

*Original Article***A Comparative Survey of Meta Cognition and Academic Motivation
in Urban and Rural Girl and Boy Students****Mottahedi, Alireza^{1*}, Keykhosravani, Moloud² and Dehghani, Mostafa³**¹*Department of Educational Psychology, Shahid Chamran University, Iran*²*Department of Psychology, Shahid Chamran University, Iran*³*Department of Family Counseling, Shahid Chamran University, Iran*

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ABSTRACT

The aim of this research was to do a comparative survey of met cognition and academic motivation in urban and rural students, in interaction with gender. So, 400 students were selected from high schools in Sabzevar townships by a multi-stage cluster sampling. The subjects were 196 urban and 204 rural students, comprising 210 girls and 190 boys. The instrument for studying met cognition in this study was Met cognition Awareness Inventory (MAI). This questionnaire has 2 main dimensions: Knowledge Met cognition and Regulative Met cognition. Another instrument which we study academic motivation by was Inventory of School Motivation (ISM). This questionnaire has 3 cardinal dimensions: Intrinsic Motivation, Extrinsic Motivation and Self-concept. According to the achieved results the urban students were higher than rural students in the whole met cognition scale and in the dimension of knowledge met cognition; and also from the viewpoint of academic motivation, the urban students were the higher group in the dimension of external motivation. Furthermore, for the gender difference in met cognition girls did better than boys in the modality of regulative met cognition. And also in the questionnaire of academic motivation, girls were of higher motivation in all dimensions except for the dimension of self-concept. The interaction effect between gender and the place of residence was examined for each of dimensions of met cognition and academic motivation by using the two-way ANOVA test that was not significant.

Keywords: Met cognition, Motivation, Urban, Rural, Gender, Sabzevar**INTRODUCTION**

Today perhaps the main concern of education is to teach learners who have the required self-regulation and self-sufficiency and also able to cope with changes and unpredictable events concerning to present time; attending in their learning process actively and with self-confidence, taking learning responsibility by themselves and have the potential for living in highly changing future society (Andrew, 1998; quoted from Foladchang, 2004).

The behavioural and cognitive self-regulation is one of the important subjects of cognition which has been differently defined by psychologists. Pintrich (1986) has defined the self-regulated learning as active self-controlled behaviour, target-oriented and having motivation and cognition for fulfilling and completing the assigned tasks by a student.

Of leading theories, in this context, is the theory of Pintrich & Degroot (1990) in which the following components have been mentioned:

- General Cognitive Skills:** it includes those skills which a student deploys them when he is learning, memorizing and comprehending.

- Met cognition:** it consists of the strategies of controlling, directing and modifying the cognition.

- Management strategy:** it refers to the controlling ways which an individual applies them on intrinsic and extrinsic sources in order to achieve to his or her desired goals.

- Motivation:** it causes the student to be led toward learning and achievement goals.

The considerable point is that the strategies of cognition, metacognition and motivation are internalized by social learning and enrichment of social environment of the student influences on the degree of his or her cognitive development because the public social concepts about cognition are transferred through informal experiences to children. It goes in parallel with learning by direct education in which a certain set of cognitive skills and the quality of using them are taught to the students (Pressley, Harris, & Marks, 1992).

According to research aim, it is less likely that rural students have that basic capacity necessary for studying in school. They have probably less desirable performance than the students from urban middle class in school (Slavien, 2006).

Underdeveloped regions create an environment in which the motivation, achievement and cognitive ability of the children are limited due to lack of positive role patterns, insufficient social services and other factors (Black & Krishnakumar, 1998).

Besides, the teachers go into teaching in the poor regions have no or little expectation from students to learn their lessons, so it could have an effect on their motivation as well as achievement (Becker & Luthar, 2002).

Based on above statements, the present study, on the basis of self-regulation theory and its factors namely metacognition and motivation and from view of environmental enrichment and its effect on students has been examined in both rural and urban society and also among girls and boys. The selection of metacognition and motivation and emphasizing on them has been made more exactly and comprehensibly because of their highly importance in schooling process. Metacognition has such importance in learning that some professionals in education define the successful learning based on acquisition of metacognitive knowledge (Boekaerts, 1999). Metacognition means thinking about oneself thoughts. Thinking can be about what one knows, [metacognitive knowledge] is about what one is doing it, [metacognitive knowledge] could be either cognitive state or personal feeling [metacognitive experience] (Flavell, 1979). Metacognitive thoughts do not come from external realities, but rather its source is related to mental representation of that reality. Therefore metacognitive has been described as thinking about thoughts, cognition of cognition or knowledge and cognition about phenomenon of cognition (Flavell, 1979). Metacognition is a general construct which is independent of intelligence ability.

By overview on previous investigations it can be concluded that metacognition and motivation are two interrelated constructs so that students will be successful if they are dominant on both of them (McInerney & Sinclair, 1992). The research has proved their direct influences on academic achievement (Theodosiou & Papaioannou, 2005). Consequently, it can be assumed that students residing and studying in the villages probably will have problem in metacognition and motivation skills compared to those living in the cities due to little experiences and limited movements.

The aim of each educational system is to foster motivated, progress-oriented and efficient learners. Some processes related to achievement, which are significantly considered in the research literature, are motivation, metacognitive and cognitive strategies used by individuals during learning (Theodosiou & Papaioannou, 2005). In fact, cognition and awareness of learners about those cognitive processes as well as metacognitive strategies are main effective factors on learning and academic achievements and the considerable point is that in contrast to intelligence and born talents, they are educable and learnable (Seif, 2001). Paris and Winograd (1990; quoted from Mokhtari & Richared, 2002) have argued that increased awareness of individuals has two advantages: (i) passing on the checking responsibility of learning from teachers to students (ii) increasing the self-perception, emotion and positive motivation among learners. Thus the metacognition provides a personal insight about oneself thinking and in turn raising the independent learning. High and internal motivation leads to further using of cognitive abilities. Since metacognition, learning and motivation are interrelated constructs (Paris & Winograd, 1990; quoted from Mokhtari & Richared, 2002) it seems that studying the effect of environmental and cultural conditions on metacognition and motivation which influence on academic achievement as well, could be a step toward learning improvement of the people. Thus due to scarce of domestic research on this case, the present study tries to fill this gap. By focusing on these two concepts and introducing effective proposes to the teachers and educational planners it can significantly help the students to seize educational opportunities and promote their education and also provide a means to the teachers by which to address academic issues of the students especially rural ones.

By considering these points and with respect to the importance of both motivation and metacognition and their effect on people's performance especially in the academic settings and also the role of these constructs in the teaching-learning process, it seems that recognizing the quality of interaction of these constructs with the variable of environmental differences can be a pace toward discovering and solving the problems caused by individual differences of the learners in the educational settings. Thus this study particularly focuses on examine of metacognition and academic motivation dimensions in both rural and urban secondary school students. It also discovers whether there is a significant difference between rural and urban students based on the degree of motivation and metacognition characteristics.

MATERIAL AND METHODS

Subjects

Forty hundred students were chosen for this study. This sample consists of 210 females and 190 males subjects who attending in the rural and urban high schools at Sabzevar city in the Khurasan province. The subjects were selected and tested through multistage randomized cluster sampling.

Metacognition Awareness Inventory (MAI)

The metacognition awareness inventory (MAI) was developed by Sheraw and Denison in 1994 in order to examine metacognition of adolescents and adults learners. This inventory contains 52 items and measures different factors: two dimensions of metacognition i.e. knowledge of cognition and regulation of cognition and eight sub-processes of metacognition. The cognitive knowledge factor includes three sub-processes i.e. expressional, methodical and situational knowledge and regulation of cognition factor involves five sub-processes that are planning, information management strategies, inspection of perception, and difficulty evaluation of learning process. The answers to this questionnaire are evaluated by a 5-Point Likert Scale (1-never 2-seldom 3-sometimes 4-often 5-always).

Schraw and Dennison (1994) through a research have examined the validity and reliability of the scale. The results of exploratory factor analysis confirmed the existence of both of the factors (i.e. cognitive and regulative factors) in the questionnaire. They also reported the internal consistency of MAI between 0.88 and 0.93. The evidence relating to reliability was estimated by Cronbach alpha. The value of the coefficient for the whole scale and for both dimensions i.e. knowledge of cognition and regulation of cognition was reported 0.93 and 0.88 respectively.

At the present study in order to examine validity of the questionnaire the inter-correlation method of overall scales and subscales was used. The obtained correlation coefficient between sub-components of cognitive knowledge dimension and its total score was 0.82 to 0.89 and for regulation of cognition dimension the correlation between sub-scales and its total score was 0.82 to 0.89. Also the correlation coefficients between two overall dimensions of both knowledge and regulation of cognition were measured by total score of metacognition scale which were 0.91 and 0.98 respectively. All the coefficients are significant at level 0.01. To identify reliability of questionnaire, the Cronbach alpha coefficient was used for its different dimensions which was 0.94 for overall scale and for dimensions of knowledge of cognition and regulation of cognition were 0.84 and .91 respectively. These coefficients were .60 to .76 for subscales.

Academic Motivation Scale

In order to measure the academic motivation variable the Inventory of School Motivation (ISM) was used. This shortened questionnaire included forty nine phrases about eleven-dimension academic motivation provided by foladchang (2004).

This instrument is on the 5-choice Likert scale (fully agreed, agreed, not certain, disagreed, fully disagreed).

Reliability and validity of ISM has been examined by McInerney & Sinclair (1992) on a 2152 sample consisted of both girls and boys in seventh through tenth grades in Australia. For investigating the validity of questionnaire a factor analysis has been done by which it was found that ISM is almost strongly confirmed in the light of existence of numerous distinct parameters affecting on students' motivation.

The reliability of different scales of ISM was obtained through measuring Cronbach alpha coefficient. According to Mac McInerney & Sinclair (1992) the alpha coefficient for different scales is generally attained above 0.70. foladchang (2004) measured the questionnaire's reliability through both retest and alpha coefficient estimation. The total test reliability coefficient was 0.94 and the eleven-scale reliability coefficients were varying from 0.70 (related to progress-oriented scale) to 0.90 (in extrinsic motivation). In addition, the internal consistency calculated by foladchang through alpha coefficients showed 0.77 for overall questionnaire and for different scales it was 0.27 the lowest (in progress-oriented scale) and 0.77 the highest (in extrinsic motivation) with median 0.50.

At the present study in order to examine validity of the questionnaire the inter-correlation method of overall scales and subscales was used. The correlation of intrinsic motivation dimension with its subscales was between 0.76 and 0.85. Similarly the correlation of extrinsic motivation with its subscales was between 0.71 and .80. In the self-concept dimension the correlation ranges from .66 to 0.85. The correlation of extrinsic and intrinsic motivation and self-concept dimensions with overall scale was 0.82, 0.97 and 0.76 respectively. All the mentioned above coefficients are significance at level 0.01.

To determine the reliability of questionnaire, the Cronbach alpha coefficient for overall scale as well as each subscale was estimated. The obtained coefficient of overall scale was .83 and that of extrinsic, intrinsic motivation and self-concept dimensions were 0.70, 0.75 and 0.72 respectively. In the partial scale the alpha coefficient varied between 0.35 in task-oriented scale and 0.68 in social cooperation one.

RESULTS

Two -way analysis of variance was used in order to examine the signification of difference between rural and urban students, both girls and boys, in different dimensions of metacognition scale as well as academic motivation.

1- Analysis related to metacognition scale

➤ Investigation difference in type of population & gender, based on metacognition scale total score

Table 1. Average and standard deviation of metacognition score Based on variables gender & type of population

Gender	population	μ	s	n
Girl	rural	14.191	72.78	98
	urban	49.196	57.77	112
	total	99.193	17.28	210
Boy	rural	84.185	43.33	106
	urban	47.191	55.74	84
	total	94.187	93.79	190
Total	rural	02.188	32.31	204
	urban	34.194	47.76	196
	total	12.191	14.79	400

Table 2. Investigation effect type of population & gender, on metacognition

	ss	df	Ms	F	Sign.
Gender	596.29	1	596.2998	578.3	059.0
Type of population	508.33	1	508.3372	024.4	046.0
Type of population* gender	045.24	1	045.24	029.0	866.0
Within	821.33	396	07.838		
Total	24.33	399			

➤ **Investigation difference in type of population & gender, based on knowledge of metacognition**

Table 3. Average and standard deviation of knowledge of metacognition score based on variables gender & type of population

gender	population	μ	s	n
Girl	rural	32.61	94.9	98
	urban	68.63	23.9	112
	total	58.62	67.9	210
Boy	rural	57.60	73.11	106
	urban	14.63	50.7	84
	total	71.61	14.10	190
Total	rural	93.60	89.10	204
	urban	45.63	57.8	196
	total	17.62	87.9	400

Table 4. Investigation effect type of population & gender, on knowledge of metacognition

	ss	df	ms	F	sign
Gender	482.41	1	482.41	430.0	512.0
Type of population	145.60	1	145.60	219.6	013.0
Type of population* gender	053.1	1	053.10	011.0	917.0
Within	795.38	396	496.96		
Total	44.38	399			

➤ **Investigation difference in type of population & gender, based on regulation of metacognition**

Table 5. Average and standard deviation of regulation of metacognition score Based on variables gender & type of population

gender	population	μ	s	n
Girl	rural	81.129	99.19	98
	urban	80.132	39.19	112
	total	40.131	68.19	210
Boy	rural	56.124	12.23	106
	urban	33.128	07.18	84
	total	23.126	07.21	190
Total	rural	08.127	78.21	204
	urban	88.130	92.18	196
	total	95.128	49.20	400

Table 6. Investigation effect type of population & gender, on regulation of metacognition

	ss	df	ms	F	sig
Gender	703.23	1	703.23	644.5	018.0
Type of population	311.11	1	311.11	725.2	100.0
Type of population* gender	035.15	1	035.15	036.0	849.0
Within	077.16	396	634.41		
Total	067605	399			

2- Analysis related to motivation scale

➤ Investigation difference in type of population & gender, based on internal motivation

Table 7. Average and standard deviation of internal motivation score Based on variables gender & type of population

gender	population	μ	s	n
Girl	rural	67.48	36.5	98
	urban	39.49	59.5	112
	total	05.49	48.5	210
Boy	rural	61.47	49.6	106
	urban	23.47	44.6	84
	total	44.47	45.6	190
Total	rural	14.48	98.5	204
	urban	46.48	05.6	196
	total	29.48	016	400

Table 8. Investigation effect type of population & gender, on internal motivation

	ss	df	ms	F	sig
Gender	4.25	1	4.255	149.7	008.0
Type of population	929.50	1	929.2	082.0	775.0
Type of population* gender	599.29	1	599.29	829.0	363.0
Within	645.141	396	724.35		
Total	777.14	399			

➤ Investigation of difference in type of population and gender, based on external motivation

Table 9. Average and standard deviation of external motivation score Based on variables gender & type of population

gender	population	μ	s	n
Girl	rural	16.58	05.9	98
	urban	83.59	13.9	110
	total	05.59	11.9	210
Boy	rural	48.55	29.10	106
	urban	53.57	97.8	84
	total	38.56	75.9	190
Total	rural	76.56	78.9	204
	urban	85.58	00.9	196
	total	79.57	50.9	400

Table 10. Investigation effect type of population & gender, on internal motivation

	ss	df	ms	F	sig
Gender	193.61	1	193.61	945.6	009.0
Type of population	882.34	1	882.34	888.3	049.0
Type of population* gender	541.30	1	541.3	04.0	842.0
Within	85.35	396	439.88		
Total	36.36	399			

➤ Investigation difference in type of population and gender, based on self-concept

Table 11. Average and standard deviation of self-concept score Based on variables gender & type of population

gender	population	μ	s	n
Girl	rural	09.56	65.6	98
	urban	97.56	95.6	112
	total	56.56	80.6	210
Boy	rural	22.56	86.7	106
	urban	88.57	62.7	84
	total	95.56	78.7	190
Total	rural	16.56	29.7	204
	urban	36.57	24.7	196
	total	75.56	28.7	400

Table 11. Investigation effect type of population & gender, on self-concept

	ss	df	ms	F	Sign.
Gender	844.26	1	844.26	506.0	477.0
Type of population	899.15	1	899.15	998.2	089.0
Type of population* gender	77.14	1	77.14	279.0	598.0
Within	469.21	396	006.53		
Total	21.175	399			

DISCUSSION AND CONCLUSION

The results of data analysis show that the main effect of population type on metacognition is significant [$F_{(396,1)} = 4.024$ and $P < 0.046$]. It means that the urban students scored higher than their counterparts in the villages on the metacognition general scale. Since the knowledge and metacognition strategies, in contrast to intelligence and inherent talents that are educable and learnable (seif, 2001) and because most of research has supported of effectiveness of metacognition education in certain spans and for different groups, the students studying in poorer educational settings and are possibly given little education have lower metacognition characteristics. Specifically if it is considered that the rural students who attend at schools having lower qualities and their teachers do not possess the needed experiences and qualification (Haycock, 2001), then the difference between rural and urban students in metacognition will be acceptable.

The other advisable subject is that the rural communities are more collectivism than urban people (foladchang, 2004). In the collectivism communities the people tend to make relation to each other and have social networking; this possibly causes they rely more on others in their cognitive regulation than on their own knowledge and metacognition skills.

The dimensions of metacognition scale were also examined in both rural and urban students through which it is revealed that the main effect of population type on metacognition is significant [$F_{(396,1)} = 6.219$, $P < 0.013$]. It means that urban students are highly skilled in met cognition compared to rural ones. However the main effect of population type on dimension of metacognitive regulation is not significant [$F_{(396,1)} = 2.725$, NS]. Possible reasons for justifying the discrepancy between urban and rural students have been explained in the discussion of total score of metacognition. Those reasons are also true for observed discrepancy in dimension of metacognitive knowledge. Yet, in explaining the non-discrepancy between rural and urban students in dimension of metacognition regulation, Shia (2004) believes that met cognition strategies typically act as a compensatory mechanism for learners with low capacity. In the other word the students who are have low ability in learning resort to met cognition strategies in order to compensate their weaknesses. Thus the rural students who have both little educational stimulates (Haycock, 2001) and knowledge of met cognition (based on results of this research) partly enjoy from regulation of met cognition. Non-discrepancy in dimension of metacognitive regulation is acceptable because it seems that all the students, whether urban or rural, in order to be succeeded in their tasks must deploy the met cognition strategies and cognition regulation, since the relationship between met cognition and academic achievement has been confirmed in many research (mokhtari & richard, 2002).

Each of knowledge and regulation of met cognition in itself have subscales which have been analyzed in this research. It seems that due to being partial of these subscales it is not necessary to discuss about all of them in this research. They explain here only for applications of diagnosing, educational, and signification of difference between rural and urban students.

In dimension of met cognitive knowledge the urban students on subscales of expressional and situational knowledge are superior to rural ones. The mean scores of the urban students on subscales of expressional as well as situational knowledge were 29.72 and 18.67 respectively and for rural students the mean scores of subscales were 28.56 and 17.84. However on subscales of trend knowledge there was no significant difference between them.

In the met cognitive regulation dimension, the difference between urban and rural students on subscales of information management and fault-removing strategies is significant and the urban students are of higher ability on both subscales. It means that their average scores on these two scales were 37.46 and 20.12 respectively. But on subscales of planning, perception inspection, and evaluation of learning process there was no significant difference between two groups of students.

The main effect of gender on met cognition of main effect of gender of total score of met cognition is not significant [$F_{(396,1)} = 3.578$, NS]. Because the basic hypothesis of this research is that students' cognitive and met cognitive skills are influenced by degree of their environmental enrichment (slavien, 2006) and also since the rural students have limited opportunities to promote their capacity due to residing in deprived regions. The non-difference between girls and boys in met cognition may be justified by this way. If urban society and rural communities are considered as secured and deprived then both of gender, whether urban or rural, are inhabited in the settings which have the same educational opportunities. Therefore there should not metacognitively be a difference between girls and boys. Based on data the urban students in both genders are of stronger met cognition; conversely the rural students have weaker met cognition in both genders. In turn the mean scores of both urban girls and boys on total score of met cognition were 191.47 and 185.84 respectively and in rural students they were 196.49 and 191.14.

If the analyses related to met cognition dimensions are considered, it reveals that in met cognitive knowledge dimension the main effect of gender is not significant [$F_{(396,1)}=0.43$, NS]. It is consistent with the hypothesis based on non-discrepancy in both genders due to placing in similar educational settings. However in dimension of met cognition regulation the main effect of gender is significant [$F_{(396,1)}=5.644$, $P<0.018$]. It means that the girl students are of higher met cognition regulation than the boys. According to conducted research, the girls always receive high scores in schools compared to boys and since metacognition strategies are main factors affecting on academic achievement and learning, the girls must deploy more met cognition strategies in their studying than boys and they are more dominance in met cognition regulation. Thus the results of this research are consistent with Mokhtari and Richard (2002)'s theory.

In order to describe the met cognition state in girls and boys more precisely, the results of analyses related to subscales of each metaconition dimensions are explained. In the metaconition regulation dimensions, the gender effect is not significant on subscales of expressional, trend and situational knowledge. However in the met cognition regulation the differences in subscales of information management and fault-removing strategies are significant and in the subscales of planning, perception inspection and evaluation of learning process there was no significant difference between girls and boys.

The main effect of population type on dimensions of academic motivation has been clustered in various forms which each explain the reasons of the behavior. However it should be noted that these dimensions is not always consistent with each other. For example Ryan and Deci (2000) believe that the intrinsic motivation is opposite of extrinsic motivation. Hence because the motivation questionnaire used in this research has various dimensions and may not be consistent with each other, the estimation and analysis of total score has not done and only the analysis of academic motivation dimension has been dealt with.

According to the results, the main effect of population type on intrinsic motivation is not significant [$F_{(396,1)}=0.082$, NS]. The intrinsic motivation means fulfilling an activity for that activity itself. It means that the activity is per se interesting and satisfiable. According to Ryan and Deci (2000) the intrinsic motivation is an inherent desire for exploring, learning, promoting the abilities, observing the phenomenon and challengeable. With regard to this point that the tasks and materials are the same for all the students, it seems that there is no different between students by degree of intrinsic motivation to deal with their tasks. Almost all the students to the same extent have always valued the school tasks and achieving the academic goals and the effect of environment on them is tiny.

In intrinsic motivation subscales this similarity is obvious and the main effect of population type on three subscales i.e. progress-oriented, task-oriented and purposefulness is not significant.

However on extrinsic motivation the results of variance analysis show that the main effect of population type on extrinsic motivation is significant [$F_{(396,1)}=3.888$, $P<0.049$]. It means that urban students have higher extrinsic motivation than rural ones. In contrast to intrinsic motivation, it is based on access to external factors such as reward, confirmed by others and avoiding of punishment. The aim of performing an activity is that to response to cases outside that activity. In other word, one does an activity to achieve distinct consequences of that activity (Ryan & Deci 2000). Duck (2004) point out that the externally motivated behaviours are those that contribute to reward, social status and positive evaluation by others. Since in the urban societies the expertise and education level are the important factors in promotion of standard of living and distinguishing the socio-economic status of the people and the children are expected to move ahead progressively and their achievement in school to be rewarded (Trawick-Smith, 1997) and the students through academic achievement can attract their relatives attention, it seems natural that urban students are of stronger extrinsic motivation. On the other hand, in the rural communities the higher education is not welcomed and considered as a top priority. Therefore it is less likely that the rural students to be encouraged to pursue their education. These students due to employ in inferior jobs, which do not require a higher education, have not the stimulus and potential required for continuing their education (Halle, Kurtz-Coster, & Mahoney, 1997). Thus the extrinsic motivation in rural students is poorer than the urban ones. The results of variance analysis on subscales of extrinsic motivation dimension show that the differences in subscales of reputation and material rewards are significant and the mean scores of urban students

are higher than rural ones. However on the subscales of competitiveness and authoritarian the differences are not significant. Also the main effect of population type is not significant.

In the case of the main effect of gender on academic motivation the various investigations have generally shown that the girls have higher motivation as well as tendency for academic achievement compared to boys (Maher & Ward, 2002). The results of present research also demonstrate that the girls have higher motivation in most of academic motivation dimensions. This is consistent with previous research (Pomerantz, Altermatt, & Saxon, 2002).

The results of variance analysis on intrinsic motivation dimension show that the main effect of gender on intrinsic motivation is significant [$F_{(396,1)} = 7.149, P < 0.008$].

It shows that the girls are of more intrinsic motivation than the boys. Perhaps the possible reason is that the academic activities account for a major part of their social and individual life, whereas the boys are of more choices and free-action which do not devote their energy on studying. The girls possibly satisfy their mental and social needs by academic activities.

The main effect of gender on intrinsic motivation is significant [$F_{(396,1)}, P < 0.009$]. It means that the girls have more intrinsic motivation than the boys. The people typically consider to education as means for achieving their goals. But the boys do not perceive the education as an only possible way to secure their life. They seek many other ways to gain reputation and welfare in present and future which do not require higher education whereas the girls consider the education as a best choice for reputation and social status. The main effect of gender on self-concept is not significant. [$F_{(396,1)} = 0.506, NS$]. This is consistent with previous research. According to research, although the girls receive higher scores than the boys but the boys overestimate their skills, whereas the girls underestimate their skills.

By examining the two-way analysis of variance on both dimensions and subscales of met cognition and academic motivation it reveals that interaction effect of population type on gender in most of them is not significant. Only in self-concept dimension from academic motivation scale, the subscales of self-reliant and social cooperation have significant interaction effect.

The findings of this research on differences of motivation and met cognition of both urban and rural students can help entrepreneurs in education to improve and enrich education process of the students. The necessary of consider to training the teachers and managers in motivation and met cognition strategies and its effect on educational, emotional, social especially in rural schools which their students are of no or little motivation and met cognition characteristics is the application of this research.

With regard to findings and results of this research, the following cases present as research recommendation to authors interested in cognition field.

1-Selecting a sample so that to cover the students in other grades. It can show the changes in motivation and met cognition throughout the schooling years.

2- Studying and comparing the rural and urban students status in other context such as cognition strategies, goal orientation, relation pattern, child-rearing style, type of attachment can help the education in planning on rural communities.

3- Examining the other influential factors on motivation and met cognition could help the body of scientific research. For example studying the teacher contribution, parent education, amount of income, economic household possibilities, teacher exceptions, mental and social atmosphere in classroom, and role of peers can provide a suitable context for scientific investigation.

4-Conducting experimental research using suitable strategies in order to learn the cognition and met cognition strategies for rural students and examining and comparing educational, cognitive, emotional consequences can help the teachers to become familiar with strategies and scientific methods.

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