-level cultural support for breaking the stereotype that "basketball is a male sport", see Table 16.

Table 16 Differences in Community Activity Participation Frequency

	Monthly community activity participation frequency (Average ± SD)			F	p
	0times(n=49)	1-2times(n=304)	3times or more (n=164)		
Sports identity	3.02±1.07	3.26±1.04	3.66±0.80	12.421	0.000**
Sports self-efficacy	3.06±1.04	3.14±1.03	3.55±0.90	9.987	0.000**
Gender-role pressure	3.37±1.03	3.17±1.04	2.74±0.86	13.262	0.000**

Note: * $p < 0.05$ ** $p < 0.01$

Difference testing shows that respondents with higher training frequency, more active technical display in games, and more community interaction have higher scores in athletic identity and self-efficacy, while gender-role pressure scores are relatively lower. This trend suggests that through continuous participation and explicit response, women may acquire more technical capital and visible roles in training, competition, and community scenarios, thereby gaining opportunities to strive for decision-making power and discourse power at a micro level, providing a potential entry point for the reconstruction of gender roles and power relations.

7 DISCUSSION AND ANALYSIS

7.1 Social Support Provides a Mitigating Effect

The research results indicate that tripartite support from family, teammates, and the community not only directly reduces women's sense of threat but also functions through providing women with identity confirmation of "I belong to basketball" and competence beliefs of "I can play well." This shows that external environmental affirmation is the cornerstone of individual psychological reconstruction, especially community support, which accounts for the highest proportion (41%) in the mediating path, revealing the core value of informal sports organizations in female empowerment [4].

7.2 Women "Letting the Ball Talk": The Behavioral Logic of Responding to Prejudice

Difference analysis in training and competition found that women choosing to "work hard to win trust" or "actively display techniques" have significantly higher athletic identity and efficacy than the "ignore bias" group. Interestingly, women taking an avoidance strategy (ignoring bias) have the highest sense of threat. This reveals that in competitive fields, explicit performance of ability is the most effective weapon to break gender boundaries; silent avoidance often leads to the continuous psychological magnification of stereotypes [2,3].

7.3 Increased Participation Frequency Produces Positive Impacts

As the frequency of training and community activities increases, women's gender-role pressure shows a linear decrease. Although women currently play more executive and participant roles in the community with limited involvement in organizational decision-making (less than 30%), continuous participation accumulates necessary technical capital, laying the foundation for a future shift in power from "peripheral participation" to "core decision-making."

8 CONCLUSION

8.1 Validation of Psychological Mechanisms

This study successfully constructed and validated a chain model in which social support reduces gender-role pressure through the psychological resources of athletic identity and sports self-efficacy. Sports self-efficacy emerged as the most influential mediating resource, and community support contributed the largest indirect effect among the three support sources, underscoring the central role of psychological resource accumulation in buffering gender-related pressure.

8.2 Impact of Behavioral Strategies

Behavioral strategy analysis shows that women who respond to bias actively, through technical display, sustained training, and visible participation in community activities, report significantly higher athletic identity and self-efficacy along with lower gender-role pressure than those who adopt an avoidance strategy. Higher training and community-activity frequency further reinforce this pattern, indicating that explicit, action-based responses are more effective than silence in weakening gender-related pressure.

8.3 Summary of Participation Status

The amateur female basketball community in Beijing is characterized by youthfulness and high stickiness. Although women have loosened gender boundaries at the micro level by "letting the ball talk," there is still room for improvement in core power and discourse regarding community management and tactical decision-making.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

REFERENCES

- [1] Napoli J, Ouschan R. The paradox of challenging and reinforcing stereotypes in women's sport sponsor communication. *Journal of Marketing Management*, 2024, 40(1-2): 72-101.
- [2] Dehkordi E N, Moteshareie E, Abdoli B, et al. The effect of questioning gender stereotype threat on girl's standing long jump performance. *BMC Psychology*, 2024, 12(1): 663.
- [3] Sebastián-Tirado A, Félix-Esbri S, Forn C, et al. Are gender-science stereotypes barriers for women in science, technology, engineering, and mathematics? Exploring when, how, and to whom in an experimentally-controlled setting. *Frontiers in Psychology*, 2023, 14: 1219012.
- [4] Liu S, Noh Y-E. Beyond physical recovery: investigating athletic identity as a mediator between social support and psychological readiness for return to sport. *Australian Journal of Psychology*, 2024, 76(1): 2402424.
- [5] Blumenthal J A, Burg M M, Barefoot J, et al. Social support, type A behavior, and coronary artery disease. *Biopsychosocial Science and Medicine*, 1987, 49(4): 331-340.
- [6] Qiao Yanbin, Xiao Lifang. The relationship between physical exercise and prosocial behavior among college students: The chain mediating roles of self-efficacy and perceived social support. *Sports Research and Education*, 2025, 40(04): 72-79.
- [7] Li Menglong, Yang Jiao, Ren Yujia. Reliability and validity of the Chinese version of the Exercise Identity Scale among college students. *Chinese Journal of Clinical Psychology*, 2019, 27(01): 63-66.
- [8] Wang Caikang, Hu Zhongfeng, Liu Yong. Reliability and validity of the General Self-Efficacy Scale. *Chinese Journal of Applied Psychology*, 2001(01): 37-40.
- [9] Bai Yanxue. An experimental study on eliminating the effect of gender stereotype threat among female college students in physical activities. Harbin Normal University, 2019.