

# Social Support and Leisure Exercise of Female College Students

## A Mediating Effect of Gender-role Conflict\*

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**Abstract**—Investigate the influence of social support on leisure exercise of female college students as well as the mediating effect of gender-role conflict. Through using the Social Support Scale for University Students (SSS-US), Sage's Role Conflict Inventory (RCI) and the Physical Activity Rating Scale (PARS-3), this paper makes investigation on 560 female college students. Results indicated that female students could feel a higher social support and a lower gender-role conflict, but their leisure exercise is not ideal. Female social support and leisure exercise are different on the level of gender role conflict. Social support and gender-role conflict are the important antecedent variables of female students' leisure exercise, and they significantly affect female leisure exercise. Gender-role conflict has a partial mediating effect in social support explaining female leisure exercise, and the mediating effect was 23.10% of the total effect. **Conclusions:** Giving more social support and recognition as well as through changing the traditional gender concept to ease the gender-role conflict might be a crucial link that cultivating the habit of physical exercise and promoting the autonomy of leisure exercise.

**Keywords**—female students; social support; gender-role conflict; leisure exercise

### I. INTRODUCTION

Leisure exercise, including diversified physical exercise activities taking health, entertainment or recreation as the periodic or ultimate goals, reflects the individual consciousness of participation in physical training positive attitudes towards life and is supposed to be a healthy lifestyle of female college universities as the exploration and extension of school physical education. However, the current situation of Chinese adult females taking exercise is not as ideal as expected, which is mainly caused by lack of time, interest, and absence of shaped habit (Dong & Zhang, et al, 2013). Still, part of colleges and communities just let female college students teeter their way to developing leisure exercise behaviors by absolute “disregard” and “neglect”, so it is crucial for the health of female mental & physical development even the promotion of comprehensive civilian quality to cultivate female college students to shape consciously the habit of leisure exercise. Moreover, discussing the influencing mechanism of female leisure exercise,

beneficial to the female college students for more exercise effects and personality socialization development, is a key topic in urgent need to be tackled by college physical education.

By summarizing the female physical exercise behaviors at home and abroad, it is discovered that social support is an exogenous factor of female college students for leisure exercise (Helgeson, 2003). Social support, from general or particular supportive behaviors of others, is a sort of care and support given to people (Song & Fan, 2013); it can provide exogenous power for leisure exercise and benefit self-concept and personality development of individuals. For instances, parents' support can motivate students to fulfill physical exercises (Pei & Gao, 2013); friends' support is good for increasing exercise enthusiasm and eliminating negative emotions (Schaefer, Coyne and Lazarus, 1981); supported by schools and teachers, students will generate more approval sense on exercises to promote the shape of independent exercise consciousness (Hagger & Biddle, et al., 2003). Briefly, the more social support received by students, the easier to form the positive exercise intention and impetus; automatically the stronger the feelings of satisfaction, the richer the experience and the longer the exercise duration. In conclusion, social support from multiple external aspects is capable of adjusting and improving individual social behaviors, activating internal motivation and enthusiasm for exercises and conducting to the cultivation of physical training habit of female college students (Bandura, 1986).

Clinical psychological researches discover that wide differences in the leisure exercise situation exist among the group with the same level of social support, which may result from the diversified levels of gender-role conflicts among individuals (Dong & Zhang, 2016). Gender role refers to a peculiar thought and behavior pattern stipulated by genders and reflects the social gender of an individual (Li, 2011). Although the equality of men and women, personality development, free thought and various feminism movements have gained a certain promotion of female international status and influence, with the residual traditional socio-cultural influence, females have not absolutely get rid of the real society's expectation on the gender role and still experienced the conflict between exercise behavior and its gender role (Liu & Huang, et al., 2011). Researches show that: ① Gender-role conflict is a key

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factor that restricts females to participate in physical activities (Russell, 2004). The female role norms widely acknowledged by the society make females generate more worries and anxieties than males (Kauer & Krane, 2006); in an exercise circumstance, the gender-role conflict sensed by females not only disturbs its mental aptitude but obstructs the concrete exercise practice (WEISS, 2006); ② social support can relieve the gender-role conflicts felt by females under specific situations (Xie & Ma, et al., 2015). With positive support and assistance provided by outside world, individuals will have a sense of identity on the behavior engaged and further reduce the social gender-role conflict feelings for such situations (Alfano, Ginsburg and Kingery, 2007); supports from friends and family enable female college students to win respects, lessen aloneness and hopelessness and protect mental elasticity (Xin, MA and Geng, 2006). In a word, external supportive resources are benefit to promote happiness and satisfaction, further to minimize the adverse impacts brought by gender role expectancy (Dai & Yao, 2012).

According to the value expectation theory, social stereotypes on gender role will influence subjective value and expectation even the selection of social behavior through egocentric awareness (Xu, 2015), hereby presumed that: social support and gender-role conflict may be the antecedent variables of leisure exercise for female college students; in case of any influences on the leisure exercise of female college students casted by social support, gender-role conflicts may exert an intermediate effect. Indeed, it has not been clearly defined upon the present domestic researches, so this study is aimed to answer the following questions: (1) how is the social support, gender-role conflict and the current status characteristics of leisure exercise of female college students; (2) What's the relevance between social support/gender-role conflict and leisure exercise of female college students; (3) Does the gender-role conflict have mediating effects when the leisure exercise of female college students is influenced by social support. This paper is designed to somewhat benefit researches on enriching leisure exercise of female college students and provides relevant departments with reference for policy-making consulting.

## II. METHOD

### A. Subject

By stratified random sampling, choose one university respectively from 5 selected cities (1 municipality, 2 first-tier cities and 2 second-tier cities) from Zhejiang, Shanghai and Suzhou and guarantee the representativeness of subject schools in type and discipline; it determines 633 subjects in total. Under the criterion of regarding those with "lack of 85% answered entries", "regular answer", or "apparent problems of answer" and "reverse question checkout" as invalid questionnaires, 560 is considered as valid questionnaires and accounts for 88.47%, at ages of  $(20.61 \pm 1.550)$ , including 244 major in science and 316 in arts, of which there are 142 freshmen, 183 sophomores, 133 juniors and 102 seniors.

### B. Measuring tool

1) *Undergraduate social support questionnaire*: Refer to Undergraduate social support questionnaire (Ye & Dai, 2008). The questionnaire is based on Shui-Yuan Xiao's social support theory and contains 17 questions under the Likert5 point method, record 1 ~ 5 points correspondingly for each with answers from "Not at all" to "Exactly" and the total score reflects on the level of external support available to subjects; it is measured the absolute value of question skewness is  $0.023 \sim 1.387$ , absolute value of kurtosis  $0.037 \sim 1.817$ , the minimum standard deviation 0.671, Cronbach's  $\alpha=0.916$ , split-half reliability  $=0.862$  and total correlation of questions  $0.483 \sim 0.664(p < 0.01)$ .

2) *Gender role conflict scale*: Revised the gender role conflict scale (Sage & Loudermills, 1979); The scale was applied to measure the conflict degree between the gender and athlete role sensed or experienced by female college athletes, while in this study, the topic words "train" and "competition" mentioned in the questions are revised to "leisure exercise". It contains 17 questions under the Likert5 point method. Considering this scale is designed to assess the degree of gender-role conflict felt by female college students during leisure exercise, instead of describing two independent events, the previous options "not at all", "no", "hard to explain", "yes" and "exactly" should be replaced with "None", "mild", "medium", "relatively serious" and "serious" recorded as 0 ~ 4 points successively. The score is within 0 ~ 40 points and the mean value of total score is 20, but 2 points of each; the total points represent the level of gender-role conflict sensed or experienced by subjects during the leisure exercise. Upon exploratory factor analysis, the load of each question is  $> 0.433$  and explains 61.156% of total variation; upon confirmatory factor analysis,  $\chi^2=174.825$ ,  $df=35$ ,  $\chi^2/df=4.995$ , SRMR=0.0402, GFI=0.907, NNFI=0.901, IFI=0.885, CFI=0.900; Cronbach's  $\alpha=0.871$ , split-half reliability  $=0.851$ ; and the total correlation of questions  $0.387 \sim 0.738(p < 0.01)$ .

3) *Physical activity rating scale*: Revised physical activity rating scale; This scale mainly evaluates the amount of subjects' exercise from strength, time and frequency and combining the research objective, "physical training" is altered to "leisure exercise" and scores of exercise amount act as the assessment indicator of leisure exercise; besides, the formula of "strength  $\times$  time  $\times$  frequency" is adopted to calculate the situation of leisure exercise. Each indicator is divided into 5 grades: for strength and frequency, it records 1 ~ 5 points for Grade 1 ~ 5 successively; for time, it records 0 ~ 4 points for Grade 1 ~ 5 successively. It is measured that the absolute value of question skewness is within  $0.083 \sim 0.922$  while for kurtosis it is within  $0.235 \sim 0.389$ , the minimum standard deviation is 0.884; Cronbach's  $\alpha=0.863$ , split-half reliability  $=0.733$ ; the total correlation of questions is within  $0.582 \sim 0.800(p < 0.01)$ .

### C. Testing Process

According to convenient sampling principle, on March 15 to 25, 2016, it conducted data collection by uniformly testing; before the test, the core conceptual words and instructions were explained to subjects; it left 3 minutes for filling answers and after that all scales were returned on the spot; during the test the general population statistics materials were acquired.

### D. Data Collection and Analysis

Import the acquired data into the SPSS22.0 statistical software and realize the research needs by a series of statistic analysis of valid data; during the test for mediating effect of gender-role conflicts, set social support as the independent variable, gender-role conflict as the intermediate variable and leisure exercise as the dependent variable; upon the regression analysis in steps to verify 3 conditions: ① first, independent variable and intermediate variable should both have significant regression effects on the dependent variable; ② Second, independent variable should have significant regression effects on the intermediate variable; ③ finally, the interaction between independent variable and intermediate variable should have significant regression effects on the dependent variable. If the regression coefficient of independent variable over the dependent variable sharply declines after the intermediate variable intervenes in the regression equation, it shows that the gender-role conflict has mediating effects.

## III. RESULTS

### A. Current Status Characteristics of Social Support, Gender-Role Conflict and Leisure Exercise

The descriptive statistics shows “Table I”: Female college students can experience favorable social support ( $63.45 > \text{total mean value: 51 points}$ ), and can sense a low level of gender-role conflict during exercises ( $16.48 < \text{total mean value: 20 points}$ ); however, except for the duration above the average, the leisure exercise situation of female college students is not ideal and its exercise intensity and frequency are both inferior to the theoretic mean value (3 points).

TABLE I. STATISTICAL TABLE OF MEAN VALUE & STANDARD DEVIATION (N=560)

Variable	Social support	Gender-role conflict	Exercise intensity	Duration	Exercise frequency	Leisure exercise
M±SD	63.45 ± 8.424	16.48 ± 6.147	2.58 ± 1.273	2.27 ± 1.274	2.89 ± 0.929	21.37 ± 19.958
Skewness	0.112	-.294	0.028	-.148	0.087	1.052
Kurtosis	0.689	-.010	-1.458	-1.051	0.204	0.732

For gender-role conflicts, it is arranged in ascending order of scores to test whether the social support and leisure exercise vary in the level of gender-role conflict; select respective 154 subjects (308 in total) to build up a low-intensity conflict group and a high-intensity conflict group according to the break point of 27% to conduct independent-samples T test “Table II”; the results display that: social support and leisure exercise

(including strength, duration and frequency) have significant differences in the gender-role conflicts ( $p < 0.001$ ); it is learnt upon comparison that for subjects with serious gender-role conflicts, the lower the social support level, the more negative, passive and disordered the leisure exercise.

TABLE II. INDEPENDENT-SAMPLES T TEST (N=308)

Variable	Levene-test		T-test			M±SD	
	F	p	T	df	p	Low conflict group	High conflict group
Social support	1.161	.163	5.831	306	.000	17.06±7.014	12.59±6.404
Exercise intensity	1.417	.235	6.646	306	.000	3.47±1.133	2.62±1.127
Duration	0.865	.353	6.705	306	.000	3.07±1.433	2.08±1.142
Exercise frequency	2.618	.107	6.640	306	.000	3.47±1.019	2.73±0.928
Leisure exercise	0.806	.462	11.213	306	.000	45.02±27.390	17.05±14.156

### B. Direct Influence of Social Support and Gender-Role Conflict to Leisure Exercise

The correlation analysis shows that “Table III”: Social support has significant positive correlation with the leisure exercise ( $p < 0.01$ ), and has the closest positive correlation with the duration ( $r=0.606$ ); the gender-role conflict has significant negative correlation with the leisure exercise ( $p < 0.01$ ) and has the closest negative correlation with the exercise frequency ( $r = -0.452$ ); the social support has significant negative correlation with the gender-role conflict ( $r = -0.238$ ,  $p < 0.01$ ).

TABLE III. TABLE OF BIVARIATE BILATERAL COEFFICIENTS

Variable	Social support	Gender-role conflict	Exercise intensity	Exercise intensity	Exercise intensity	Exercise intensity
Social support	1.000					
Gender-role conflict	-.238**	1.000				
Exercise intensity	.494**	-.299**	1.000			
Duration	.606**	-.343**	.665**	1.000		
Exercise frequency	.277**	-.452**	.232**	.244*	1.000	
Leisure exercise	.513**	-.592**	.755**	.800*	.582**	1.000

Note: \*\* means the correlation is remarkable at 0.01 level (double tails).

Set social support and gender-role conflict as the independent variable respectively and leisure exercise as the dependent variable; adopt the forced enter method to conduct regression analysis “Table IV”: ① the social support has significant positive effects on the leisure exercise ( $F(1,558)=198.854$ ,  $p < 0.001$ ), which explains 26% of the variables, also on the strength ( $F(1,558)=180.537$ ), duration ( $F(1,558)=324.339$ ) and frequency ( $F(1,558)=46.215$ ) ( $p < 0.001$ ), which respectively explains 24%, 37% and 8% of the

variables. ② The gender-role conflict has significant negative effects on leisure exercise ( $F(1,558)=300.732$ ,  $p < 0.001$ ), which explains 35% of the variables, also on the strength

( $F(1,558)=54.821$ ), duration ( $F(1,558)=74.615$ ) and frequency ( $F(1,558)=143.592$ ) ( $p < 0.001$ ), which respectively explains 9%, 12% and 20% of the variables.

TABLE IV. REGRESSION ANALYSIS OF LEISURE EXERCISE THROUGH SOCIAL SUPPORT AND GENDER-ROLE CONFLICT

Variable	Exercise intensity <sup>a</sup>			Duration <sup>b</sup>			Exercise frequency <sup>c</sup>			Leisure exercise <sup>d</sup>		
	B	SE	$\beta$	B	SE	$\beta$	B	SE	$\beta$	B	SE	$\beta$
(Constant)	1.9	0.108		0.929	0.11		2.437	0.098		4.362	2.057	
Social support	0.084	0.006	0.494***	0.114	0.006	0.606***	0.038	0.006	0.277**	1.67	0.118	0.513**

Variable	Exercise intensity <sup>e</sup>			Duration <sup>f</sup>			Exercise frequency <sup>g</sup>			Leisure exercise <sup>h</sup>		
	B	SE	$\beta$	B	SE	$\beta$	B	SE	$\beta$	B	SE	$\beta$
(Constant)	4.072	0.119		3.809	0.13		4.062	0.091		62.462	1.931	
Role conflict	-.051	0.007	-.299***	-.064	0.007	-.343***	-.062	0.005	-.452***	-1.928	0.111	-.592***

Note: SE= standard error; Ra2=0.24, Rb2=0.37, Rc2=0.08, Rd2=0.26, Re2=0.09, Rf2=0.12, Rg2=0.20, Rh2=0.35 ;

\*\*\* represents F value reaches the significant level of 0.001; \*\* represents F value reaches the significant level of 0.01; \* represents F value reaches the significant level of 0.05, similarly hereinafter.

### C. Mediating Effect Test of Gender-Role Conflict

To investigate whether the gender role conflict possesses mediating effect when the social support explains the leisure exercise, the following regression analysis is conducted based on above analysis. ① The negative regression on gender role conflict ( $F(1,558)=33.618$ ,  $T = -5.798$ ,  $p < 0.001$ ) of social support is significant ( $p < 0.001$ ) which explains the variable 6% "Table V". ② When getting involved in the gender-role conflict "Table VI", the regressions on leisure exercise of social support and gender-role conflict are separately significant ( $F(2,557)=274.673$ ,  $\beta_1=0.394$ ,  $\beta_2 = -0.498$ ,  $p < 0.001$ ) which jointly explain 50% of variable. Thereinto, the regressions on intensity ( $F(2,557)=107.918$ ,  $\beta_1=0.449$ ,  $\beta_2 = -$

0.192), duration ( $F(2,557)=193.196$ ,  $\beta_1=0.556$ ,  $\beta_2 = -0.211$ ) and frequency ( $F(2,557)=85.480$ ,  $\beta_1=0.179$ ,  $\beta_2 = -0.410$ ) are all significant ( $p < 0.001$ ) which separately explain 28%, 41% and 23% of variable.

TABLE V. REGRESSION ANALYSIS ON GENDER-ROLE CONFLICT OF SOCIAL SUPPORT

Variable	Gender-role conflict					
	B	SE	$\beta$	T	F	R2
(Constant)	20.000	.714		28.005		
Social support	-.159	.041	-.238***	-5.798	33.618	.06

TABLE VI. REGRESSION ANALYSIS ON LEISURE EXERCISE OF SOCIAL SUPPORT AND GENDER-ROLE CONFLICT

Variable	Exercise intensity <sup>a</sup>			Duration <sup>b</sup>		
	B	SE	$\beta$	B	SE	$\beta$
(Constant)	2.552	.164		15.537	1.721	
Social support	.076	.006	.449***	12.112	.104	.556***
Gender-role conflict	-.033	.006	-.192***	-5.188	-.040	-.211***

Variable	Exercise frequency <sup>c</sup>			Leisure exercise <sup>d</sup>		
	B	SE	$\beta$	B	SE	$\beta$
(Constant)	3.568	.138		25.892	36.799	
Social support	.025	.005	.179***	4.687	1.283	.394***
Gender-role conflict	-.057	.005	-.410***	-10.737	-1.622	-.498***

Note: Ra2=0.28, Rb2=0.41, Rc2=0.23, Rd2=0.50.

Comprehensive analysis: the regressions on leisure exercise of social support and gender-role conflict are separately significant (Table 4). Also the regression on gender-role conflict of social support is significant (Table 5); because of the intervention of gender-role conflict (Table 6), the regression coefficients for leisure exercise and various indicators are still significant and separately reduce to 0.394, 0.449, 0.556 and 0.179 (which originally are 0.513, 0.494, 0.606 and 0.277). It is thus proved that when the leisure exercise of female college students is explained by the social support, the gender-role conflict possesses part of the mediating effects. When studying the integration intensity, duration and frequency for leisure exercise by complying with the theoretical experience for evaluation on exercise amount level of Liang Deqing, we work out that  $a = -0.238$ ,  $S_a = 0.041$ ,

$b = -0.498$ ,  $S_b = 0.101$ ,  $c = 0.513$ ,  $S_c = 0.118$ ,  $c' = 0.394$ ,  $S_{c'} = 0.101$ . Input the corresponding value by checking with the Sobel test formula which is:

$$Z = \frac{ab}{\sqrt{S_a^2 b^2 + S_b^2 a^2}}$$

After calculating,  $Z = 3.76$ . Look up in the MacKinnon critical table where  $3.76 > 0.90$  ( $p < 0.05$ ,  $n > 200$ ) which means that the mediating effect of gender-role conflict is significant "Fig. 1". The ratio between mediating effect and total effect is: Effect  $m = ab/c = -0.238 \times -0.498 \div 0.513 = 0.2310$ , which means that the mediating effect of gender-role conflict shall account for 23.10% in the total effect.



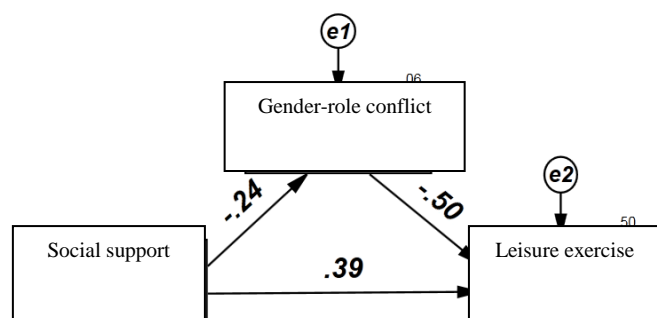


Fig. 1. Mediating effect model of gender-role conflict.

#### IV. DISCUSSION

##### A. Current Situation of Social Support, Gender-Role Conflict and Leisure Exercise of Female College Students

① The situation of leisure exercise of female students is not as ideal as expected. In recent years, to respond to the call of “Sunshine Sport Activities for National Hundreds of Millions of Students”, various regions and schools has formulated a series of measures to present new outlook of school sports and community sports work. However, although the related departments has risen the attention on student physical exercises and physical health to the national strategy level, which has provided favorable opportunities for improvement on the current situation of exercise of female college students, the situation of negative and non-autonomic leisure exercise of female college students has still not been effectively restrained and their exercise behaviors still lack the required standardization and habituation. ② Female college students can feel great social support. As a kind of important mental elasticity resource, the social support can improve the adaptive capacity for individual life changes which possesses certain gain effects for healthy growth of females. Unlike males, the thoughts of females are more exquisite and the personality of females is more modest and gentle, meek and friendly and the females possess higher sensitiveness on the external help, attention, support, advice and reminder and can easily feel the social support provided by the outside world and are more willing to accept and use the social help. ③ Female college students can feel the slight gender-role conflict in the leisure exercise. Since the establishment of People’s Republic of China, because of the intensification of ego-ideal, the social status of Chinese females have been generally improved which also accordingly weaken the gender-role conflict of female college students in exercise. Honestly, the society, community and school adopt the zero-supervision and the measure of discouraging with no interference on the leisure exercise of female school students which causes the consistent traditional cognition on the gender-role of female school students. In addition, the renewal of apparatus resources in the stadium is out of date and the instructors for exercise and fitness are insufficient, etc which cause the female college students to consider the contents and objectives of leisure exercise to be inconsistent with their customary behavior modes; what’s more, there are still parts of female college students being aware of their poor athletic ability and thinking that living at home, going to gathering and reading in leisure time are more

consistent with the female images of being meek, restraining and gentle and quiet than that shown in the physical exercise. These gender concept factors lead the female college students to feel the gender-role conflict in a certain degree which causes great troubles for the selection or practice of exercise behaviors of female college students.

It is found in the research that there are differences in social support and leisure exercise of female college students on the level of gender-role conflict. The existing behavior experience of female college students will form certain cognition and memory system which will form the established role assignment under the impacts of the traditional social gender expectations and will naturally and forcibly standardize what kinds of behavior can comply with the external expectations and what kinds of behaviors cannot be acknowledged by the society. This kind of role assignment generally causes female college students to think that the quiet and restraining social behaviors can be more easily to be accepted by the outside world than the quick and active physical exercise. Therefore, those with high gender-role conflict will feel more social support, understanding and identification than that felt by those with low gender-role conflict and will be more active in leisure exercise.

##### B. Impacts of Social Support and Gender-Role Conflict on Leisure Exercise

Firstly, the social support is the external impetus to promote the leisure exercise of female college students which possesses the gain effects. The individual can obtain more and more supports from families, school and friends and will easily feel the acknowledgement of their behaviors from the outside world which will make the leisure exercise of them possible; if they cannot obtain enough social support, this will not only block the intention of exercise of female college students but also will increase the procrastination tendency of exercise behavior or even cause the motivation to fade away. It is found in the data that the positive impacts on the duration of social support are the greatest. As we all know, the constellation effect of exercise of female college students is extremely obvious. They are more willing to take part in the exercise under good interpersonal atmosphere while the support and understanding from schoolmates can exactly provide the stable interpersonal atmosphere for female college students. They can develop the friendship and improve the communication with the companions so as to keep the exercise behaviors more durable.

Secondly, the gender-role conflict is an important factor that restricts the female college students to practice the leisure exercise. The set pattern of traditional gender consciousness and the cultural thoughts naturally endow males and females with different social role assignments. And it seems to be legal and reasonable that such role assignments differentiate in the sports field which will cause the consistent gender role concepts to compulsorily classify females as the weak in sports field. Although the social concept of gender equality has enjoyed popular support in our country and females also enjoy equal rights with males on many aspects including culture, politics, society and family, etc, the conditions and opportunities for leisure exercise of female college students

still cannot be comparable to that for males. While for the individuals of female college students, to avoid being slandered as “tomboy” and “tough girl”, they usually present the negative, passive, tired and other behavior disposition. To sum up, those with serious gender-role conflict will possess poorer autonomy, self-consciousness and enthusiasm and lower insistence and vitality on exercise. It is also shown in the data that the negative impacts on exercise frequency of gender-role conflict are the greatest. Frequency is a concrete pattern of manifestation of habituation of individual exercise. Generally speaking, those with serious gender-role conflict will possess relatively obscure value cognition and goal orientation toward the exercise. This group will lack the interests in physical exercise and it will be harder for them to obtain the deep experience and will be easy for them to form the social withdrawal behaviors which will even reduce the frequency and opportunities for exercise.

Finally, the gender-role conflict is an intermediate variable in the impacts on leisure exercise of female college students of social support and this mediating effect accounts for 23.10% in the total effect. The social support is benefit to buffer the mental stress of female college students and can provide necessary exogenous resources for them to respond to the living stress events. The high social support always come with good physical and psychological status which can keep/improve the physical and psychological health , maintain/motivate social behaviors through regulating negative impacts of other factors on mind and body. Under normal conditions: ①those with abundant social support will rationally analyze the social behavior properties and will be good at adapting to the situation reactions through changing the traditional cognitive concepts in leisure exercise. In other words, strong social support network will be helpful for female college students to reconstruct the traditional gender-role concepts, adapt to the modern social gender cognition, buffer the degree of gender-role conflict, obtain the acknowledgement on participation in the leisure exercise and make their exercise psychology to be more consistent with the active ego and the exercise behaviors will possess same active and lively and other statuses as that of the males. ② Those lacking social support will usually possess prejudices on cognition of their expected targets and will produce anxieties and avoidance behaviors in numerous and jumbled life. They are accustomed to self-isolation and are easy to feel the role conflict with exercisers of their gender which will cause the reduction of feeling of competence on exercise, regression of willing to exercise and limitation on participation behaviors. Therefore, granting more social support and acknowledge and remitting the gender-role conflict through changing the traditional social gender concepts may be a key link to promote the leisure exercise of female college students.

## V. CONCLUSION

The female college students can feel the high social support but their leisure exercise status is not that ideal; the female college students can feel low to intermediate gender-role conflict in the leisure exercise and there are differences between social support and leisure exercise on the level of conflict. The social support and gender-role conflict are the

two antecedent variables of leisure exercise which all possess significant impacts on leisure exercise of female college students; on the basis of gender-role conflict, the social support possesses significant impacts on the leisure exercise of female college students, that is, the gender-role conflict is one intermediate variable of the impacts on leisure exercise of female college students of social support and this mediating effect shall account for 23.10% in the total effect.

## REFERENCES

- [1] ALFANO C A, GINSBURG G S, KINGERY J N. (2007). Sleep-related problems among children and adolescents with anxiety disorders. *Journal of the American Academy of Child & Adolescent Psychiatry*, 46(2):224–232.
- [2] BANDURA A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall, 132-155.
- [3] DAI Q, YAO J X. (2012). Relationship between physical exercise and life satisfaction: The mediation effects of self-efficacy, social support and self-esteem. *Journal of Beijing Sport University*, 35(5):67-72.
- [4] DONG B L, ZHANG H, ZHU L Q, et al. (2013). Research on the mechanism of female students' physical exercise behavior. *Journal of Nanjing Sport Institute*, 27(6):91-98.
- [5] DONG B L, ZHANG H. (2016). Influence of gender-role conflict on exercise involvement of female university students. *Journal of Tianjin University of Sport*, 31(1):82-87.
- [6] HAGGER M S, BIDDLE S J H, CHOW E W, et al. (2003). Physical self-perceptions in adolescence: Generalizability of a hierarchical multidimensional model across three cultures. *Journal of Cross-Cultural Psychology*, 34(6):611-628.
- [7] HELGESON V S. (2003). Social support and quality of life. *Quality of Life Research an International Journal of Quality of Life Aspects of Treatment Care & Rehabilitation*, 12(1):25-31.
- [8] KAUER K J, KRANE V. (2006). “Scary dykes” and “Feminine queens”: Stereotypes and female collegiate athletes. *Women in Sport and Physical Activity Journal*, 15(1): 42-52.
- [9] LI J. (2011). The effects of gender-role conflict on training engagement of Chinese female athletes. *Journal of Capital Institute of Physical Education*, 23(2):152-155.
- [10] LIANG D Q. (1994). Stress level and the relationship with physical exercise for college students. *Chinese Mental Health Journal*, 8(1):5-6.
- [11] LIU J Z, HUANG H X, JIA F Q, et al. (2011). A new sex-role inventory (CSRI-50) indicates changes of sex role among Chinese college students. *Acta Psychologica Sinica*, 43(6):639-649.
- [12] PEI D C, GAO P F. (2013). Studying on the physical & mental health and the sport participation behaviors of migrant workers' children. *Journal of Sports and Science*, 34(1):94-98.
- [13] RUSSELL K M. (2004). On versus off the pitch: The transiency of body satisfaction among female rugby players, cricketers, and netballers. *Sex roles*, 51(9): 561-574.
- [14] SAGE G H, LOUDERMILK S. (1979). The female athlete and role conflict. *Research Quarterly. American Alliance for Health, Physical Education, Recreation and Dance*, 50(1): 88-96.
- [15] SCHAEFER C, COYNE J C, LAZARUS R S. (1981). The health-related functions of social support. *Journal of Behavioral Medicine*, 4(4):381-406.
- [16] SONG J M, FAN H Y. (2013). A meta-analysis of the relationship between social support and subjective well-being. *Advances in Psychological Science*, 21(8):1357-1370.
- [17] WEISS W M, WEISS M R. (2006). A longitudinal analysis of commitment among competitive female gymnasts. *Psychology of Sport and Exercise*, 7(3): 309-323.
- [18] XIE J L, MA H Y, TANG H Y, SHEN C G. (2015). Effects mechanism of sex on work interference with family: An empirical study based on the social role theory. *Acta Psychologica Sinica*, 38(1):191-195.

- [19] XIN Z Q, MA J X, GENG L N. (2006). Relationships between adolescents' hopelessness and life events, control beliefs and social supports. *Psychological Development and Education*, 22(3):41-46.
- [20] XU K. (2015). Regulative effect of social support on relationship between gender role conflict and stress of senior high school students. *China Journal of Health Psychology*, 23(4):555-559.
- [21] YE Y M, DAI X Y. (2008). Development of social support scale for university students. *Chinese Journal of Clinical Psychology*, 16(5):456-458.