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A Contextual Measure of Achievement Motivation: Significance for Research in Counseling

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Abstract

Facilitating levels of achievement and success experiences are fundamental goals of counseling. Instruments used to assess the results of programs designed to increase achievement motivation are at a rudimentary stage. Common practices of measuring achievement motivation and assessing programmatic training are presented and critiqued in this article, followed by an introduction of a Contextual Achievement Motivation Survey (CAMS). The CAMS, based upon McClelland's theory of achievement motivation, provides an indicator of one's achievement thoughts and behaviors. The CAMS is recommended for counselors to use when assessing programs that increase achievement motivation. It is the first instrument that assesses achievement motivation in the context of school, work, family, community, and leisure as well as providing an overall measure of achievement motivation.

Professional counselors work in a variety of settings including schools, agencies, business, hospitals, private practice, and universities. Professional counselors also work with a myriad of mental health and behavioral problems in each of these settings. The client's motivation is a significant factor that will determine whether counseling is effective in addressing many of the mental health and behavioral issues. In most settings there are opportunities for counselors to enhance individual achievement and goal attainment. When working with achievement and goal attainment issues, counselors need to address a specific form of motivation identified as *achievement motivation*. Furthermore, counselors in school settings need to be familiar with achievement motivation training programs if they want to increase their students' achievement. A significant component of achievement motivation training involves increasing one's achievement thoughts and behaviors. However, methods of assessing achievement

motivation, particularly measuring achievement thoughts and behaviors, are a challenge. This article provides a review of achievement motivation training principles, a critique of current methods used to measure achievement motivation, and introduces a contextual achievement motivation survey to assess achievement thoughts and behaviors.

Different forms of motivation include extrinsic, intrinsic, physiological, and achievement (Atkinson, 1964; Harackiewicz, Barron, Carter, Lehto, & Elliot, 1997). Achievement motivation is referred to as a need to achieve (abbreviated *n Ach*). Individuals are motivated to achieve when they are challenged and aware that the outcome will be a reflection of their personal success or failure. Achievement motivation has been studied in both business and educational settings. McClelland (1961) researched the achievement behaviors of entrepreneurs, and related findings to economic development. McClelland concluded that levels of achievement motivation exhibited by leaders in business have a direct effect on the economic growth of a nation. Research conducted in business and industry also demonstrated that it was possible to increase the need to achieve in adults over a relatively short amount of time (McClelland & Winter, 1969). In subsequent studies, (Cueva, 2006; deCharms, 1972; Elias & Rahman, 1994; Kolb, 1965; Lopez, 2008; Ryals, 1975; Smith, 1973) researchers have found that levels of achievement motivation held by students in educational settings can be increased, and are predictors of students' success.

Theoretical Foundation of Achievement Motivation Training

For over 20 years, McClelland and his associates at Harvard University researched high achieving individuals. Studies by McClelland and others led to a theory of achievement motivation that identified cognitions and behaviors of high achievers. Findings targeted a prototype of the high achieving individual who consistently utilizes a set of thoughts and behavior strategies when approaching a task. McClelland used the *Thematic Apperception Test (TAT)* and other imagination methods to measure achievement motivation. Research identified 10 thoughts associated with high achievers that students are taught to use in achievement motivation training programs (Smith & Troth, 1975). These thoughts are:

- *Achievement Imagery (AI)*—A desire for excellence revealed through one of the following: competition with others (CO), competition with self (CS), unique accomplishments (UA), long-term involvement (LTI);
- *Need (N)*—Deeply wanting to achieve something;
- *Action (ACT)*—Planned action toward achieving excellence;
- *Hope of Success (HOS)*—Expecting success before it is achieved;
- *Fear of Failure (FOF)*—Worry about failing before it happens;
- *Success Feelings (SF)*—Good feelings after success;
- *Failure Feelings (FF)*—Bad feelings after failure;
- *World Obstacles (WO)*—World obstacles interfering with success;
- *Personal Obstacles (PO)*—Personal obstacles interfering with success; and
- *Help (H)*—Help sought and obtained to achieve success.

In addition to thoughts consistently used by high achievers, four action strategies have been identified that characterize these individuals. Action strategies often taught in achievement motivation training programs include:

- *Moderate Risk Taking (MRT)*—In a new situation where a person must rely on one's own skill, the high achiever takes carefully calculated moderate risks. They set goals that are challenging rather than goals that are unreasonably difficult or are too simple and undemanding.
- *Use of Immediate Concrete Feedback to Modify Goals (ICF)*—High achievers like to know how they are doing. They seek situations that offer immediate concrete feedback concerning their progress or lack of it. They use feedback to modify goals or behaviors.
- *Personal Responsibility (PR)*—Individuals with a high need to achieve like to test how much they can personally accomplish. They like situations where they can take personal responsibility for their success and failures. They initiate activities in which they can assume personal responsibility.
- *Researching the Environment (RE)*—Persons with high levels of achievement motivation approach new situations with an alert, curious, and intentional style. They size up situations, checking out the limits and the possibilities—with the end in mind of accomplishing or moving toward a goal.

Achievement motivation training programs emphasizing achievement thoughts and behaviors have been successfully implemented in the business sector with the use of outcome measures such as the *TAT* and productivity indicators (McClelland, 1961). Alschuler (1971) advocated applying achievement motivation training programs within educational settings. Subsequently, achievement motivation training programs have been successfully implemented with school-aged children at the elementary and secondary levels (Alschuler, 1973). Outcome measures used by counselors to assess the effectiveness of achievement motivation training in educational settings have included grade point average, students' written responses to picture cues, and paper-pencil instruments. There is a need to continue developing methods to assess achievement motivation to assist counselors who are researching training program effectiveness.

Measuring Achievement Motivation

The *Thematic Apperception Test* is a projective test that was initially used to assess achievement motivation. Adaptations of the *TAT* have included a number of picture images, which solicit stories from test takers. Individuals that cite a large number of achievement images after viewing pictures are identified as possessing high levels of achievement motivation. Questions regarding the validity of the projective measure (Spangler, 1992), in addition to counselors in many settings not being allowed to administer and interpret projective test findings, have led researchers to search for other methods to assess achievement motivation.

Achievement Motivation Measures

As the result of counselors not being permitted to use projective instruments, as well as questions concerning the validity of projective measures, paper-pencil

instruments have been developed to provide an indicator of achievement motivation. The following measures have been used to assess levels of achievement motivation. However, validity and reliability studies have not been extensively applied to many of the following instruments.

The Questionnaire on Current Motivation (QCM). The *Questionnaire on Current Motivation* (QCM; Rheinberg, Vollmeyer, & Burns, 2001) measures four factors believed to correlate with one's current achievement motivation: anxiety, challenge, interest, and probability of success. Results of the CAM have been shown to be related to one's performance on cognitive tasks (Freund & Holling, 2011). The QCM, as originally introduced by Rheinberg et al. (2001), is an 18-item instrument, with anxiety and interest measured with five items each. Additionally, the constructs of challenge and probability of success are each measured by four items. A short form of the questionnaire consists of 12 items (Freund, Kuhn, & Holling, 2011). Example items from the short form of this measure include:

- I think I am up to the difficulty of this task.
- I probably won't manage to do this task.
- I feel under pressure to do this task well.
- After having read the instruction, the task seems to be very interesting.
- I am eager to see how I will perform in the task.
- I am afraid I will make a fool out of myself.

Achievement Motivation Inventory (AMI). The *Achievement Motivation Inventory* (AMI) is a personality inventory designed to measure a number of work-related constructs. The AMI is viewed as a trait-oriented measure that assesses the concept of achievement motivation (Schuler & Prochaska, 2000). The AMI employs a 7-point Likert scale and consists of 170 items. Areas measured are Compensatory Effort, Competitiveness, Confidence in Success, Dominance, Eagerness to Learn, Engagement, Fearlessness, Flexibility, Flow, Goal Setting, Independence, Internality, Persistence, Preference for Difficult Tasks, Pride in Productivity, Self-Control, and Status Orientation. The AMI has been used in studies involving personnel selection and counseling as well as in the sports arena.

Reliability (Cronbach's α) for the total score of the AMI has been reported at .96. Single scale score reliability has ranged from .66 to .83 for individual scales. Retest reliability is $r_{tt} = .94$ for the total score ($r_{tt} = .71$ to $r_{tt} = .89$ for single scales). Content validity has been demonstrated by extensive research on all major aspects of achievement motivation. Expert ratings ensured that only relevant aspects are included. Additionally, confirmatory factor analysis shows a good fit of the model to theory. Construct validity is shown by correlations with related personality scales, e.g., Big Five inventories (ranging up to $r = .72$). Criterion related validity is indicated by prediction of grade point averages in U.S. colleges ($r = .22$ for the total score and up to $r = .29$ for single scales) and early academic achievements (ranging between $r = .21$ to $r = .36$ on different scales; Schuler, Thornton, Frintrup, Mueller-Hanson, 2002). Studies have shown that there is high social validity in regard to acceptance of the test by examinees (Byrne et al., 2004).

The length of the *Achievement Motivation Inventory* can be a problematic, particularly if administered in an educational setting. Competitiveness, confidence in

success, fearlessness, goal setting, preference for difficult tasks, and pride in productivity relate most directly to achievement motivation theory.

Achievement Motivation Profile (AMP). The *Achievement Motivation Profile* is a self-report assessment tool measuring a students' motivation to achieve as well as personality characteristics, interpersonal skills, and work style. The AMP consists of 140 self-descriptive statements that are answered on a 5-point Likert scale. The AMP has been used with students ages 14 and older in educational settings. Under the profile, section Motivation for Achievement the following concepts are measured:

- Achiever (ACH)–Achievement and task completion; achievement of specific goals; follow-through.
- Motivation (MOT)–Inner commitment to achieve; strength of inner emotions, need, and values; inner drive.
- Competitiveness (COMP)–Need to win, to perform better than others, or to surpass standards of achievement or performance.
- Goal Orientation (GOAL)–Having clear goals and objectives.

The *Achievement Motivation Profile* has been normed in the United States and Canada with an n=1,738. It can be administered by computer or in a paper-pencil format. Concepts related to achievement motivation theory include: achievement task completion, goals, commitment, need, and competitiveness. The number of items on this instrument could be problematic in some settings.

The Achievement Motives Scale. The *Achievement Motives Scale* (AMS) focuses on two factors of achievement motivation: hope of success and fear of failure. An original version of the AMS included 30-items. The authors, Lang & Fries (2006) developed a revised form with the use of confirmatory factor analysis. The revised 10-item *Achievement Motives Scale* (AMS-R) revealed an acceptable reliability, lower inter-scale correlations, and criterion-related validity with achievement behaviors. The following example items from the AMS reflect the measures emphasis on hope of success and fear of failure factors:

- I like situations in which I can find out how capable I am.
- I enjoy situations, in which I can make use of my abilities.
- I am afraid of failing in somewhat difficult situations, when a lot depends on me.
- I feel uneasy to do something if I am not sure of succeeding.

The 10-item revised AMS-R provides a quick measure for researchers to examine two salient factors related to achievement motivation. The Achievement Motives Scale (AMS) is a well-established and frequently used scale to assess hope of success and fear of failure. The revised scales provided adequate reliability, lower interscale correlations, and criterion-related validity with respect to typical criteria of achievement-related behavior (Lang & Fries, 2006).

The measures reviewed represent a handful of paper-pencil instruments that have attempted to assess achievement motivation. There is a need to continue the process of developing measures to assess achievement motivation considering the importance of this concept in education and work settings. Several achievement motivation-training programs implemented in K-12 settings and at the collegiate level have used paper-pencil measures to assess training outcomes. A number of these programs have published their

finding in a variety of outlets (Cueva, 2006; deCharms, 1972; Elias & Rahman, 1994; Kolb, 1965; Lopez, 2008; Ryals, 1975; Smith, 1973). However, a substantial number of achievement motivation programs, often implemented by counselors, have not been investigated and are not cited in the professional literature. The scarcity of measures assessing achievement motivation is one reason for the lack of published empirical studies examining the efficacy of achievement motivation training programs. The need for developing new measures of achievement motivation is evident.

The Development of a Contextual Achievement Motivation Scale

Most of the paper-pencil measures used to assess achievement motivation have not sufficiently addressed theory that supports their instrument development. Only a few number of items in these instruments directly address findings by McClelland and others concerning achievement thoughts and achievement behaviors. Few questions related to achievement thoughts and behaviors have been included within current achievement motivation surveys. The *AIMS*, for example focuses on merely two achievement motivation thoughts: hope of success and fear of failure.

Another concern of paper-pencil measures attempting to assess achievement motivation is a failure to consider the context in which individuals are being assessed. Most measures of achievement motivation have focused on individual performance in either an educational or work setting. This limited view of expressing one's need to achieve fails to consider value and life style differences. Since individuals differ in what is valued and where they might focus their energies, it makes sense to measure their achievement motivation level in a variety of settings as school, work, family, community, and recreation.

The *Contextual Achievement Motivation Scale* (CAMS) takes into account the importance of a theoretical base aligned with achievement motivation theory (McClelland, 1961), and the environmental settings of individuals. The CAMS was developed by the author at the University of Michigan at the Educational Resource Information Center. The scale was developed considering the following principles:

- Extensively researching achievement motivation literature and attempts at measurement.
- Examining and critiquing achievement motivation theory, including research supporting theory.
- Using literature findings and extant theories in the development of a pool of questions to assess achievement motivation.
- A continuous review and revision of survey questions by panels of experts.
- Scientific search for agreement on question content and narrowing of questions.
- Sorting of questions measuring overall achievement motivation, and achievement motivation by setting.

The Appendix provides items measuring achievement motivation in two settings and then provides questions that address achievement motivation thoughts, behaviors, and in various settings. It includes questions that measure achievement motivation within the family, community, and during recreation, as well as an overall measure of achievement thoughts and behaviors.

Studies reflecting the validity and reliability of the CAMS are in process and will be reported in the professional literature. The CAMS is being studied with large groups of students at the elementary, middle school, secondary and college levels in the United States as well as abroad.

Conclusions

Instruments used to measure achievement motivation and assess training programs were reviewed and critiqued in this article. There are variances in reported psychometric properties in reviews of these surveys. The *Contextual Achievement Motivation Survey* (CAMS) was introduced as a measure of achievement thoughts and behaviors, including examining these concepts within a number of settings. The CAMS, grounded in McClelland's theory of achievement motivation, reports high levels of validity and reliability in preliminary investigations. The CAMS, designed for counselors' use when assessing individual achievement motivation levels, is also recommended as a pre-post measure testing the outcome of achievement motivation training programs.

Cognitive programs teaching achievement thoughts and behaviors can assist youths and adults in reaching their goals and achieving at high levels. Facilitating one's level of achievement and increasing success experiences are fundamental goals of counseling. Achievement motivation training programs have been implemented by counselors in a number of settings to increase students' achievement motivation and success in school (Smith, 2011). Although a number of instruments assessing achievement motivation have been developed, there is a need to continue exploring ways to measure this concept. The need to develop additional measures of achievement motivation is of particular importance as professional counselors are being asked to demonstrate the efficacy of their work, including outcome findings of educational programs such as achievement motivation training.

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Appendix

Part I. Measure of Achievement Motivation in two Settings

Rate yourself according to the following characteristics. Please check one of the five categories following each characteristic. N=Never, S=Sometimes, 50%=50% of the time, U=Usually, A=Always.

In school work, I am (was)	N	S	50%	U	A
1. An achiever	<input type="radio"/>				
2. Productive	<input type="radio"/>				
3. Ambitious	<input type="radio"/>				
4. Competent	<input type="radio"/>				
5. Energetic	<input type="radio"/>				
6. Aggressive	<input type="radio"/>				
7. Thorough	<input type="radio"/>				
8. Efficient	<input type="radio"/>				

At my place (s) of employment, I am (was)

9. An achiever	<input type="radio"/>				
10. Productive	<input type="radio"/>				
11. Ambitious	<input type="radio"/>				
12. Competent	<input type="radio"/>				
13. Energetic	<input type="radio"/>				
14. Aggressive	<input type="radio"/>				
15. Thorough	<input type="radio"/>				
16. Efficient	<input type="radio"/>				

Part II. Measure of Achievement Motivation: Thoughts, Behaviors, Settings

Rate yourself according to the following characteristics. Please circle one of the five categories following each characteristic. N=Never, S=Sometimes, 50%=50% of the time, U=Usually, A=Always.

17. Much of my spare time is well spent with my family.	N	S	50%	U	A
18. I am active in community affairs.	N	S	50%	U	A
19. I carefully plan recreational activities.	N	S	50%	U	A
20. I enjoy competitive recreational activities.	N	S	50%	U	A
21. Our family actively plays and works together.	N	S	50%	U	A
22. Our family works as a unit so we can use our time effectively together.	N	S	50%	U	A
23. I am active even during leisure time.	N	S	50%	U	A
24. When proceeding with a difficult task, I think of all the resources that may be available to me in order to accomplish the task.	N	S	50%	U	A
25. I have a strong desire to be a success in the things I set out to do.	N	S	50%	U	A
26. I try to follow the rule: Business before pleasure.	N	S	50%	U	A
27. I thoroughly study candidates' qualifications at election time.	N	S	50%	U	A
28. I take an active part in organizing and seeing that parties are entertaining.	N	S	50%	U	A
29. I can keep my mind on a task for a long period of time.	N	S	50%	U	A

30. I would rather work with an expert in the field than with a friend or someone I know.	N	S	50%	U	A
31. In most projects, I would rather take personal responsibility for completion than be only a contributor.	N	S	50%	U	A
32. I think what is best for the family, discuss it, and then work toward that goal.	N	S	50%	U	A
33. I like to undertake projects that involve some risk.	N	S	50%	U	A
34. Planning activities in advance doesn't take the fun out of life.	N	S	50%	U	A
35. I have a tendency not to give up easily when confronted with a difficult problem.	N	S	50%	U	A
36. The thought of losing is less painful than succeeding is pleasurable.	N	S	50%	U	A
37. I take the time to keep abreast of national affairs.	N	S	50%	U	A
38. I play an active role in several community clubs and organizations; e.g., zero population growth, pollution control.	N	S	50%	U	A
39. When working on a committee, I like to see that plans are followed through efficiently.	N	S	50%	U	A
40. I prefer to know how I am progressing and to obtain concrete feedback when working at a task.	N	S	50%	U	A
41. While working on a task, I think of how it will feel when and if the task is successfully completed.	N	S	50%	U	A
42. Despite the uncertainty of the future, it pays to make plans.	N	S	50%	U	A
43. I finish things that I start.	N	S	50%	U	A
44. When engaged in leisure time activities, I try to strive for excellence.	N	S	50%	U	A
45. I prefer things to be challenging (involving some risk of failure).	N	S	50%	U	A
46. I intentionally set time aside so that I can help to develop efficient expenditure of community funds and provide the most effective community functions.	N	S	50%	U	A
47. When playing a game, I like to really know and understand the rules and regulations.	N	S	50%	U	A
48. When involved in a task, I sometimes think of how I may feel if I fail.	N	S	50%	U	A
49. I set goals for my lifetime.	N	S	50%	U	A
50. I prefer projects that require an intensive effort or a long-term commitment.	N	S	50%	U	A
51. I feel that my present work is meaningful.	N	S	50%	U	A
52. When proceeding with a task, I will list (mentally or in writing) those obstacles outside of me that may hinder my completing the task.	N	S	50%	U	A
53. I thoroughly explore the environment before making decisions.	N	S	50%	U	A
54. As a family unit we carefully pre-plan our activities.	N	S	50%	U	A
55. I like to know how I am performing when working on a task.	N	S	50%	U	A
56. When working on a difficult task, I am aware of and try to improve personal weaknesses that may hinder successful task accomplishment.	N	S	50%	U	A

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