Development of an Indigenous Study Habits and Attitude Inventory for the Adolescent Students

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The present study was conducted to develop an indigenous standardized inventory to measure the study habits and attitudes of the adolescent students. In Sindh least research work has been conducted on the study problems of the young students and their study habits. The sample (N=560, male = 283; female =277) of the present research consisted of adolescent participants of colleges and university. The age range of the sample was 16-23 years. The study habits and attitudes inventory was developed in the Urdu language. It consists of eight sub-scales and total seventy three items. Items were finalized after performing item analysis through extreme group method. The five-point Likert like scale was selected as response category. To avoid response set bias, some items were scored in reverse direction. The psychometric properties of the study habits and attitude inventory were developed and assessed through item analysis (extreme-group technique), content validity, and construct validity through item-total correlation and Cronbach alpha reliability coefficient (r= 0.86). Analysis of the results indicated the reliable and valid status of the study habits and attitude inventory.

Keywords: study habits and attitude, reliability, item-analysis, validity

The facilitative factors for academic achievement and learning have always remained a focus of interest among psychological and educational researchers (Deci, & Ryan, 1985; Robbins et al., 2004; Perry et al., 2005). Education not only nourishes mind but helps to develop creative and competent individuals for the society. Mostly in academic environment many students generally considered as underachievers because they perform lower than their abilities and commonly they were thought to have limited cognitive abilities (Robyak, Downey, & Ronald, 1979; Sirohi, 2004). But the findings of different studies (Crede & Kuncel, 2008) had pointed out clearly that different factors such as study attitudes, family environment, intrinsic motivation, attitude towards education, time management, anxiety, and self-control etc. are responsible for underachievement rather than only cognition. Findings of the several studies (Elliot, McGregor, & Gable, 1999; Robbins et al., 2002; Seligman, & Duckworth, 2005) had suggested that study skills play significant important role in the successful academic learning. Poor study habits has a direct positive relationship with the low academic achievement which in turn develop the feelings of the low self-esteem and frustration in the students whereas good study habits and attitude lead towards positive self-concept because of the successful achievement of the academic goals (Seligman, & Duckworth, 2005). The continuous academic success increases the determination, commitment and self-determination of the students (Deci, & Ryan, 1985). Successful attainment of any goal including academic achievements is only possible through the use of proper and effective strategies (Robbins et al., 2004; Sirohi, 2004). Good study habits and attitudes are set of proper study skills. Effective study attitudes developed through the pleasant past experiences of students and remain helpful to achieve the future goals successfully (Crow, & Crow, 1999). But if the experience is not pleasant then it blocks the way of learning and academic achievement through wasting time, increasing anxiety and by developing the negative feelings of learned helplessness (Akinbobola, 2009; Adesina, &

Akinbobola, 2005).

Generally in Pakistan and especially in Sindh least research work has been focused on the study habits and attitudes of the young adolescent students. Results of some studies conducted on the Pakistani students (Ansari, 1983; Jamil, 2001; Iqbal, & Shahzadi, 2002) had indicated that majority of the students do not had positive study attitudes even they had no information about good study habits. Iqbal, Sohail and Shahzad (2010) conducted a research on the study and learning skills of the university sample. Findings revealed that mostly students have ability as well as willingness to grasp new information, more enthusiastic but had poor concentration, and time management. Results of another study (Sarwar, Bashir, Khan, & Khan, 2009) pointed out significant differences in the study attitudes of the low academic achievers and high academic achievers. High academic achievers showed better time management, follow daily study time table and had positive attitude towards studies. Moghni and Riaz (1984) had found that students with positive study habits achieved good results as compared to the other students with poor study skills. High academic achievers mostly have firm believe on the effort and ability whereas low academic achievers blamed their luck as a main contributing factor in their failure (Addiba, 2004). Sarwar (2004) conducted a study to find out the relationship of the study attitudes with the achievement of the secondary class students. Findings of the study indicated a positive relationship of the study habits and academic achievement. Findings further indicated the significant differences in the study attitudes and academic achievement of the urban and rural students (Sarwar, 2004).

Present study was conducted to develop an indigenous scale to assess the study habits and attitudes of the adolescent students and to establish its psychometric properties.

Method

Participants

The sample of the present study was consist of male and female (N=560, males = 283; females =277) college and university participants. The age range of the participants was 16-23 years with the mean age of twenty years (M=20.86,

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SD=14.97). The data of the male participants was collected from different colleges of the Hyderabad including Govt. Degree Boys College Hyderabad; Sachal Sarmast College of commerce; Superior College for Boys and the data of female participants was collected from the Nazareth Girls' College Hyderabad; Govt. Zubeda Girls College; County College for girls and Govt. Dr I. H. Zuberi College of Home Economics Hyderabad. From the university data was collected from the different departments of Sindh University Jamshoro including Departments of Bio-chemistry, Zoology, Sociology, International Relations, Mass Communications, Psychology, Urdu and Computer Sciences etc. Sample was collected through stratified random sampling technique. Respondents belonged to different socioeconomic status i.e., middle (41%), upper middle (31%) and lower middle (28%). This sample was used for the item analysis of the scale. The scores of the other sample (N=236, males=112, females=124) were used for the standardization (validity and reliability) of the inventory.

Procedure

Because of the non-availability of any instrument to measure the study habits and attitudes of the adolescent students in Sindh, an indigenous inventory was developed. The present study was carried out, in two phases, in the first phase items were generated and item writing was performed while in the second phase standardization of the inventory was established.

In the second phase of assessing the psychometric properties of the scale it was administered on sample of the adolescent students. First of all the permission from the higher authorities of the different colleges was taken for data collection of college participants and same procedure was used for the data collection of the university participants and permission was taken from the directors/chairpersons of different departments. Before data collection, first of all the rapport was developed and informed consent was given to the participants, the booklet of the study habits and attitudes inventory was administered randomly and participants were told to fill-in their responses. Following instructions were given to them, that "There is no right and wrong answer of any statement but what they think and do in the given or written situation is important. You can ask any question." Instrument was distributed to five hundred and ninety five (N=595) students. After scrutiny of the filled-in questionnaires in-complete questionnaires were discarded out and remaining five hundred and sixty (N=560) were used for further analysis. Same procedure was followed for the other sample (N=236, males=112, females=124) of the present study which was used for the assessment of the construct validity through item-total (item minus) correlation, Cronbach Alpha reliability and internal homogeneity of the sub-scales of the study habits and attitude inventory (SHAI).

PHASE -1: Item Development

Items of the inventory were developed through both the deductive and inductive approach. A detailed review of the literature of the attitude object in question was done to understand all the aspects. The questionnaire developed by Ansari (1983) was also reviewed. Secondly, the first author interviewed a sub-sample of the study (N=180, Male= 90, Female=90) to collect the favourable as well as unfavourable materials related to the object in question. The age range of the participants was 16-23 years. Initially ninety three items were generated and pooled up. Then for the qualitative content validity and item-analysis the scale was given to the two subject matter experts of Psychology. According to their suggestions some changes were brought-in and twelve items out of ninety three were removed out. Eighty-one (81) statements of the SHAI were finalized by the subject matter experts to whom the inventory was given for the qualitative item analysis and content validity. Then these items were divided into eight sub-scales namely study habits and attitude, attitude towards teacher, attitude towards class and assignment, examination, social activities, family environment, time management and concentration. All subscales have both positive and negative statements. The response category is five-point Likert like scale ranging from "almost always" to "almost never". Almost always was assigned the score "five" and almost never assigned the score "one". Some items were scored in the reverse direction to avoid response set bias. The higher score represents good study habits and low score represents poor ones.

PHASE -2: Item analysis, validity, reliability

In the second phase quantitative item analysis, Cronbach alpha reliability, constructs validity, and internal consistency of the subscales of the inventory was calculated.

Results

The standardization of the SHAI was performed on the sample of the adolescent participants. The quantitative item analysis of the SHAI was performed through the extreme-group method to assess the discriminative quality of the items of SHAI. The high scorers (n=33%) were placed in the upper group and the low performers (n=33%) were in the lower group. Then their proportion on each item was analyzed to estimate the discrimination index (see table - 1).The eight items (shown by asterisks*) out of eighty one (81) had discrimination index below .45 were discarded out (Kaplan & Saccuzzo, 2005). The median score value is 219 (this score was obtained by adding the minimum (73) and maximum (365) scores divided by two). Score on the inventory greater than this value represents positive study habits and lower than this value indicates poor study habits and attitudes.

The construct validity of the inventory was measured through item-total (minus item) correlation (Anastasi, 1996) (see Table-2). For this purpose the inventory was administered on the adolescent participants (N=236, males=112, females=124). Analysis of results indicated the valid status of the instrument to measure the study habits and attitudes of the adolescent students because significant relationship found among the items and the total sore on the inventory.

The inter-relationship of the subscales is showing the homogeneity and internal consistency of the inventory (see table3).

Table 4 is showing the reliability coefficient of the study habits and attitude inventory (SHAI). The Cronbach alpha coefficient was calculated and its value(r= 0.86, p<.001) is showing a statistically significant reliable status of the inventory.

Table 1
Item analysis through extreme group technique for study habits & attitude Inventory (SHAI)

No. of Variables	Proportion of subjects in Upper Group (pt)	Proportion of subjects in Lower Group (pb)	Discrimination Index (di)	No. of Variables	Proportion of subjects in Upper Group (pt)	Proportion of subjects in Lower Group (pb)	Discrimination Index (di)
1	0.83	0.30	0.53	41	0.78	o.22	0.56
2	0.77	0.22	0.55	42	0.83	0.24	0.59
3	0.69	0.21	0.48	43	0.72	0.21	0.51
4	0.84	0.11	0.73	44	0.76	0.19	0.57
5	0.83	0.31	0.52	45	0.82	0.26	0.56
6	0.69	0.19	0.50	46	0.85	0.26	0.59
7	0.62	0.16	0.46	47	0.96	0.36	0.60
8	0.60	0.12	0.48	48	0.84	0.28	0.56
9	0.81	0.36	0.45	49	0.87	0.25	0.62
10	0.82	0.37	0.45	50	0.70	0.20	0.50
11	0.69	0.22	0.47	51	0.71	0.23	0.48
12	0.83	0.29	0.54	52	0.72	0.21	0.51
13	0.85	0.21	0.64	53	0.82	0.28	0.54
14	0.86	0.31	0.55	54	0.79	0.24	0.55
15	0.69	0.23	0.46	55	0.84	0.22	0.62
16	0.80	0.30	0.50	56	0.78	0.20	0.58
17	0.79	0.27	0.52	57	0.70	0.16	0.54
18	0.59	0.20	0.39*	58	0.79	0.17	0.62
19	0.88	0.34	0.54	59	0.85	0.28	0.57
20	0.79	0.18	0.61	60	0.73	0.23	0.50
21	0.83	0.23	0.60	61	0.78	0.32	0.46
22	0.57	0.12	0.45	62	0.86	0.32	0.52
23	0.79	0.30	0.26*	63	0.69	0.17	0.52
24	0.81	0.16	0.47	64	0.74	0.20	0.54
25	0.60	0.42	0.18*	65	0.67	0.21	0.46
26	0.33	0.03	0.30*	66	0.77	0.30	0.47
27	0.80	0.34	0.46	67	0.59	0.14	0.45
28	0.64	0.43	0.21*	68	0.67	0.17	0.50
29	0.79	0.29	0.50	69	0.77	0.22	0.55
30	0.67	0.20	0.47	70	0.83	0.32	0.51
31	0.78	0.23	0.55	71	0.70	0.19	0.51
32	0.77	0.14	0.63	72	0.79	0.29	0.50
33	0.39	0.15	0.24*	73	0.84	0.28	0.56
34	0.80	0.23	0.63	74	0.85	0.36	0.44*
35	0.76	0.31	0.45	75	0.71	0.24	0.47
36	0.89	0.23	0.66	76	0.79	0.22	0.57
37	0.83	0.13	0.70	77	0.78	0.29	0.49
38	0.76	0.37	0.23*	78	0.83	0.30	0.53
39	0.87	0.28	0.59	79	0.72	0.27	0.45
40	0.68	0.13	0.54	80	0.97	0.39	0.58
				81	0.62	0.20	0.42*

Table 2
Item- total (item minus) correlation for the construct validity of the variables of SHAI

No. of Variable	R	No. of Variable	R
V1	0.32***	V40	0.25**
V2	0.42***	V41	0.41***
V3	0.32***	V42	0.40***
V4	0.23	V43	0.29**
V5	0.36***	V44	0.37***
V6	0.31***	V45	0.43***
V7	0.32***	V46	0.49***
V8	0.47***	V47	0.33***
V9	0.29***	V48	0.31***
V10	0.42***	V49	0.35***
V11	0.21	V50	0.28**
V12	0.25	V51	0.21*
V13	0.30***	V52	0.30***
V14	0.45***	V53	0.41***
V15	0.28	V54	0.22*
V16	0.25	V55	0.23*
V17	0.39***	V56	0.40***
V18	0.27	V57	0.34***
V19	0.36***	V58	0.26**
V20	0.30***	V59	0.20*
V21	0.33***	V60	0.23*
V22	0.47***	V61	0.29**
V23	0.34***	V62	0.22*
V24	0.37***	V63	0.25**
V25	0.31***	V64	0.19*
V26	0.29	V65	0.37***
V27	0.31***	v66	0.27**
V28	0.32***	V67	0.29**
V29	0.28	V68	0.28**
V30	0.39***	V69	0.24**
V31	0.37***	V70	0.31***
V32	0.32***	V71	0.26**
V33	0.35***	V72	0.42***
V34	0.29**	V73	0.43***
V35	0.26**		
V36	0.37***		
V37	0.45***		
V38	0.36***		
V39	0.31***		

df=234,p<.05, **<.01,***<.001*

Table 3
Inter- correlations among different subscales of the Study Habits & Attitude Inventory

Subscales	SHA	ATT	ATC	Ex	SA	FE	TM	CON	Total
SHA	---	.78*	.69*	.73*	.51*	.72*	.58*	.81*	.81*
ATT	---	-----	.89*	.71*	.62*	.53*	.63*	.54*	.59*
ATC			---	.67*	.50*	.47*	.77*	.68*	.60*
Ex				---	.54*	.49*	.78*	.72*	.76*
SA					-----	.67*	.53*	.77*	.69*
FE						---	.61*	.45*	.57*
TM							---	.69*	.62*
CON								---	.88*
Total									

df=234, p<.001

(SHA=Study habits & attitude, ATT=Attitude towards teachers, ATC= Attitude towards class, Ex=Examination, SA=Social Activities, FE= Family Environment, TM=Time Management, Con=Concentration)

Table 4
Reliability coefficient of the Study habits & attitude Inventory

Name of the Scale	Reliability	r (reliability Coefficient)
Study habits & attitude Inventory	Cronbach Alpha Coefficient	0.86*

df=234, p<.001

Discussion

Results of the present study has indicated the valid status of the newly developed instrument the study habits and attitude inventory (SHAI). The construct validity was measured (see table-2) through item-total (item-minus) correlation (Anastasi, & Urbina, 2004). Item analysis (see table 1 & 3) have indicated the homogeneity of the inventory. Unfortunately our students do not have insight about the proper study habits and attitudes. But it is very important for them to get information and to develop the positive study habits and attitudes and effective learning strategies for becoming effective learners and high academic achievers. Learning is a lifelong process and education serves the function of enriching and cultivation of the thoughts of learners (Nuthana, & Yenagi, 2009; Xi, 2007). Therefore educational institution must motivate the students to develop effective study habits and learning skills.

Studies at college level are more competitive for the students because in schools mostly students dependent on their teachers for learning but the higher studies demand an independent and responsible attitude towards study. Ineffective study attitudes and learning strategies can hinder the future goals of the students. Beginning years of education are more important to teach students proper study skills. Those students who failed to achieve better grades should be more focused to improve their study skills. Poor academic achievement or continuous failure in getting a goal successfully reduces the interest and motivation to learn in future (Sutherland, 2003; Xi, 2007). This study habits and attitude scale could be used for the students to know about their study strategies. It is the cry of the hour that students must become a strategic learner because knowledge is increasing and advancing rapidly and those students who don't know how to study will not be able to compete

with the others (Bjork, 2001). Ineffective study habits and attitudes create hurdles in getting better results (Addiba, 2004; Sarwar, 2004) through causing lack of determination in the students. Academic achievement considered as an important criterion to judge the potentials of individuals (Nuthana, & Yenagi, 2009) and it significantly influenced by the study skills of the students (Addiba, 2004; Kaur, & Gill, 1993; Nuthana, & Yenagi, 2009; Sarwar, 2004). Irrespective of any educational level or class teachers and educators must try to know about the lacking and weak areas of their students in terms of study habits and should guide them in incorporating of the good study skills to become competent learners.

Conclusion

The main aim of education is to nourish and cultivate the human mind which cannot be achieved without proper study habits and strategies (Shen, 2007). Study habits and attitudes have been considered as the third pillar of education and academic achievement (Crede, & Kuncel, 2008) beside intellectual and non-intellectual factors. Learning is a lifelong process and proper learning attitudes always remain helpful for the individual to perform the duties. It is the need of the hour to be aware of the proper strategies of studying thus this inventory should be applied in the schools and colleges to guide the students about their study habits and attitudes. Seminars and workshops on this topic should be arranged to increase the information and knowledge of the parents and teachers to direct and guide the founders of the future of our nation.

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