Achievement-Motivation and Goal-Expectancy as Determinants of Risk Taking Behavior of the Adolescents

Rekha Sharma

Department of Psychology, National College, Choudhary Devi Lal University, Sirsa, India

Email address
rekhasharma2516@gmail.com

Citation

Abstract
Present investigation was focused to find out role of need-Achievement and expectancies of goal attainment on risk behavior of 180 male adolescents (10+1, 10+2 class) in an experimental situation where “Insoluble task” was used with different instructions to develop different goal expectancies i.e. Ps.25, Ps.50 and Ps.75. Factorial design (2X3) was used to study persistence at a “perceptual Reasoning task” as dependent variable and Need-Achievement and Probability of Success (expectancy of goal-attainment) as independent variables. ‘Perceptual Reasoning Task’ Test was used to get persistence scores of risk taking behaviour of the students in various experimental conditions. Six cards of TAT, (3BM, 6BM, 7BM, 8BM, 10 & 20) and Mandler & Sarason Test Anxiety Questionnaire (TAQ) were administered in sequence individually to all students to get scores of Need-Achievement. Research findings revealed that (1) there was significant difference between High need-Achievers and Low need-Achievers; (2) the adolescents showed significant difference between Ps.25 and Ps.50, Ps.25 and Ps.75 and Ps.50 and Ps.75 on persistence; (3) High need-Achievers and Low need-Achievers equally persisted longer on intermediate task (Ps.50); (4) High need-Achievers and Low need-Achievers showed almost same pattern of risk taking behavior except at Ps.50 and Ps.75 where High need-Achievers significantly persisted better at.50 than.75 but Low need-Achievers did not show such pattern significantly.

1. Introduction
Achievement motivation can be defined as the need for success or the attainment of excellence. Achievement goals can affect the way a person performs a task and represent a desire to show competence (Harackiewicz, Barron, Carter, Lehto & Elliot, 1997). Achievement motivation theorists focus their research attention on behaviors involving competence. Individuals aspire to attain competence or may strive to avoid incompetence, based on the earlier approach-avoidance research and theories. McClelland (1961) in his achievement motivation theory, proposed that there are two kinds of achievement motivation, one oriented around avoiding failure and the other around the more positive goal of attaining success. Atkinson, another motivational theorist, drew from work of Lewin and McClelland in forming his need-achievement theory, a mathematical framework that assigned the desire to succeed and the desire to avoid failure as important determinants in achievement behavior (Elliot & Harackiewicz, 1996). Atkinson’s (1957, 1964) model of achievement motivation attempted to combine the constructs of needs, expectancy, and value into a comprehensive theory. His model proposed that behavior was a multiplicative function of these three components, which he labeled motives,
probability for success, and incentive value. Motives represented learned but stable and enduring individual differences or dispositions and included two basic achievement motives: to seek success (motive to approach or need for achievement) and to avoid failure (motive to avoid failure). These motives are affective in nature but do include an aspect of expectancy in terms of emotional anticipation (Covington, 1992). The motive for success was assumed to represent individual’s hope for or anticipation of success and reflect their “capacity to experience pride in accomplishment.” (Atkinson, 1964). If the motive of success was high, then individuals would likely approach and engage in achievement tasks. In contrast, the motive to avoid failure represents individuals’ capacity to experience shame and humiliation when they fail, and when the motive is high; this would lead individuals to avoid engaging in achievement tasks. These two motives (to succeed and to avoid failure) represented the internal and personal contribution to motivation. Atkinson also included expectancy and value constructs in his model that represented the environmental side of the equation because they were assumed to be more closely tied to the situation or task. Atkinson used human subjects in his research therefore construct was more cognitive in nature and reflected a person’s subjective belief about probability of success. These subjective beliefs about expectancy for success, although certainly reflecting an individual’s own beliefs, also were assumed to represent one of the environmental influences on motivation because they could reflect task difficulty.

The third component of motivation in Atkinson’s model was the incentive value of success. Incentive value of success was defined as an affect, specifically, pride in accomplishment. The incentive value of success was assumed to be inversely related to the probability of success (incentive value=1.0-probability of success), as the expectation for success went up, as in easy task, the incentive value would go down because it was assumed that the person would not value succeeding at an easy task. In the same way, for difficult task where probability of success is low, the incentive value would be high. In this model incentive value was an affect, but in more general uses of the value construct, it has become a belief about the attainment value, importance, or interest in a task (Eccles, 1983). Nevertheless, the inverse relation between value and expectancy is always applicable. Given the inverse relation between incentive value and the probability success, Atkinson’s mathematical model predicts that motivation will be highest when tasks are of an intermediate level of difficulty. When the probability of success is .5 (the person will succeed at the task about half the time i.e. 50% times), the incentive value of success also will be .5 (incentive value=1.0-.5, which is the value for probability of success). The product of multiplying the probability of success by the incentive value is greatest at this intermediate level e.g. .5x.5=.25 in comparison to other conditions. This is true for all values of probability of success and incentive value given the assumed inverse relation between probability of success and incentive value.

All the major theories of achievement motivation agreed that incentive value of success was determined by risk involved (or challenge) in the task. Risk is a state of mind developed by the situation, when something valuable is at stake in a challenging and uncertain environment. Risk situation is a resultant of many factors, like fear of failure, uncertainty of success, insecurity of loss, high pressure for win, etc. Risk takers are considered as Entrepreneurs (high on need-Achievement). It’s a personality trait of the person who decides the preference of risk taken and it can be different in different situations. Every work condition involves a risk varies from mild to severe and not a single one has been identified as working in a risk free situation or environment.

Weiner (1992) summarizes the motivational research on this generalization regarding an intermediate level of difficulty where risk is uncertain (50% chances of failure) and concludes that the laboratory research on task choice and persistence is supportive. However, he does note that in Atkinson’s model, the third determinant of motivation, the motive for success and fear of failure, plays an important role beyond the expectancy and value components. Atkinson’s model predicts that individuals high in the motive for success and low in fear of failure (high need for achievement) will be most likely to choose tasks of intermediate difficulty, whereas individuals who are high in fear of failure and low in the hope for success (low need for achievement) will choose very easy or very difficult tasks. A study by Shrivastava, R. and Tripathi, R. (2015) found out that there is a significant relationship between need-achievement and risk taking behavior. High need achievers prefer moderate risks while low need achievers prefer very safe of very difficult tasks.

The analysis of determinants of achievement-oriented activity is more complete when effects of the tendency to avoid failure and the role of extrinsic sources of motivation are also taken into account. The motive to avoid failure (MAf), conceived as a disposition to be anxious about failure, has been reliably assessed by tests in test situation. This motive, combining multiplicatively with the subjective probability of failure and the negative incentive value of failure, produces a tendency to avoid undertaking an activity when there is an expectancy of failure. Easier the task the greater is the pain of failure. The tendency to avoid failure produces a resistance to achievement-oriented activity that must be overcome, if not by a stronger tendency to achieve then by some extrinsic motivational tendency. When the motive to avoid failure is stronger (MAf > Ms) and resistance should be greatest, as is more likely when n-Achievement is weak, all interest in achievement-oriented activity should be inhibited and resistance should be greatest for tasks that represent moderate risks where Ps is near.50. The resistance is often overcome by extrinsic sources of positive motivation, e.g. the tendency to gain approval by doing what is expected.
This is more easily accomplished where resistance is weakest, namely, where the probability of success is either very high or very low. These two extreme levels of aspirations occur most frequently among men who are weak in n-achievement and strong in anxiety. In its theoretical formulation, Atkinson's (1957) and McClelland's (1985) theory of achievement motivation combined n-Ach with cognitive expectations of success and with the value of such success to a person. In fact, this theory was often referred to as the Expectancy-Value model of achievement motivation. The inclusion of cognitive processes as central concepts in the explanation of human behavior indicated a shift in the metaphor that guided motivation theory: from that of a machine to that of a rational decision-maker (Weiner, 1991). Atkinson held, for example, that people would rationally construct the value of success to be higher on difficult than on easy tasks. Similarly, he expected people to have lower expectancies for success on difficult than on easy tasks. Atkinson contended that these two perceptions interacted to result in a person's behavioral tendency to engage in a task, which was highest at moderate levels of task difficulty, and zero at both very low and very high levels. However, in Atkinson's theory, this relationship was still thought to be affected by people's unconscious need for achievement, and to be strong only for individuals with high need for achievement. For individuals with low need for achievement, the behavioral tendency to engage was expected to be low regardless of task difficulty.

In its theoretical formulation, Atkinson's (1957) and McClelland's (1985) theory of achievement motivation combined need-Ach with cognitive expectations of success (degree of risk involvement) and with the value of such success to a person. Atkinson held, for example, that people would rationally construct the value of success to be higher on difficult than on easy tasks. Similarly, he expected people to have lower expectancies for success on difficult than on easy tasks. Atkinson contended that these two perceptions interacted to result in a person's behavioral tendency to engage in a task, which was highest at moderate levels of task difficulty (moderate risk), and zero at both very low and very high levels (low or high risk). However, in Atkinson's theory, this relationship was still thought to be affected by people's unconscious need for achievement, and to be strong only for individuals with high need for achievement. For individuals with low need for achievement, the behavioral tendency to engage was expected to be low regardless of task difficulty. Kuhl, Julius (2010) proposed an elaboration of J. W. Atkinson's (1957) theory of achievement motivation to include standard setting as a determinant of risk preference and motivational tendency. When the personal standard was located at an intermediate level of task difficulty, the elaborated theory reduced to the original theory. In Ss having a motive to achieve success higher than the motive to avoid failure, a shift of the peak of the preference function was predicted from moderately difficult to more difficult tasks if the standard was more difficult and to easier tasks if the standard was easier. In failure-oriented Ss, an inverse relation between difficulty of standards and preferred difficulty level was predicted. Experimental results from 32 undergraduates confirmed these predictions. It concluded that some of the inconsistent findings concerning the preference functions of success-oriented or failure-oriented Ss could be explained by individual differences in personal standards of excellence (PsycINFO Database Record (c) 2006 APA).

2. Rationale of the Study

Adolescence is the age of development especially in cognition & affection. Their development is influenced mainly by socialization. Role model, behavior of Parents & Teachers, knowledge given by Teachers & Parents, Role of Social media etc., shape their personality & confidence in them about their potentialities & skills. Such factors make them different from each other in getting success / failure and their attitude for them and also their future behavior course regarding their goal attainment. Need-Achievement (n-ach.) is an important determinant of aspiration, effort, and persistence when an individual expects that his performance will be evaluated in relation to some standard of excellence. Individuals differ in their strength of motive to achieve, and various activities differ in the challenge they pose and the opportunity they offer for expression of this motive. Therefore, both personality and environmental factors must be considered in accounting for the strength of motivation to achieve in a particular person facing a particular challenge in a particular situation. This has practical importance in education especially for young students (10+1, 10+2 & college students) who are believed to be highly aspirants for their future goals. On the basis of above theoretical background the investigator aimed to find out the relationship of need-Achievement and expectancies of goal attainment on persistence among adolescents.

3. Objective of the Study

Present investigation was focused to find out role of need-Achievement and expectancies of goal attainment on risk behavior of adolescents in an experimental situation where “insoluble task” was used with different instructions to develop different goal expectancies.

4. Delimitation of the Study

Although the efforts were made to find out the relevance of Atkinson’s theory of need achievement in today’s perspectives even though it had some limitations:

- The sample was limited to boys only (because it was believed that boys had high need achievement in comparison to girls).
- The situation for experimentation was hypothetical i.e. Insolvable figure, not the real one (because real situation could not be controlled as was done by
instructions in the study).

- TAT was used to measure need achievement (the scoring was checked by two others experts and the reliability was found.84).

5. Hypotheses

Following hypotheses were proposed to test the objectives of the study:

Ho-1: There would be no significant difference of persistent behavior of adolescents at all goal expectancies (Ps.25, Ps.50 & Ps.75).

Ho-2: High need-achievers would show no significant difference of persistent behavior in comparison to Low need-achievers at all goal expectancies.

Ho-3: Ps.50 would have equal importance for High need-achievers and Low need-achievers.

Ho-4: High need-achievers and Low need-achievers would show no significant difference in persistence and go along with General trend of persistence at all proposed goal expectancies.

6. Research-Design and Methodology

2x3 factorial design was used to study persistence at a “perceptual Reasoning task” as dependent variable and need-Achievement and probability of success (expectancy of goal-attainment) as independent variables.

7. Sample

The sample was consisted of 180 male students (10+1, 10+2 class) of various govt. schools of Karnal. They were selected randomly from the attendance registers of science, arts & commerce with age range of 15 to 18yrs.

8. Tools & Procedure

After getting permission from the head of the institutions, tools were applied on the sample. The following tools & procedure were adopted ------

N-Achievement (Resultant need-Achievement):

Six cards of TAT, (3BM, 6BM, 7BM, 8BM, 10 & 20) were administered in sequence individually to all students. The following instructions were given:

“I am going to show you some pictures and your task will be to make up a story for each. It is a test of imagination. In making stories you have to keep in mind four points:

1. Who are the characters? What is happening at present?
2. What has happened in the past?
3. What is being thought? What is wanted? By whom?
4. What will happen? What will be done?

Your stories will be kept strictly confidential. I will give you 30 seconds to look at a picture and then five minutes will be given to write story about it. You are free to write whatever the picture suggests to you in relevance to above four questions. Your quickness in imagining and writing a story will be very important.”

By following above instructions, stories of all 6 cards were scored as specified by Atkinson in manual for Achievement motive (1958). The reliability of the scoring of the TAT protocols was checked by another researcher who was expert in it. The correlation between the two scoring was found to be. 67 which was sufficient enough for reliability. Raw Scores & TAT were converted into T scores by the following formula:

\[
T = \frac{10(x - m) + 50}{SD}
\]

Test Anxiety Questionnaire (TAQ):

Mandler & Sarason Test Anxiety Questionnaire (TAQ) was administered on the same students. The questionnaire was scored according the specified norms. The test was no time limit but students were generally able to complete the task within 10 to 15 minutes. The scores were converted into T-scores to make them additive with the T score obtained from TAT stories. The split half reliability of this Test by spearman brown formula was.73.

Need-Achievement was calculated by subtracting T-scores of motive to avoid failure (M

\text{AF}) obtained from test anxiety questionnaire from T scores of motive to success (M

\text{S}) obtained by TAT. Variable N-Achievement has two levels:

\[ M_{S} - M_{AF} = \text{High N-Achievement Group (HN-Ach)} \]

\[ M_{AF} > M_{S} = \text{Low N-Achievement Group (LN-Ach)} \]

Probability Of Success (Ps):

This was done by inducing different instructions to the two groups of Students who were High need-Achievers and Low need-Achievers:

Proability Of Success At Difficult Task (Ps.25) ---

For developing probability of Ps.25 the following instructions were given:

This is very difficult task. The probability of success is.25 i. e. only 25 out of 100 did it successfully in previous tests. Please try to solve it. You can take as many trials as you want.”

Probability Of Success At Intermediate Difficult Task (Ps.50) ---

For developing Ps.50 the following instructions were given:

This is a difficult task, but not very much. 50% students did it successfully in previous tests. Please try to solve it and take as many trials as you want.”

Probability Of Success At Easy Task (Ps.75) ---

For developing Ps.75 the following instructions were given:

This is a very easy task. Approximately 3 out of 4 students did it successfully on previous tests. Please try to solve it and take as many trials as you want.”

Perceptual Reasoning Task Test-

It was used to get persistence scores of the students in various experimental conditions. The task was a line diagram approximately 1.5 inch square (given below) printed on a white paper. It was an ‘insoluble figure’ and was used to assess persistence in terms of time scores (How much time he
took in solving the problem).

![Perceptual Reasoning Task](image)

Figure 1. Perceptual Reasoning Task.

Students were instructed as below:

- You will not be permitted to lift his pen/pencil from the figure once you started to make it;
- You will not be permitted to trace over any line twice.
- You can take as much trials as you want.

This test was presented to all students in the individual sessions. Time taken by the subjects was considered as their scores on the risk taking behavior (persistence).

Table 1. Research Paradigm with the distribution of students.

<table>
<thead>
<tr>
<th>Probability of success</th>
<th>Need-Achievement</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ps.25</td>
<td>M &gt; MAF (High N-Ach)</td>
<td>30</td>
</tr>
<tr>
<td>Ps.50</td>
<td>M &lt; MAF (Low N-Ach)</td>
<td>30</td>
</tr>
<tr>
<td>Ps.75</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>90</td>
</tr>
</tbody>
</table>

9. Statistical Analysis of Result

Obtained data was analyzed by 2x3 analysis of variance and was shown in the Table 2.

Table 2. Analysis of variance of 2x3 factorial design in which time scores were taken as criterion scores

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sum of square</th>
<th>Df</th>
<th>Mean square</th>
<th>F</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need-Ach.</td>
<td>494.74</td>
<td>1</td>
<td>494.74</td>
<td>44.48</td>
<td>.01</td>
</tr>
<tr>
<td>Ps</td>
<td>1509.23</td>
<td>2</td>
<td>665.135</td>
<td>60.47</td>
<td>.01</td>
</tr>
<tr>
<td>Need-Ach. xPs</td>
<td>135.6</td>
<td>2</td>
<td>67.8</td>
<td>6.16</td>
<td>.01</td>
</tr>
<tr>
<td>Error within treatment</td>
<td>1914</td>
<td>174</td>
<td>10.90 or 11</td>
<td>-----</td>
<td>---------</td>
</tr>
</tbody>
</table>

Table 3. Pair-wise comparison of mean of High need-achievers and Low need-achievers N =180 (n = 90).

<table>
<thead>
<tr>
<th>Levels of n-ach</th>
<th>Mean</th>
<th>Pair</th>
<th>Difference</th>
<th>SEdm</th>
<th>t</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>High need-Ach.</td>
<td>18.78</td>
<td>High need-Ach, Low need-Ach.</td>
<td>2.00</td>
<td>.34</td>
<td>5.85</td>
<td>.01</td>
</tr>
<tr>
<td>Low need-Ach.</td>
<td>16.48</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>----</td>
</tr>
</tbody>
</table>

![Mean score of persistence](image)

Figure 2. Mean persistence scores of Risk taking behavior of High need- Ach (Hn-ach) and Low need-Ach (Ln-ach).

![Mean persistence score](image)

Figure 3. Mean persistence scores of risk taking behavior of Ss at different Probability of success (Ps).
Table 4. Pair wise comparison of Means at different levels of Ps N=180 (n=60).

<table>
<thead>
<tr>
<th>Levels</th>
<th>Means</th>
<th>Pairs</th>
<th>Diff.</th>
<th>SEDM</th>
<th>t</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>.25</td>
<td>14.96</td>
<td>.25, 50</td>
<td>-4.86</td>
<td>.42</td>
<td>11.57</td>
<td>.01</td>
</tr>
<tr>
<td>.50</td>
<td>19.82</td>
<td>.25, 75</td>
<td>-3.15</td>
<td>.42</td>
<td>7.5</td>
<td>.01</td>
</tr>
<tr>
<td>.75</td>
<td>18.11</td>
<td>.50, 75</td>
<td>1.71</td>
<td>.42</td>
<td>4.07</td>
<td>.01</td>
</tr>
</tbody>
</table>

Table 5. Interactional effect between Need-Achievement (N-ach.) and Probability of success (N-ach x Ps) N =180 (n=30).

<table>
<thead>
<tr>
<th>Probability of success</th>
<th>Mean score of persistence of High need-achiever</th>
<th>Mean score of persistence of Low need-achiever</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ps.25</td>
<td>15.45</td>
<td>14.47</td>
</tr>
<tr>
<td>Ps.50</td>
<td>21.77</td>
<td>17.87</td>
</tr>
<tr>
<td>Ps.75</td>
<td>19.13</td>
<td>17.10</td>
</tr>
</tbody>
</table>

Figure 4. Significant difference of persistence score of Hn-achievers and Ln-achievers at three levels of Probability of success (Ps.25,Ps.50 &Ps.75).

Figure 5. Significant difference of persistence score of Hn-achievers and Ln-achievers at three levels of Probability of success (Ps.25,Ps.50 &Ps.75).

Figure 6. Comparative analysis of persistence scores of risk taking behavior of Hn-achievers & Ln-achievers at Ps.25, Ps.50 Ps.75.

Table 6. Pair-wise comparison of means of persistence scores (Risk taking behavior) of Need Achievement (N-ach) and Probability of success (Ps) at different levels.

<table>
<thead>
<tr>
<th>Levels</th>
<th>Mean persistent score</th>
<th>Pairs</th>
<th>Difference</th>
<th>Sedm</th>
<th>t</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ps</td>
<td>.25</td>
<td>15.45, 14.47</td>
<td>Hn-ach, Ln-ach</td>
<td>.98</td>
<td>----</td>
<td>1.67</td>
</tr>
<tr>
<td>.50</td>
<td>21.77, 17.87</td>
<td>Hn-ach, Ln-ach</td>
<td>3.9</td>
<td>----</td>
<td>4.64</td>
<td>.01</td>
</tr>
<tr>
<td>.75</td>
<td>19.13, 17.10</td>
<td>Hn-ach, Ln-ach</td>
<td>2.03</td>
<td>----</td>
<td>2.42</td>
<td>.05</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hn-ach Mean persistent score</th>
<th>Pairs</th>
<th>Difference</th>
<th>Sedm</th>
<th>t</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ps.25</td>
<td>Ps.25, Ps.50</td>
<td>-6.32</td>
<td>----</td>
<td>7.52</td>
<td>.01</td>
</tr>
<tr>
<td>Ps.50</td>
<td>Ps.25, Ps.75</td>
<td>-3.68</td>
<td>----</td>
<td>4.33</td>
<td>.01</td>
</tr>
<tr>
<td>Ps.75</td>
<td>Ps.50, Ps.75</td>
<td>2.64</td>
<td>----</td>
<td>3.14</td>
<td>.01</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ln-ach Mean persistent score</th>
<th>Pairs</th>
<th>Difference</th>
<th>Sedm</th>
<th>t</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ps.25</td>
<td>Ps.25, Ps.50</td>
<td>-3.4</td>
<td>----</td>
<td>4.5</td>
<td>.01</td>
</tr>
<tr>
<td>Ps.50</td>
<td>Ps.25, Ps.75</td>
<td>-2.63</td>
<td>----</td>
<td>3.13</td>
<td>.01</td>
</tr>
<tr>
<td>Ps.75</td>
<td>Ps.50, Ps.75</td>
<td>.77</td>
<td>----</td>
<td>.92</td>
<td>-------</td>
</tr>
</tbody>
</table>
10. Discussion

As predicted in Atkinson’s risk-taking model, data showed that High need-Achievers persisted longer (showed high risk taking behavior) in comparison to Low need-Achievers at a task of intermediate difficulty level. It was supported by a study, Sharma (2014, 2015) who found similar results and proved the motive strength theory that High need-Achievers had $M_{S} > M_{AF}$ i.e. they had greater tendency to succeed instead of fear of failure whereas Low need-Achievers have $M_{AF} > M_{S}$ as they had strong motive of failure in comparison to motive to succeed at a task which was neither difficult nor easy (moderate risk), rather had equal chances of success & failure. McClelland (1973) associated n-Ach with entrepreneurial behavior and he further explained that Hn-achievers set moderate achievement goals, take calculated risks and value concrete feedback regarding performance. Gurol & Atsan (2006) cited need-Achievement as one of the most frequent entrepreneurial trait and Pillis & Reardson (2007) supported it as they explained it as the strongest prediction of risk taking attitude (entrepreneurship). Koh (1996); Thomas & Mueller (2000) found that entrepreneurs (High need-Achievers) preferred to take moderate risks in their business decision; they did not like to be involved in situations where there was extreme risk or uncertainty. This was supported by Matthews, S. W. et al (2007) and Shrivastva, R. et al (2015) as they found high need achievers prefer moderate risks while low need achievers prefer very safe or very difficult task. They found similar results as was found by Atkinson. In present study it was found that High need Achievers persisted longer in all three conditions of probability of success in comparison to Low need Achievers. But the difference was found to be significant at Ps.50 and Ps.75. Longer persistence at Ps.75 (easy task, 3/4 probability of success) by High need Achievers might be explained by apperception of the situation i.e. feeling of loser due to inability to succeed on an easy task. It was quite surprising that High and Low need-Achievers, both showed similar pattern of persistent behavior except when they were compared at Ps.50 and Ps.75, where High need Achievers showed significant difference but Low need Achievers did not. It might be due to that High need Achievers were ability believers (they have tendency to accept challenges), so they persisted longer at Ps.50. Again they persisted longer at Ps.75 because they wanted to avoid humiliation after getting failure on an easy task.

Why High and Low need achievers acted similarly at Ps.50? There might be another explanation i.e. greater persistence on intermediate difficulty task (Ps.50). In the present study only male adolescents were used as subjects to study. They has tendency to prove themselves (whether they are high or low in achievement-motivation). Therefore Low need-Achievers showed same persistent behavior as was shown by High need-Achievers at Ps.50. Low need Achievers were characterized by need of certainty and Ps.50 had equal chances of success and failure therefore they perceived the situation of problem solving as dominated by need of uncertainty. The intermediate difficulty task had equal degree of uncertainty and certainty, and uncertainty was characterized by challenge. The youth has general tendency of risk-tasking, so it might be possible that this tendency made low need-achievers to show the same pattern of behavior at Ps.50 as was shown by High need Achievers. According to Atkinson’s high need-achievers seek to perform task of moderate probability (Ps.50) because they perceive here only an opportunity to do better and maximum satisfaction. But low need-achievers in this study show the same pattern of persistence at Ps.50 as was shown by high need-achievers. Why this happened? The Atkinson’s theory showed negative valence for Ps.50 for low need-achievers on the basis of maximization of satisfaction. Weiner and Kukla (1970) gave emphasis on cognitive correlates and stated that intermediate difficulty tasks provided an appropriate situation to performers to get information about the efficacy of their efforts and abilities. They explained the success on easy task (Ps.75) due to ease of the task and failure on difficult task (Ps.25) due to the difficult nature of the task. The both situations were determined by the characteristics of the task. But the situation at intermediate task (Ps.50) was determined neither by difficulty nor by easiness of the task because here the task could produce success as well as failure with equal ratio i.e. 50-50. In the absence of external cause (task as difficult or as easy) success or failure was attributed to the internal causes i.e. efforts and ability used by the need-achievers. High need-achievers persisted longer on intermediate task (Ps.50) because it was mediated by the perception that such tasks yielded the most self-evaluated feed back which the easy and difficult tasks did not. It might be due to that goals could be conceptualized as a variable predicated by the perceptions of the current achievement situation, resulting from task/risk values (Pintrick and Schunk, 2002; Hullemanetal, 2008). Therefore they persisted longer at Ps.50 because they could attribute their success to their ability and efforts. Low need-achievers, according to Weiner and associates, tried to avoid the situations that provide self-evaluation. So they preferred either easy or difficult task as they gave minimal self-evaluation feedback.

The similar behavioral pattern of persistence by both, high need-achievers and low need-achievers could be understood by ability to reduce uncertainty (Trope, 1979; Sorrentino and Hewitt, 1984). They believed that there were some people who had greater need for certainty than others. Those who had high need for certainty tend to choose task which provided them certainty of success. They tried to choose easy task as it gave maximum certainty of success and tried to avoid difficult task as it gave maximum certainty of failure. The task of intermediate difficulty failed to provide any clear cut certainty of success and failure. Therefore they performed better in this ambiguous situation. Adolescents being challenges lovers took this ambiguous situation as a challenge and hence acted in longer persistence irrespective of low and high on need achievement. The situation like this.
where specific expectations in the form of probabilities of success were uncertain, behavior could be better understood by generalized expectations (external-internal locus of control) and cognition (perception of ability and efforts). Rishpal and Nidhi Jain (2012) found a strong association between high need achievers and risk taking attitude as they found high risk adaptability (acceptance for challenge) in them. Therefore there are many factors to be identified which are supposed to arouse, give direction and determine magnitude of achievement drive in the individual. Therefore this limitation of the study would provide a much more to be investigated, especially role of locus of control in this respect.

11. Conclusion of the Study

The researcher here concluded that and adolescents had tendency to take risks (challenges) and that is why in this study both High need-Achievers and Low need-Achievers persisted longer at task of intermediate difficulty level (Ps.50) where moderate risk was involved to prove their worth by accepting the situation of Ps.50 as a challenge. The study partially supported Atkinson’s theory of Achievement-Motivation that High need-Achievers persisted longer at Ps.50 i.e. at task of intermediate level and also supported that achievement-motivation and goal-expectancy as determinants of risk taking behavior of the adolescents.

12. Educational Implication of the Study

An Accel Team representatives (2010) stated that David McClelland believed that the need for achievement was a distinct human motive that can be distinguished from other needs. One characteristic of achievement motivated people was that they saw to be more concerned with personal achievement (risk taking attitude) than with the rewards of success. He believed that they did not reject rewards but the rewards were not essential as the accomplishment itself. In this review, I viewed a scope of role of risk taking attitude in students' academic motivation, engagement, achievement and accomplishment. I argued that achievement motivation theory, current issues, and educational practice could be conceptualized in relational terms. Influential theorizing, including attribution theory, expectancy-value theory, goal theory, self-determination theory, self-efficacy theory, and self-worth motivation theory, was reviewed in the context of the role of significant others in young people's academic lives (Tapola A, Niemivirta M., 2008). More researches on achievement motivation are needed to examine the effects of environmental factors affecting students' motivational beliefs and goal tendencies. However, when interpreting and applying the results, individual factors underlying students' different perceptions of their learning environment are often ignored. An implicit assumption seemed to be that regardless of their dispositional differences (e.g. motivational basis), students would experience and benefited from instructional practices in the same way.

References

[1] Accel Team Representatives (psy INFO Database Record©2010AP4, Motivation at a Glass.


