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Role of Academic Self-Handicapping and Self-Regulated Learning Strategies in Mastery Goal Orientation among Adolescents

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The present study attempted to investigate the role of academic self-handicapping and self-regulated learning strategies in mastery goal orientation among adolescents. The sample comprised of 550 school students (age range = 14-16 years). Instruments namely Self-Handicapping Scale (Jones & Rhodewalt, 1982), Self-Regulation Inventory (Cleary & Platten, 2013), and Achievement Goals Questionnaire-Revised (Elliot & Murayama, 2008) were used. It has been found that self-handicapping was negatively associated with self-regulated learning strategies and mastery goal orientation; whereas self-regulated learning strategies was positively linked with mastery goal orientation. In addition, it has been found that girls displayed less self-handicapping behavior and more self-regulated and better goal oriented behavior as compared to boys. Demographic group differences showed that adolescents enrolled in private schools with higher maternal education were less engaged in self-handicapping behavior and more self-regulated and achievement goal oriented as compared to government school students. However, significant differences were found on paternal education in relation to mastery goal orientation only.

Keywords: Academic self-handicapping, self-regulated learning strategies, mastery goal orientation, adolescents, schools.

Students' academic achievements are very much important for their future prospects. Students' personal habits, attitudes, traits, and their abilities greatly shaped their academic performance. For instance, procrastination, self-efficacy, self-discipline, motivation and engagements play a vital role in their learning and academic achievements. These academic achievements make students to work hard to reach their career goals and ensure a better future for them.

Academic self-handicapping is conceptualized as perceived incapacity or hindrance of the students in performing expected academic output (Barzegar & Khezri 2012). Self-handicapping is also experienced by the students when

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they try to weaken their progress and more often to show impression management (Urdan, 2004). Tice (1991) explained self-handicapping as an attitude shown by a student to guard off and keep his/her current level of self-belief in a task in which he/she thinks that his/her peculiarity or honor is at stake. A behavior to be categorized as self-handicapped would happen prior to the task that pushes a student to perform badly in that task. Many examinees talk about the poor preparations they had for the exam and by doing this they try to give a reason for their bad performance. Only if they had studied for the exam they would not have self-handicapped (Akça, 2012). However, students who did not study simply because they forgot that there was any exam tomorrow are not self-handicapping behavior; however, the students who did know about the exam but did not study, they intentionally provided themselves an excuse for their low performance (Cocorada, 2011). Self-handicapping is adopted specifically to influence the judgments or attributions of other people (Chorba, Was, & Isaacson, 2012). Therefore, self-handicapping is intentional; it includes attitude adopted by a student to give an excuse of his failure or bad performance, and save his self-esteem (Urdan, 2004).

Self-Regulated Learning Strategies

The other variable which has been explored in the present study is self-regulated learning strategies. It means learning processes used by students which are generated by their own behavior, attitudes, and thoughts for the achievement of their learning tasks (Zimmerman, Boekarts, Pintrich, & Zeidner, 2000). Self-regulation means the independence and control in the course of which individuals implement, evaluate and modify his strategies for the achievement of goals proficiently (Pulkka & Niemivirta, 2013). Likewise, Zimmerman et al., (2000) deliberated that self-regulated learning strategy is a process which is reflected in terms of concrete and consistent behavioral actions focusing upon acquisition of new skills and expertise. Pintrich (2000) suggested different components of self-regulation which operates in three phases.

Forethought phase. Learners set different tasks by having a sense of belief in their abilities for completing those tasks efficiently (Pintrich, 2000).

Monitoring. In this process they focus on their performance and implement different processes selected by them to learn tasks and then compare the results with desired outcomes to determine whether their approach is right or not. In this way they are strengthening their self-belief that their efforts are being made in the right directions and are resulting in positive desired outcome (Cleary & Platten, 2013).

Evaluating. During this process, students self reflect on their performance and evaluate whether the strategy adopted by them is effective or not. They want to succeed but the strategy adopted by them might not be right, this is the phase where they change their strategies and work hard, showing perseverance, using different method if needed, or obtaining feedback about their performance. To motivate, bring efficiency in learning process and to strengthen the self-belief individuals can use these processes (Zepeda, Richey, Ronevich, & Nokes-Malach, 2015).

Dimensions of Mastery Goal Orientation

Another construct that has been investigated in the present study as an outcome is mastery goal orientation. It has been defined as an integrated set of attitudes, perceptions, and characteristics that shows multiple ways of setting goals, making strategies and responding to different goal oriented situations faced by individuals (Gonida & Cortina, 2014). In addition, mastery goal orientation is reflected in actions of individual targeted upon the values attached to that goal achievement (Cleary & Platten, 2013). By understanding these, teachers can recognize the student's psychological process of achievement behavior, thereby, provide opportunities and motivate students to work hard towards the achievement of their goals (Farsani, Beikmohammadi, & Mohebbi, 2014).

Numerous studies (Cleary & Platten, 2013; Gonida & Cortina, 2014) indicated that an achievement goal orientation is an individual's level of performance in academic tasks which is strongly linked with mastery goals and performance goals. Alternative definition of mastery goal also includes task or ego goals and learning or performance goals (Grant & Dweck, 2003). The structure of the mastery or performance has been used in modern literature of achievement, individuals adopting mastery goal techniques try to achieve competence through learning and understanding and they improve their current level of competence from their previous level of competence through feedback and goal achievements (Pulkka & Niemivirta, 2013).

According to Elliot and McGregor (2001), individuals adopt performance approach to establish themselves superior as compared to others by doing well in achieving their goals in academic environment and always try to do better as compared to previous efforts. However, the individual adopting performance avoidance orientation is just trying to avoid performing worse than others (Gegenfurtner & Hagenauer, 2013).

Elliot and McGregor (2001) elaborated goal orientation in the context of provisions of proficiency tasks and aptitude feedback or self-evaluation. They divided goal orientation into four-dimensional approach, and divided mastery goal orientation into two dimensions known as mastery approach and mastery avoidance. Similarly, McCrea, Hirt, and Milner (2008) proposed goal orientation in 2 × 2 conceptualization comprising mastery-approach, mastery-avoidance, performance-approach, and performance-avoidance goals as follows:

Mastery-approach goal orientation. Under this approach students work on improving their abilities, competence level, knowledge level, skills, understanding level and making better strategies. Student falling under this category believe that ability is changeable (i.e. subtractive speculation of skills), multifaceted and compound set of tasks which should be built around the related competency and can be achieved by making good strategies and showing motivation and having self-belief (Elliot & McGregor, 2001).

Mastery-avoidance goal orientation. In this category students make efforts only to acquire bear minimum level of performance as compared to their fellows. They misunderstand information; they feel that their self-esteem is at stake and lack faith and conviction in their abilities (Effeney, Carroll, & Bahr, 2013).

Performance-approach goal orientation. It is apprehensive to situations when individuals try to perform better as compared to others, they have a sense of competition and want to be seen as competent and able and more efficient as compared to others. They believe in entity theory of ability, for them learning is a continuous process of achieving higher levels of performance, they involve in self-evaluation and ask for evaluation from others, and perceive failure as a sign of inability (Leondari & Gonida, 2007).

Performance-avoidance goal orientation. It occurs when individuals seek to refrain from unfavorable judgments from others. The students who apply this type of reference see learning tasks as a warning to their self-esteem and self-worth; they have low activity level and performance and are more anxious (Grant & Dweck, 2003).

Numerous studies (Hirt, McCrea, & Boris, 2003; Hip-Fabek, 2006) have explored the relationship between academic self-handicapping and self-regulated learning strategies; for instance, it has been found that there are situations where self-handicapper uses to influence the judgment of fellow students and teachers about oneself (Kazemi, Nikmanesh, & Khosravi, 2015).

Academic environment also provides the opportunity to study the self-handicapping behaviors in relation to context. That is, the context in which self-handicap strategies are used and how the context influences an individual's self-handicapped behavior (Pomerantz, Altermatt, & Saxon, 2002).

Different studies (Zimmerman et al., 2000; Pape, Bell, & Yetkin, 2003) demonstrated that the procrastination in learning environment plays critical role in self regulating behaviors of the students. Students using self-regulated techniques perform well in achieving learning tasks as they set their own tasks, devise methodologies, and try to improve their level of competence on their own (Park & Sperling, 2012). Similarly, self-regulated learners show positive attitude towards them, have high self-esteem, and self-efficacy, and use mastery goal orientation techniques (Pintrich, 2000). On the other hand, students with poor self-regulation usually fail in adopting effective learning techniques and have low self-efficacy and self-esteem; and do not understand the task at hand rather they just try avoid not to do worse than their fellows (Pintrich, 2000). These qualities of poor self-regulators are usually found in academic procrastinators. Additional empirical evidence showed that students exhibit high level of self-handicapping due to that difficulty in time management, low interest in school lessons, and not being decisive in setting up their priorities (Radosevich, Vaidyanathan, Yeo, & Radosevich, 2004).

Steel, Brothen, and Wambach (2001) concluded that the self-handicapping seems to be a strong indicator of avoidance-based strategy, and a performance-avoidance goal which is also strengthened by Radosevich et al., (2004) inferring negative relationship between self-handicapping and mastery goal orientation. Moreover, indications of performance-approach goals would be difficult to produce, as performance-approach goals represent skills that concentrate on standardizing achievements and may adversely identified to self-impairments (Barzegar & Khezri, 2012). Performance-approach goals likewise hold self-presentation concerns (Zepeda, Richey, Ronevich, & Nokes-Malach, 2015) and they may be decidedly identified to self-handicapping (Cocorada, 2011).

According to Urdan (2004), a student chooses objectives in view of his/her environment's expectation. In a classroom, where teachers give more importance to grades and consider grades as benchmark to judge the student's competence; in such an environment the students would probably follow performance goal approach. On the other hand, students who believe that they cannot get good grades tend to adopt performance avoidance approach to

avoid being seen as incompetent. These type of students are only concerned about being looked or judged as incompetent, and will not seek help, thereby limiting their academic challenges. Studies (Al-Harthy, Was, & Isaacson, 2010; Urdan, 2004) further suggest that students being judged as incompetent or weak based on their grades; adopted goals that were weakening to their learning. Students adopting performance-avoidance goals try to protect their self-esteem and pride by not being looked as incompetent on unintelligent (Farsani et al., 2014). Those students might have more chances of leaving schools due to their reluctance to work hard and seeking help from others for proper guidance (Eccles & Wigfield, 2002). Students who adopt performance-avoidance goals tend to have low self-efficacy, and show reluctance in seeking help as they consider it as a sign of incompetence (Zepeda et al., 2015).

Few studies have demonstrated connections between achievement goal orientation and cognitive and self-regulated learning strategy use. For instance, Elliot and McGregor (2001) asserted that sixth grade students' self-regulated learning is absolutely joined with a task goal orientation. According to theories of self-regulated learning (Winne, & Hadwin, 2008; Zimmerman et al., 2000), tasks set by the learner for oneself to inspire to behave in a manner that would result in achieving that task efficiently and perform better in the future. Distinctive studies (Winters, Greene, & Costich, 2008) have analyzed how learning forms intercede the affiliated among achievement goals and outcomes, describing these learning processes as cases of intellectual commitment, self-regulation of learning, or the technique use.

Dialect learners have exposed incredible enthusiasm for the region of goal orientation and self-regulation and their interaction to learners' achievement. Learners' scholastic achievements are exaggerated by learner's self-regulated and goal-oriented methodology (Schunk & Zimmerman 2003). Researchers (Radosevich et al., 2004) examined the liaison of goal orientation and self-regulatory processes in an achievement background. The level of self-regulation useful for the students and the assets owed for task achievements would bring about fruitful dominance of mastery goal orientation (Park & Sperling, 2012). Additionally, performance-avoidance goal orientation strategy is negatively related with subjective self-regulation (Gegenfurtner, & Hagenauer, 2013).

The current study aimed to observe the feasible links between self-handicapping and self-regulated learning strategies in mastery goal orientation. Fewer studies have been done on self-handicapping in young school children to see the development context of individuals who utilized this strategy. However, the present study attempted to determine the effect of

academic self-handicapping behavior on the performance and achievement of the adolescents.

The gap between academic self-handicapping and academic performance has been seen in the existing literature. The present study is attempted to inspect the impact of self-handicapping behavior on the performance of the students. Previous studies have identified the pattern of self-regulated learning strategies among university and college students, and they also found self-handicapping as a motivational strategies used by adults. However, the present study attempted to identify this pattern among adolescents.

In the light of aforementioned literature, the objectives of the present research were outlined as:

1. To examine the relationship among academic self-handicapping, self-regulated learning strategy, and mastery goal orientation among adolescents.
2. 2It also attempted to determine the role of various demographics (gender, type of school, and parental education) in relation to academic self-handicapping, self-regulated learning strategy, and mastery goal orientation among adolescents.

Hypotheses

The following hypotheses were postulated.

1. Academic self-handicapping is negatively related with self-regulated learning strategy and goal orientation.
2. Self-regulated learning strategy is positively associated with goal orientation.
3. Girls are likely to express less self-handicapping behavior with better self-regulation and higher goal orientation as compared to boys.
4. Adolescents enrolled in private school would display less self-handicapping inclinations with more self-regulation and goal oriented behaviors as compared to government school students.
5. Adolescents with higher parental (maternal and paternal) education will express lower self-handicapping behavior, better self-regulation, and more goal oriented behaviors.

Method

Sample

The sample (N = 550) comprised of school students, including girls (n = 265) and boys (n = 285) enrolled in 9th (n = 269) and 10th (n = 281) class. The sample was selected through convenient sampling method. The sample comprised of both public / government (n = 280) and private (n = 270) schools of Islamabad and Rawalpindi. The age range of the respondents

varied from 14 to 16 years (M = 15.28; SD = 3.57). The sample was selected from segregated (n = 354) and co-education (n = 196) institutions. The educational level of the parents were divided into three groups, that is matric and intermediate (n = 152), graduation (n = 237), and post-graduation (n = 161).

Instruments

The following measures were used to assess constructs of the study:

Self-Handicapping Scale. The Self-Handicapping Scale (Jones & Rhodewalt, 1982), having 15 items was used to measure self-handicapping behavior of the students. The scale was uni-dimensional in nature with no subscale. The responses of the scale acquired on 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). There were three reversed scored items, and the possible range of scores that could be attained on this scale was 15 - 75 with high scores indicating higher tendencies of self-handicapping. The composite score of the scale was shown to have high internal reliability (α =.79; Jones & Rhodewalt, 1982), while in the present study alpha of .86 was achieved for this scale.

Self-Regulation Strategy Inventory. A 15 item Self-Regulation Strategy Inventory (Cleary & Platten, 2013); was used to measure self-regulated strategies of the students. The scale comprised of both positively and negatively phrased items. The scale consisted of three subscales: Managing Learning Environment (6 items), Seeking Learning Information (5 items), and Maladaptive Regulatory Behavior (4 items). The responses on the scale were acquired on 5-point Likert scale ranging from 1 (*never*) to 5 (*always*); while responses on Maladaptive Regulatory Behavior Subscale were reversed scored. The possible score range of the scale would be 15-75 with high score on the scale indicate better self-regulated strategies employed by students. The composite score of the scale was shown to have high internal reliability (α = .92; Cleary, 2006), whereas an alpha of .81 was attained for this scale in the present study.

Achievement Goals Questionnaire-Revised. To measure goal orientation of the students; a 12 item Achievement Goals Questionnaire-Revised (Elliot & Murayama, 2008) was used. The scale consisted of four subscales: Mastery Approach Goal (3 items), Mastery Avoidance Goal (3 items), Performance Approach Goal (3 items), and Performance Avoidance Goal (3 items). Responses were acquired on 5-point Likert scale varying from 1 (*strongly disagree*) to 5 (*strongly agree*); whereas responses on Mastery Avoidance Goal Subscale and Performance Avoidance Goal Subscale were reverse scored. The possible score range that would be attained on this scale was 12-

60 with high scores indicating better achievement goal orientation of the students. The internal consistency of the scale has been reported as satisfactory (α = .84; Elliot & Murayama, 2008); while, in the present study, alpha coefficient of .79 was achieved for this scale.

Procedure

First of all official permission was taken from the administrative heads of the schools to administer the research questionnaires on the students. The data was collected from the different schools of Rawalpindi and Islamabad. Initially informed consent was obtained from the participants and they were briefed about the purpose of the study. Respondents were also assured of the confidentiality of data. Later, questionnaire booklets were administered on individual basis. Participants signed the consent form and they were requested to read the statements carefully and mark the most appropriate option of the statements. Written instructions as well as verbal narrations were given to the participants so as to maximize the clarity and reduce ambiguity regarding the completion of questionnaire. Afterwards they were thanked and appreciated for their cooperation and valuable time.

Results

Pearson product moment correlation was conducted to determine the relationship among academic self-handicapping, self-regulated learning strategies, and mastery goal orientation. It also helps in identifying the direction of the relationship between variables. Independent sample *t*-test and one way ANOVA was computed to determine the group differences across gender, type of school, and overall parental education.

Table 1

Correlation Matrix Among Academic Self-Handicapping, Self-Regulated Learning Strategies, and Mastery Goal Orientation (N = 550)

Variables	SH	SRLS	MLE	SLI	MRB	MGO	MAG	MAV	PAG	PAV
SH	–	-.42***	-.29**	-.34**	.26**	-.39**	-.35**	.32**	-.30**	.20*
SRLS		–	.69***	.52***	-.49***	.51***	.41**	-.37***	.37***	-.30**
MLE			–	.64***	-.37**	.24**	.37**	-.20*	.23*	-.41**
SLI				–	-.61***	.26**	.32**	-.24**	.29**	-.28**
MRB					–	-.22**	-.11	.31**	-.14	.21*
MGO						–	.71***	-.51***	.60***	-.63***
MAG							–	-.48***	.37***	-.44***
MAV								–	-.42***	.40***
PAG									–	-.35***
PAV										–

Note. SH = Self-Handicapping; SRLS = Self-Regulated Learning Strategies; MLE = Managing Learning Environment; SLI = Seeking And Learning Information; MRB = Maladaptive

Regulatory Behavior; MGO = Mastery Goal Orientation; MAG = Mastery Approach Goal; MAV = Mastery Avoidance Goal; PAG = Performance Approach Goal; PAV = Performance Avoidance Goal.
*$p < .05$. **$p < .01$

Table 1 demonstrated the relationship among academic self-handicapping, self-regulated learning strategies, and mastery goal orientation. Results indicated that self-handicapping is significantly negatively associated with overall self-regulation learning strategies, managing learning environment, and seeking learning information as well as with mastery goal orientation, mastery approach goal, and performance approach goal. On the contrary, self handicapping is significantly positively linked with maladaptive regulatory behavior, mastery avoidance goal, and performance avoidance goal.

In addition, overall self regulated learning strategies along with managing learning environment and seeking learning information have shown significant positive association with overall mastery goal orientation, mastery approach goal, and performance approach goal. On the other hand, maladaptive regulatory behavior (self regulated learning strategy dimension) revealed significant positive association with mastery avoidance goal and performance avoidance goal (mastery goal orientation dimensions); whereas, it is significantly negatively related with overall mastery goal orientation. However, relationship of maladaptive regulatory behavior with mastery approach goal and performance approach goal was nonsignificant. These findings provide substantial support for hypotheses 1 and 2.

Table 1 also demonstrated adequate construct validity of self regulated learning strategies by indicating significant positive association of dimensions of managing learning environment and seeking learning information with each other as well as with the total construct. In addition, maladaptive regulated behavior is significantly negatively related with both dimensions (managing learning environment and seeking learning information) and the total construct of self regulated learning strategies.

Findings presented in Table 1 further indicated ample evidence of construct validity of mastery goal orientation by showing positive association of mastery approach goal and performance approach goal with each other as well as with the overall construct of mastery goal orientation. Conversely, dimensions of mastery avoidance goal and performance avoidance goal displayed significant negative relationship with mastery approach goal and performance approach goal and overall construct of mastery goal orientation.

Table 2

Gender Differences on Academic Self-Handicapping Self-Regulated Learning Strategies, and Mastery Goal Orientation (N = 550)

	Boys (n = 285)		Girls (n = 265)				95 % CI Cohen's		
Variables	*M*	*SD*	*M*	*SD*	*t* (298)	*p*	*LL*	*UL*	*d*
SH	51.28	6.01	45.33	6.53	5.11	.00	1.16	3.99	.54
SRLS	42.00	5.17	48.39	7.07	5.90	.00	2.40	5.43	.57
MLE	20.24	6.09	23.48	6.77	2.16	.05	0.93	2.50	.35
SLI	16.53	7.66	19.29	5.05	2.53	.04	1.19	4.42	.37
MRB*	8.77	3.08	10.44	3.28	2.97	.02	2.53	6.68	.39
MGO	40.34	6.55	44.90	8.22	3.71	.01	1.96	4.67	.42
MAG	10.32	2..69	13.09	2.98	2.75	.03	3.25	7.65	.38
MAV*	6.47	2.98	9.15	3.01	3.67	.01	2.93	5.07	.40
PAG	10.55	2.92	13.00	3.02	4.11	.00	0.59	2.39	.51
PAV*	10.26	2.74	12.51	3.19	2.03	.05	1.30	1.68	.33

Note. SH = Self-Handicapping; SRLS = Self-Regulated Learning Strategies; MLE = Managing Learning Environment; SLI = Seeking And Learning Information; MRB = Maladaptive Regulatory Behavior; MGO = Mastery Goal Orientation; MAG = Mastery Approach Goal; MAV = Mastery Avoidance Goal; PAG = Performance Approach Goal; PAV = Performance Avoidance Goal.

* Scores on these subscales are reverse scored

Table 2 shows significant gender differences in relation to academic self-handicapping, self-regulated learning strategies, and goal orientation among adolescents. Findings indicated that girls' express less self-handicapping behavior and more self-regulated and mastery goal orientation as compare to boys. It has also been observed that girls reflect better seeking learning information and engaging learning environment, and lesser maladaptive regulated behavior. Similarly, girls have shown high mastery approach goal and performance approach goal as compared to their counterparts. In addition, girls expressed less mastery avoidance goal and performance avoidance goal

in comparison to boys. These findings offer ample empirical evidence in support of hypothesis 3.

Table 3

Differences on Type of Schools Across Academic Self-Handicapping Self-Regulated Learning Strategies, and Mastery Goal Orientation (N = 550)

Variables	Private (*n* = 270)		Public (*n* = 280)				95 % CI Cohen's		
	M	*SD*	*M*	*SD*	*t* (298)	*p*	*LL* *UL*		*d*
SH	46.31	11.01	40.44	12.22	6.73	.00	1.16	3.99	.78
SRLS	39.28	10.62	35.05	10.66	5.49	.00	2.40	5.43	.65
MLE	22.14	7.29	19.61	8.08	4.36	.01	2.93	6.50	.49
SLI	15.22	6.47	11.47	7.25	4.18	.01	1.19	7.42	.44
MRB*	13.71	3.08	09.31	3.28	5.06	.00	2.53	5.68	.52
MGO	42.05	12.55	38.77	11.80	6.42	.01	1.96	3.67	.71
MAG	14.64	7.57	10.19	7.63	5.90	.00	1.25	5.65	.69
MAV*	10.47	3.11	08.82	3.44	3.27	.04	1.93	4.07	.40
PAG	12.42	4.09	09.08	3.22	3.80	.02	2.59	6.39	.42
PAV*	12.83	2.17	10.50	4.66	2.61	.05	2.30	7.68	.36

Note. SH = Self-Handicapping; SRLS = Self-Regulated Learning Strategies; MLE = Managing Learning Environment; SLI = Seeking And Learning Information; MRB = Maladaptive Regulatory Behavior; MGO = Mastery Goal Orientation; MAG = Mastery Approach Goal; MAV = Mastery Avoidance Goal; PAG = Performance Approach Goal; PAV = Performance Avoidance Goal.

* Scores on these subscales are reverse scored

Results presented in Table 3 showed group differences across study variables in relation to type of schools. It has been found that students enrolled in private schools exhibit lesser self handicapping, maladaptive regulatory behavior, mastery avoidance goal, and performance avoidance goal as compared to adolescents studying in public schools. On the other hand, private school students display better self regulated learning strategies, managing learning environment, seeking learning information, mastery approach goal and performance approach goal; thereby providing complete support for hypothesis 4.

Table 4

Differences on Parental Education of Adolescents across All Study Variables (N = 550)

Variables	Intermediate (*n* = 76)		Graduation (*n* = 110)		Post-Graduation (*n* = 80)				Tukey's Post Hoc
Maternal Education	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*	*i* > *j*
Self Handicapping	37.14	11.26	34.04	12.70	31.66	11.37	5.68	.00	1 > 2,3; 2 >3
Self Regulated Learning	38.44	9.27	41.21	8.31	44.47	10.81	4.57	.01	3 > 1,2; 2 >1
Mastery Goal Orientation	39.28	9.64	43.55	10.25	47.76	8.38	5.91	.00	3 > 1,2; 2 >1
Paternal Education	Intermediate (*n* = 74)		Graduation (*n* = 127)		Post-Graduation (*n* = 81)				
Self Handicapping	38.44	9.27	37.21	8.31	37.47	9.81	1.57	.17	ns
Self Regulated Learning	42.28	10.64	43.55	10.25	42.76	9.38	1.81	.11	ns
Mastery Goal Orientation	35.14	9.26	37.04	9.70	40.66	10.37	3.68	.01	3 > 1, 2

Total sample = Intermediate (*n* = 152), Graduation (*n* = 237), Post-Graduation (*n* = 161)

Table 4 demonstrated group differences on parental education in relation to study variables. Results indicated differential pattern for maternal and paternal educational levels; where higher maternal level of education is associated with lesser self handicapping tendencies, better self regulated learning strategies, and mastery goal orientation of the adolescents. On the other hand, higher paternal level of education is linked with higher mastery goal orientation only; however, nonsignificant differences are observed on self handicapping and self regulated learning strategies in relation to paternal educational levels; hence offering partial support for hypothesis 5.

Discussion

The major objective of the present study was to explore the role of academic self-handicapping and self-regulated learning strategies in mastery goal orientation among adolescents. It also attempted to determine the role of various demographics (such as gender, type of school, and parental education) in relation to academic self-handicapping, self-regulated learning strategy and mastery goal orientation among adolescents.

Findings show that self-handicapping is negatively associated with self-regulated learning strategies and goal orientation; thereby supporting the first hypothesis. The existing literature also found the similar patterns of relationship between self-handicapping behavior and poor academic performance (Winters et al., 2008). Self-handicapping conducts are characterized as a withdrawal of exertion from an assignment (e.g., not to prepare for a test); however, some studies indicated that self-handicappers do

feel satisfied when they do not get success in any particular task than those students who are engaged in self-handicapping (Akça, 2012).

Findings also showed significant positive association between self-regulated learning strategy and goal orientation, indicating that students with better self-regulated learning strategies are more goal oriented. The results of present study are quite in line with earlier research, for instance studies (Radosevich et al., 2004) have consistently declared that mastery goal orientation and self-regulation are positively associated with each other. Furthermore, based on the theoretical assumption about the consequences of the mastery achievement goal, those students who are goal oriented and self-regulated preferred challenging tasks and have more positive attitude towards their class activities (Grant & Dweck, 2003). Later empirical evidences (Effeney et al., 2013; Leondari & Gonida, 2007) also found that students who are highly self-regulated are more likely to be dominated, give importance to their work, and are deeply involved in learning activities (using deep learning strategies; for instance, association, amplification, critical thinking) throughout the utilization of meta-cognitive self-regulation.

Results further indicated that girls reflect lesser self-handicapping behavior and more self-regulated learning strategies and mastery goal orientation, thereby supporting the third hypothesis. These findings receive substantial support from earlier set of studies (Kazemi, Nikmanesh, & Khosravi, 2015; Pape et al., 2003) demonstrating that girls reveal better seeking learning information and engaging learning environment and lesser maladaptive behavior. Similarly, school girls are likely to reflect high mastery approach goal and performance approach goal; whereas, lesser inclinations of performance avoidance goal as compared to boys. Existing literature (Rabia et al., 2017; Steel et al., 2001) asserted that fifth grade students and senior high school male students used more self-handicapping strategies as compared to girls. Additionally, Aldous and Mulligan (2002) inferred that boys in the sixth grade are greatly prone to chase executive approach objectives as compare to girls; however, they are more apt to performance goal than girls. Similarly, Elliot and McGregor (2001) asserted that teenager boys exhibit superior performance orientation than females; whereas college-aged females show greater mastery orientation than college-aged males. However, other studies have found that 9th grade female students' performance objective orientations and classroom goal structures are positively related (Al-Harthy et al., 2010).

Findings also indicate that adolescents who are enrolled in private schools are less engaged in self-handicapping behavior and are more self-regulated and goal oriented as compare to government school students. These findings

can be readily explained in the context of native evidences as handful indigenous studies (Kausar et al., 2017; Kazemi et al., 2015) have jointly inferred that private school students are more achievement oriented and intrinsically driven for better academic performance as compared to public school students. Similarly, evidences (Rabia et al., 2017; Khan et al., 2017) from Pakistan mutually pointed out the vast differences in the school climate and classroom practices which, in turn, would have greater influence on the self regulated learning styles and achievement goal orientation of the students. Additional set of studies (Barzegar & Khezri, 2012; Park & Sperling, 2012) from various settings also highlighted the importance of two factors which are constantly related for the differences in academic outcomes between the students of private and public; that is, socio-economic characteristics and peers. Private school students are more inclined to have a positive link with academic success and they have peers with highly educated parents who can also produce a positive impact on their academic performance and educational attainments (Church, Elliot, & Gable, 2001).

The present study establishes significant differences among adolescents with varying levels of parental education; however diverse pattern surfaced in relation to maternal and paternal education. It has been found that adolescents with higher maternal education are less likely to be engaged in self-handicapping behavior and more prone to better self-regulation and achievement goal orientation. Earlier studies (Gonida & Cortina, 2014; Pomerantz et al., 2002) describe the probable reasons for this specific impact of maternal education by asserting that mothers play a significant role in shaping the early academic behaviors of young children and their own skills and abilities would have an enduring effect on the child's cognitive and psychological development. Likewise, Pulkka and Niemivirta (2013) added that study habits of primary school children are greatly determined by the maternal regulatory practices as compared to paternal disciplinary actions. Moreover, differences on paternal education showed that adolescents with higher father education exhibited higher achievement goal, however non-significant differences are found on self-handicapping and self-regulated learning strategies. In this regard, Gonida and Cortina (2014) explained that young children tend to associate with their fathers in terms of perceiving their future goals and aspirations; while, they are more prone to relate with their mothers for emotional and physical support. Existing literature (Steele-Johnson, Beauregard, Hoover, & Schmidt, 2000) also found that grade 8^{th} and 9^{th} students' achievement orientation and structure are significantly related, and those students whose parents are highly goal oriented get higher grades than other students. Other researchers (Gonida & Cortina, 2014) also found

that students who get support during homework completion from their parents are more goal oriented and self-regulated as compare to others. While, Church et al. (2001) declared a significant relationship between mothers' education and students' achievement inferring that higher educated mothers had higher expectations from their children and these expectations are also related to their children's academic achievement. In addition, Winne and Hadwin (2008) inferred that those children are more advanced in educational achievements and in higher occupational mobility whose parents especially fathers take participation in learning activities with them.

Limitations and Suggestions

The potential limitations of the current study are duly pointed out. Firstly, the size of the sample in the present study was relatively small and included only 9^{th} and 10^{th} grade students. Due to the time constraints, data was collected only from few public and private schools of Islamabad and Rawalpindi. Secondly, present study opted quantitative research method to explore the role of academic self-handicapping and self-regulated learning strategies in mastery goal orientation among adolescents. In the current study self-report measures of data collection were used which may involve the element of social desirability and responses bias. Thirdly it was a cross sectional research designs; therefore, it would be unfeasible to draw causal inferences.

Therefore, it is suggested for future studies to include a wider age range and sample to increase the diversity of the sample. Future studies should examine a more representative sample including college and university students. In upcoming studies, the sample should be selected from many public and private sector schools to increase variability of the sample. Moreover, future studies should explore self-handicapping, self-regulated strategies, and goal orientation within different segments of the society such as university and college students to enhance the sample diversity. The future studies should choose qualitative research to get reasonable information regarding the corresponding variables of the study.

Implications

The present research highlighted the important relationships among academic self-handicapping, self-regulated learning strategies and mastery goal orientation. This research is primarily a psychological study in the field of educational psychology, and such a study can form the basis for future explorations within this field. This study can be replicated on adults and adolescents. The outcomes of the present study would give a better insight about the future of students to identify and understand that their own personal

characteristics (i.e. academic self-handicapping, self-regulated strategies, and achievement goal) that could play an important role in their educational performance, and resultantly, it will make them capable to attain better self-regulated strategies and achievement objectives to reduce self-handicapping behaviors. Both parents and teachers should focus on the personal development, progress and the knowledge of the lessons instead of comparison and competition. Moreover, educationists are encouraged to design conducive classroom environments that can assist to foster the students' sense of personal competency and academic efficacy to overcome the scholastic difficulties.

Conclusion

The major derivations of the study indicated the predictive role of self-handicapping behaviors and self-regulated learning strategies in mastery goal orientation among adolescents. It is further found that gender, type of school, and maternal education play significant role in shaping self-handicapping and self-regulating behaviors along with mastery goal orientation.

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