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# Development and preliminary validation of the adolescent homework inventory

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DEVELOPMENT AND PRELIMINARY VALIDATION OF THE  
ADOLESCENT HOMEWORK INVENTORY

A Thesis

Submitted to the Graduate Faculty of the  
Louisiana State University and  
Agricultural and Mechanical College  
in partial fulfillment of the  
requirements for the degree of

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in

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by

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## **Abstract**

Homework is defined as work assigned to students by teachers that is to be completed outside of school hours (Cooper, 1989). Homework completion has been shown to have both positive and negative effects at school and home (Hoover-Dempsey, Battiato, Walker, Reed, DeJong, & Jones, 2001; Cooper, 1989; Cooper & Valentine, 2001). Given that homework will continue to be assigned, and that positive outcomes may be greater than negative outcomes, it is important to identify and address difficulties students face in homework completion. Measures are available to identify homework problems in elementary school students, but current measures available for middle and high school students are unreliable or do not include classroom behavior related to homework completion or studying. The purpose of the proposed study was to create a psychometrically sound measure for adolescent homework problems. A pool of questions was developed and administered to adolescents and their parents. Initial item elimination and Exploratory Factor Analyses (EFA) were conducted to determine the underlying factor structure. EFA resulted in 3 factors for both versions: Negative Homework Behavior, Proactive Behavior, and Parent Contingencies. A second sample of participants was collected to validate the factor structure and examine construct validity with the Homework Problem Checklist (HPC; Anesko, Shoiok, Ramirez, & Levine, 1987). Confirmatory factor analyses indicated poor model fit of six individual factor models, as sample size was too small. Construct validity was good between the Adolescent Homework Inventory and Homework Problem Checklist.

## **Literature Review**

Homework is a part of life for students of all ages and grade levels, and has been a topic of research for some time. Research on homework has focused largely on interventions related to homework completion (Trammel, Schloss, & Alper, 1994; Toney, Kelley, & Lanclos, 2003; Meyer & Kelley, 2007; Soderlund & Bursuck, 1995) and the positive and negative outcomes that result from homework performance and completion, especially those related to academic achievement (Cooper, 1989; Cooper & Valentine, 2001; Paschal, Weinstein, Walberg, 1984; Xu, 2004; Trautwein, 2007). Cooper (1989) defines homework as “tasks assigned to students by school teachers that are meant to be carried out during non- school hours.” Cooper further notes that, although homework can be completed during school hours, for example in study hall, homework does not include *guided* work completed during school hours. Extracurricular activities and “home study” programs are also not considered homework. Cooper's (1989) definition of homework does not include studying and classroom behavior related to homework completion, such as writing down assignments. The current study expands upon Cooper's definition to include these important components of homework.

### **Homework and Academic Achievement**

Successful homework completion has been shown to predict academic achievement across elementary, middle, and high school students, and generally is shown to have a positive effect on academic achievement (Cooper, 1989; Cooper, Robinson, & Patall, 2006; Trautwein, 2007). However, the effect of homework completion on academic achievement is not stable across grade levels. In a meta-analytic study, Cooper, Robinson, & Patall (2006) considered 33 correlations found between academic achievement and time spent on homework in elementary, middle, and high school children. They found that academic achievement had stronger positive

correlations with time spent on homework for middle and high school students than for elementary school students. Thus, as students get older, the positive effect of time spent on homework also increases. Several possible explanations have been proposed for the effect of grade level on the relationship between time spent on homework and academic achievement. For example, several researchers postulated that older students are better able to maintain sustained attention than younger students, resulting in more positive effects of homework completion (Cooper & Valentine, 2001; Xu & Corno, 1998). A second explanation suggests that older students have “more effective” study habits than younger children, resulting in increased positive benefits for older students who complete homework over younger students, as younger students may not be using their time as effectively (Cooper & Valentine, 2001; Dufresne & Kobasigawa, 1989).

Xu (2004) offered another explanation for the grade level effect. He surveyed 920 middle and high school students regarding their reasons for completing homework and found that younger students gave more extrinsic reasons (i.e. approval from parents or teacher) and older students gave more intrinsic reasons (i.e. helps to learn responsibility) for homework completion. This finding suggests that younger students complete homework for reasons other than for themselves, while older students better understand the value of homework completion in relation to skill-building and achievement. Thus, Xu (2005) proposed that homework completion leads to greater academic achievement for older students over younger students due to older students’ advanced understanding of homework completion as a means to achieve and succeed. Irrespective of which explanation is correct, the literature consistently documents a relationship between grade level, homework completion, and academic achievement.

## **Positive and Negative Effects of Homework**

In addition to the being associated with greater academic achievement, homework completion has been noted to increase comprehension of class material, help students learn to manage time, help students build strong writing and core skills, promote independence, and foster learning outside of the classroom (Zimmerman, Bonner, & Kovach, 1996; Alleman & Brophy, 1991; Warton, 2001; Cooper, 1989). Furthermore, homework completion has been found to have a positive effect on families; homework provides parents with the opportunity to interact with their children concerning their studies, which in turn promotes positive homework practices in students (Hoover-Dempsey, Battiato, Walker, Reed, DeJong, & Jones, 2001).

Despite evidence of many positive associations with homework, numerous undesirable consequences for assigned homework range from students' negative reactions towards homework to negative parent-child interactions during homework, including conflict over whether homework was assigned or completed. Completion of homework assignments can engender negative reactions in students towards school, which may further lead to poor school work, school refusal, or boredom (Cooper & Valentine, 2001). Students who view homework as stressful, boring, or interfering with opportunities to engage in preferred activities, may have decreased rates of homework completion or may cheat to avoid the negative experience of homework completion (Cooper, 1989; Kelley & Kahle, 1995; Kouzma & Kennedy, 2002; Schab, 1991). Homework also can be problematic for students whose parents are unable or unwilling to assist with homework completion (Kelley & Kahle, 1995; Miller & Kelley, 1991; Xu, 2004). To the other extreme, for children who are unwilling or refuse to complete homework, negative parent-child interactions may ensue when parents attempt to get their child to complete homework, causing frustration in both parent and child, and possible discord in the family.

Although homework completion may have both positive and negative outcomes, it can be argued that the positive effects of homework completion outweigh the negative effects. Positive effects of homework seem to be greater than negative effects of homework, and the occurrence of negative effects seems to occur less often. Despite which is greater or occurs most often, homework most likely will continue to be assigned given its long history as part of the education system and curriculum (Kralovec, 2007; Foyle, 1992). As such, it is important to develop interventions that focus on reducing the negative effects and problems associated with homework and its completion. An important step in developing an intervention is to identify specific behaviors and situations that make homework completion problematic. Behaviors explored should include those related to the home setting and situation at the time of homework completion, classroom behaviors related to homework, and studying, as each of these may affect a student's ability to complete homework. The identification of specific problems associated with poor homework completion can help clinicians better develop and implement an appropriate intervention for the individual.

### **Homework Problems of Younger and Older Students**

Research has identified many specific problems encountered in the process of homework completion that are experienced by students of varying demographics and grade levels. The literature suggests that poor homework completion and negative feelings towards assigned homework are common problems for younger and older students. Research findings indicate that as students get older, their feelings and reactions towards homework completion become increasingly more negative (Chen & Stevenson, 1989; Bryan & Nelson, 1994; Xu, 2004). For example, Xu (2004) surveyed 920 fifth through twelfth grade students, and found that high school students experienced greater negative reactions towards homework completion, found

homework less interesting, and completed less assigned homework than middle school students. This finding may seem counterintuitive given the previously discussed finding that the relationship between homework and academic achievement becomes stronger as students progress academically (Cooper, Robinson, & Patall, 2006). Rather, it would appear that while older students have greater negative reactions to homework and complete homework at a lesser rate than their younger counterparts, the homework that they actually do complete is of greater benefit to them academically than homework completed by younger students. Therefore displaying that older students should be doing their homework more consistently and with greater care because it does affect them more academically, but instead, they are less likely to complete their homework, and also more likely to have negative reactions towards it than younger students.

Several possible explanations have been proposed for the findings that older students have more negative reactions and less homework completion than younger students. Xu (2004) proposed that older students have more diversions than younger students, causing them to choose more preferable activities over homework, or to feel that homework is more of a burden given the greater availability of opportunities for them to engage in more preferable activities. Additionally, parental assistance decreases as students become older (Bryan & Nelson, 1994; Xu, 2004). Thus, high school students are less likely to have their parents eliminating distractions for them, encouraging them, and praising them when homework is complete, resulting in decreased homework completion and decreased rates of positive associations with homework in older students over younger students. It is also possible that homework assignments evoke more negative reactions from older students because teachers have less motivation to make the assignments fun and interesting than teachers of younger students, who

may display more creativity in the creation of assignments, simply because they are for younger students. Each of these proposed explanations may help explain the finding that older students display more negative emotions towards homework, complete less homework, and find homework less interesting than their younger counterparts.

### **Classroom Behavior, Studying, and Homework Completion and Academic Achievement**

Classroom behavior and study time also may affect a student's ability to complete homework. Although much research has focused on the reverse relationship, how homework affects classroom behaviors and performance (for an example and short review, see Cooper, Jackson, Nye, & Lindsay, 2001), it is also important to consider how specific classroom behaviors impact homework completion. Examples of classroom behaviors that may affect homework completion include accurate recording homework assignments, taking notes in class for test preparation, asking questions when material is not understood, and turning in homework in a timely manner.

Research does not often make a clear distinction between studying and time spent completing homework. Instead, the preferred method is to view studying and time spent on homework as similar or equivalent activities, with homework completion as an "extension" of study time (Walberg & Paschal, 1995). However, it is important to consider studying as a separate, though related, activity from homework completion. Study time may result in positive outcomes by helping the student to complete homework more accurately and efficiently, given repeated rehearsal of important concepts presented in the classroom, and introduction to new material that is beneficial to the student's knowledge, and may not have previously been presented. Unfortunately the literature either ignores studying as a component of academic achievement, or does not distinguish studying from assigned homework. Further research should

be conducted looking at the relationship between homework completion, studying, and academic achievement, as well as the positive and negative effects of studying.

Problems related to homework completion pervade all grade levels and it is likely that classroom behavior and studying have an impact on homework completion, as well. Certainly, more research is needed to develop appropriate interventions that address the wide array of homework problems present within individual students. However, to aid in productive and effective research, reliable and valid measures must exist that allow researchers to identify specific homework problems that are exhibited by students individually and as a whole.

### **Homework-Related Measures Currently Available**

Currently there are several measures used to assess homework problems. Two available measures are the Homework Problem Checklist (HPC; Anesko, Shoiock, Ramirez, & Levine, 1987), and the Homework Management Scale (HMS; Xu, 2008). Another measure used to identify specific homework and academic problems is the “Diagnostic Checklist for School Success” located in *ADHD in Adolescents: Diagnosis and Treatment* (1998) by Arthur L. Robin.

The HPC is a 20-item questionnaire completed by parents and teachers regarding specific behavior problems exhibited by individual students related to successful homework completion. It has been normed using a sample of 319 children grades 2 through 4, ranging in age from 6 to 10 (Anesko et al., 1987). The HPC has been shown to have good internal consistency and content validity (Anesko et al., 1987). Although the HPC has been used in research concerning homework across grade levels, its validity and application with adolescents remains unstudied. The HPC was normed with children ages 6 to 10, failing to include students in middle and high school. Although the scale has some psychometric support, including the ability to detect treatment effects (Anesko & O’Leary, 1982; Kahle & Kelley, 1994), the utility

and relevance of the measure with adolescents is not known. Furthermore, the HPC fails to include studying behaviors and includes only a small range of classroom behaviors.

The HMS is a 22-item questionnaire intended for use with middle and high school students to measure their ability to self-regulate and manage their homework (Xu, 2008). Items are rated on a five point likert scale ranging from *never* (1) to *routinely* (5). Xu (2008) used exploratory and confirmatory factor analysis to validate the HMS using a sample of 987 urban and rural students in eleventh grade. Factor analyses resulted in a five factor structure for the HMS, which includes the following factors: arranging environment, managing time, handling distraction, monitoring motivation, and controlling emotion. The HMS has not yet been normed.

The HMS appears to be a valid measure for determining an adolescents' ability to self-regulate and manage homework. The HMS includes self-regulating behaviors such as self-talk directed towards staying focused on the activity and feeling positive about homework. The HMS also includes items measuring management of homework time and space, which includes such behaviors as removing distractions from the work area and planning when and how long to work on homework. However, the HMS does not focus on problems associated with study time and classroom behaviors related to homework, both of which may affect homework completion.

The Diagnostic Checklist for School Success was developed to help clinicians in the assessment and treatment of adolescents with Attention-Deficit/Hyperactivity Disorder (ADHD) who experience homework-related difficulties and difficulties at school. The checklist contains 82 items rated on a 5-point likert scale ranging from *never* (1) to *always* (5). Items are grouped into ten categories: homework, organization, test preparation and test taking, note taking, reading comprehension, memorizing, classroom participation and conduct, understanding/processing problems, school responsibilities, and social scene.

While the Diagnostic Checklist for School Success (Robin, 1998) is a useful tool in identifying specific strengths and weaknesses of individual students, it has not been used in research, and therefore provides no measure of reliability or validity in detecting problems or treatment effects in adolescents. The psychometric adequacy of the checklist is unknown.

### **Summary and Purpose**

Homework completion becomes increasingly more important to academic achievement as students get older, and yet negative reactions towards homework and lack of homework completion also increase as students progress in age and grade. Homework related problems encountered by elementary school children are different than those encountered by middle and high school students. There is a lack of reliable and valid measures for assessing problems related to homework in middle and high school populations. Additionally, some current measures do not include studying and classroom behaviors that likely impact homework completion and performance. Thus, there is a need to construct a measure of adolescent homework problems that includes studying and classroom behaviors that impact homework completion. The purpose of this study is to develop and preliminarily validate a measure of homework problems for adolescents.

## Phase 1 Method: Item Generation and Elimination

### Item Generation

A pool of items was generated by reviewing current homework measures, modifying existing items, and adding items deemed important in related research. Specifically, the HPC, HMS, and Diagnostic Checklist for School Success were reviewed for relevant items. After item generation, items were further reviewed by experts to ensure relevance and comprehensiveness. Items were added as needed.

### Item Elimination

**Participants.** Participants included 239 adolescents ages 11 to 18 ( $M = 13.11$ ), and 309 parents. Adolescents and parents were recruited at local middle and high schools in Baton Rouge and Gonzales, Louisiana. The adolescent sample consisted of 101 boys (42.3%) and 138 girls (57.7%). Parents ranged in age from 28 to 48 ( $M = 45.30$ ). Demographic information about the subjects is presented in Tables 1 and 2.

Table 1  
Phase 1 Demographic Characteristics of the Adolescent Sample

		Frequency (n=239)	Percentage
Ethnicity	White	187	78.2
	Black	38	15.9
	Hispanic	6	2.5
	Asian	4	1.7
	Other	4	1.7
Grade	6	74	31.0
	7	61	25.5
	8	42	17.6
	9	35	14.6
	10	25	10.5
	11	1	.4
	12	1	.4

(Table 1 continued)

(Table 1 continued)

Age			
	11	33	13.8
	12	74	31
	13	38	15.9
	14	39	16.3
	15	34	14.2
	16	17	7.1
	17	1	.4
	18	1	.4
	Missing	2	.8
Household Income			
	\$0-4,999	4	1.7
	\$5,000-9,999	0	0
	\$10,000-14,999	3	1.3
	\$15,000-24,999	4	1.7
	\$25-34,999	3	1.3
	\$35-49,999	10	4.2
	\$50-74,999	19	7.9
	\$75-99,999	23	9.6
	\$100,000 and up	159	66.5
	Missing	14	5.9

Table 2  
Phase 1 Demographic Characteristics of the Parent Sample

		<b>Frequency (n=309)</b>	<b>Percentage</b>
Relationship to Adolescent			
	Mother	250	80.9
	Father	44	14.2
	Grandparent	4	1.3
	Legal Guardian	4	1.3
	Missing	7	2.3
Household Income			
	\$0-4,999	4	1.3
	\$5,000-9,999	0	0
	\$10,000-14,999	3	1
	\$15,000-24,999	4	1.3
	\$25-34,999	5	1.6
	\$35-49,999	13	4.2
	\$50-74,999	21	6.8
	\$75-99,999	30	9.7
	\$100,000 and up	221	71.5
	Missing	8	2.6

**Measures:**

- ***Demographic Questionnaire.*** A demographic questionnaire was completed by the parent of each parent-adolescent dyad. This included information on the gender, age, race, and grade of each student. The parent's age, race, income, occupation, and level of education completed were also included (see Appendix A).
- ***Adolescent Homework Inventory-Parent (AHI-P; Pilot Version).*** The AHI-P pilot version contained 61 potential items and was completed by the parent of each adolescent. Each item was rated on a five point likert scale rating from one as *never true* to five as *always true*, indicating how true the statement was of their child's behaviors over the past month (see Appendix B).
- ***Adolescent Homework Inventory-Adolescent (AHI-A; Pilot Version).*** The AHI-A pilot version contained the same 61 items as the parent version, and was completed by the adolescent. Each item was rated on a five point likert scale rating from one as *never true* to five as *always true*, indicating how true the statement was of their own behavior over the past month (see Appendix C).

**Procedure.** Parent consent and adolescent assent were obtained from all participants. In middle and high schools, consent forms were sent home to parents with an attached letter explaining the purpose and procedure of the study and containing the researcher's contact information for any questions or comments they may have had concerning the study. The Demographics form and the AHI-P pilot version were also sent home to the parents so they could complete the forms and return them with the signed consent. Consent forms and the AHI-P were either returned to the adolescent's school, or mailed directly to the researcher. Students completed the AHI-A pilot in small groups at their school. Trained researchers administered the

measures to each small group. Researchers explained the purpose of the study and provided instructions on completing the questionnaire. One student refused to participate.

## **Phase 1 Results**

### **Item Selection**

Item means and frequency of endorsement were calculated for the purpose of reducing the number of items. Infrequent items were defined as those endorsed by less than 33% of the sample. No items on the AHI-P or the AHI-A qualified for elimination under this criteria. DeVellis (1991) states that item means should be “close to the center of the range” of item values, so items with extremely low or high means should be eliminated. Items with a mean of 2 or less or 4 or more qualified for elimination. Using this criterion, 18 items could be eliminated from the AHI-Parent version and 15 items could be eliminated from the AHI-Adolescent version (see Appendix D) based on low means. However, given that the distribution of the sample was skewed by socioeconomic status, and the critical value of these items, they were not eliminated. These items may have been endorsed at increased rates if the questionnaires had been completed by a more heterogeneous sample.

Further analyses were conducted on items to determine if they should be eliminated based on their item-total correlation, inter-item correlations, and their effect on alpha. Items with low item-total correlations (equal to or below .20) or high inter-item correlations (equal to or above .80) were to be eliminated (DeVellis, 1991). No items could be eliminated due to low item-total correlations or high inter-item correlations. Items were considered for elimination if their elimination would increase the reliability of the scale. No items were eliminated to increase alpha.

### **Exploratory Factor Analysis**

Exploratory Factor Analyses were conducted on both versions of the AHI using the Principal Component Analysis Extraction method with varimax orthogonal rotation. Missing

items were replaced with item means, given that data seemed to be missing completely at random (Downey & King, 1998; Raymond & Roberts, 1987). Criteria for a set of items to be considered a factor included an eigenvalue equal to one or greater, simple structure, and a reasonable theoretical relationship (Comrey & Lee, 1992). Scree plots also were taken into consideration when deciding the optimal number of factors that account for the most variance in each version of the AHI (Cattell, 1966). Scree plot examination for both versions of the AHI indicated a four-factor solution. Consequently, further analyses were conducted with each version of the AHI forcing extraction of three, four, and five factors. A three-factor solution proved to be the best theoretical and simple factor structure for both the AHI-P and the AHI-A. The three-factor solution for the AHI-P resulted in a scale with 58 total items explaining 44.1 percent of the variance. The three-factor solution for the AHI-A resulted in a scale with 54 total items explaining 36.6 percent of the variance. Items with factor loadings equal to or above .40 were kept, while items with factor loadings equal to or below .39 on all factors were removed (Floyd & Widaman, 1995). See Appendix E for a list of items eliminated due to low factor loadings.

The three-factor solution was similar for the AHI-P and the AHI-A. Latent constructs for both measures include: Negative Homework Behavior, Proactive Behavior, and Parent Contingencies. Factor one, Negative Homework Behavior, includes items such as “Puts off starting homework/I put off starting homework” and “Easily distracted during homework/ I am easily distracted during homework.” Factor two, Proactive Behavior, includes items such as “Organizes notes when studying/I organize my notes when studying” and “Records homework accurately/I record homework accurately.” Factor three, Parent Contingencies, includes items that pertain to parental involvement, for example, “Rewarded for completing homework/I am

rewarded for completing homework” and “Requires supervision during homework to ensure completion/I require supervision during homework to ensure completion.” See Table 3 for item factor loadings, eigenvalues, and percent variance explained for each factor of the AHI-P, and see Table 4 for the AHI-A.

Table 3  
Principal Components Analysis with Varimax Rotation Factor Loadings for AHI-P

Items	Factor Loadings		
	1	2	3
<b>Factor 1: Negative Homework Behavior</b>			
Takes too many breaks during homework	.77		
Easily distracted during homework	.74		
Unmotivated to complete homework	.73		
Takes too long to complete homework	.69		
Puts off starting homework	.66		
Stays focused during homework	.64		
Daydreams during homework	.61		
Does as little as possible to complete homework	.60		
Waits too long to start long-term assignments	.57		
Unmotivated to study	.56		
Fails to comprehend material read	.56		
Reads directions on homework and follows them	.56		
Complains about homework	.56		
Fails to finish homework	.55		
Gets annoyed when asked to complete or correct mistakes on homework	.54		
Dissatisfied with completed homework	.53		
Turns in homework late	.51		
Rushes through homework	.50		
Makes careless mistakes on homework	.50		
Frustrated when a parent/tutor tries to help with homework	.48		
Loses homework	.48		
Can't find where homework assignment is written	.47		
Talks to friends during homework (computer or phone).	.43		
Completes homework in a quiet place	.41		
<b>Factor 2: Proactive Behavior</b>			
Organizes his/her notes when studying		.71	
Highlights or underlines important points in notes		.69	
Reviews notes on a daily basis		.65	
Rewrites notes when studying		.65	
Studies materials related to homework		.65	

(Table 3 continued)

(Table 3 continued)

Reviews material until memorized	.65		
Organizes backpack for the next day	.60		
Rereads textbook or notes when he/she doesn't understand the assignment	.59		
Reviews errors made on old tests (learns from past mistakes)	.58		
Checks homework for correct answers	.57		
Records homework assignments accurately	.56		
Takes legible, organized notes	.56		
Calls a friend for help with homework when needed	.55		
Creates flashcards to study for a test	.54		
Takes pride in his/her homework	.54		
Studies adequately for tests	.53		
Asks for help from teacher when he/she doesn't understand an assignment	.51		
Studies based on test format	.50		
Knows when long-term assignments are due	.49		
Starts homework without being reminded	.47		
Denies having homework	.47		
Fails to bring home necessary materials	.46		
Reads the textbook to prepare for tests	.43		
Fails to bring homework to class	.42		
<b>Factor 3: Parent Contingencies</b>			
Rewarded for completing homework			-.67
Punished for failing to study			.66
Rewarded for studying			-.65
Punished for failing to complete homework			.64
Rewarded for good grades			-.57
Punished for bad grades			.56
Asks adults too often for help during homework			.51
Requires adult help/instruction to complete homework			.50
Requires supervision during homework to ensure completion			.48
Completes homework independently			.41
<b>Eigenvalues</b>	11.22	10.34	5.33
<b>Percent Variance Explained</b>	18.39	16.95	8.73

Table 4

Principal Components Analysis with Varimax Rotation Factor Loadings for AHI-A

Items	Factor Loadings		
	1	2	3
<b>Factor 1: Negative Homework Behavior</b>			
I am easily distracted during homework	.74		
I daydream during homework	.70		

(Table 4 continued)

(Table 4 continued)

I put off starting homework	.68
I am unmotivated to complete homework	.66
I take too many breaks during homework	.63
I complain about homework	.61
I take too long to complete homework	.61
I rush through homework	.60
I make careless mistakes on homework	.60
I get annoyed when asked to complete or correct mistakes on homework	.56
I stay focused during homework	.54
I am unmotivated to study	.51
I wait too long to start long-term assignments	.51
I do as little as possible to complete homework	.50
I deny having homework	.45
I am dissatisfied with completed homework	.41
<b>Factor 2: Proactive Behavior</b>	
I organize my notes when studying	.71
I review material until it is memorized	.68
I study adequately for tests	.66
I study material related to homework	.66
I highlight or underline important points in notes	.63
I study based on test format	.62
I reread the textbook or notes when I don't understand the assignment	.59
I review my notes on a daily basis	.59
I take legible, organized notes	.57
I rewrite notes when studying	.56
I read the textbook to prepare for tests	.56
I ask for help from the teacher when I don't understand an assignment	.55
I organize my backpack for the next day	.54
I review errors made on old tests (I learn from past mistakes)	.54
I check homework for correct answers	.54
I record homework assignments accurately	.53
I read directions on homework and follow them	.53
I create flashcards to study for a test	.53
I cooperate when my homework is reviewed by a parent/tutor	.50
I complete homework in a quiet place	.46
I take pride in my homework	.45
I call a friend for help with homework when I need it	.44
I allow a parent/tutor to assist with studying	.43
I know when long-term assignments are due	.41
<b>Factor 3: Parent Contingencies</b>	

(Table 4 continued)

(Table 4 continued)

I require adult help/instruction to complete homework			.61
I require supervision during homework to ensure completion			.59
I lose my homework			.58
I fail to comprehend information needed to complete homework			.57
I fail to bring homework to class			.54
I turn in homework late			.53
I fail to bring home necessary materials			.53
I can't find where my homework assignment is written			.51
I complete homework independently			.50
I am punished for failing to study			.48
I fail to finish homework			.47
I am rewarded for completing homework			-.47
I start homework without being reminded			.45
I fail to comprehend material read			.44
<b>Eigenvalues</b>	9.39	7.40	5.53
<b>Percent Variance Explained</b>	15.39	12.14	9.01

### Reliability

Internal consistency reliability analyses were conducted for the AHI-P with 58 items, and the AHI-A with 54 items using Cronbach's alpha. Internal consistency reliability analyses also were conducted on individual factors. The Total Scale alpha coefficient for the AHI-P was .96, and the Total Scale alpha coefficient for the AHI-A was .94, indicating some redundancy between items. Internal consistency reliability analyses yielded alpha coefficients ranging from .94 to .52 on AHI-P factors and ranging from .91 to .83 on AHI-A factors. Six items could be removed from the AHI-P to increase the reliability of individual factors. Two items on the AHI-A could be removed to increase the reliability of factor three (see Appendix F for a list of items qualifying for elimination to increase reliability). All factors were retained and no items were removed, due to the skewed sample.

## Phase 2 Method: Preliminary Validity and Reliability

### Purpose

Preliminary validity and reliability procedures were conducted to build psychometric support for both versions of the AHI. These procedures included confirmatory factor analyses (CFA) and analyses of construct validity and internal consistency using a second sample.

### Participants

Participants included 44 adolescents ages 11 to 15, and 63 parents. Students and parents were recruited from middle and high schools and in waiting rooms of local pediatric clinics. The adolescent sample consisted of 13 boys (29.5%) and 31 girls (70.5%). The adolescent sample was ethnically diverse, as displayed in Table 5. Table 5 also presents age, grade, and household income data on those adolescents that participated. Parents who participated ranged in age from 27 to 55 ( $M = 38.57$ ). Parent demographic data is presented in Table 6.

Table 5  
Phase 2 Demographic Characteristics of the Adolescent Sample

		Frequency (n=44)	Percentage
Ethnicity	White	19	43.2
	Black	21	47.7
	Hispanic	3	6.8
	Asian	0	0
	Other	1	2.3
Grade	6	17	38.6
	7	13	29.5
	8	14	31.8
	9	0	0
	10	0	0
	11	0	0
	12	0	0
Age	11	11	25

(Table 5 continued)

(Table 5 continued)

	12	16	36.4
	13	14	31.8
	14	2	4.5
	15	1	2.3
	16	0	0
	17	0	0
	18	0	0
	Missing	0	0
Household Income			
	\$0-4,999	3	6.8
	\$5,000-9,999	2	4.5
	\$10,000-14,999	5	11.4
	\$15,000-24,999	6	13.6
	\$25-34,999	6	13.6
	\$35-49,999	5	11.4
	\$50-74,999	7	15.9
	\$75-99,999	6	13.6
	\$100,000 and up	2	4.5
	Missing	2	4.5

Table 6  
Phase 2 Demographic Characteristics of the Parent Sample

		Frequency (n=63)	Percentage
Relationship to Adolescent			
	Mother	56	88.9
	Father	4	6.3
	Grandparent	2	3.2
	Legal Guardian	0	0
	Missing	1	1.6
Household Income			
	\$0-4,999	5	7.9
	\$5,000-9,999	4	6.3
	\$10,000-14,999	5	7.9
	\$15,000-24,999	10	15.9
	\$25-34,999	8	12.7
	\$35-49,999	7	11.1
	\$50-74,999	8	12.7
	\$75-99,999	7	11.1
	\$100,000 and up	2	3.2
	Missing	7	11.1

## Measures

**Demographic Questionnaire.** The demographic questionnaire was the same as used in Phase 1.

**Adolescent Homework Inventory-Parent (AHI-P).** The AHI-P contained all 61 items due to the skewed representation of the sample used in Phase 1. The AHI-P was completed by the parent of each adolescent.

**Adolescent Homework Inventory-Adolescent (AHI-A).** The AHI-A contained all 61 items due to the skewed representation of the sample collected in Phase 1, and was completed by the adolescent.

**Homework problem checklist (HPC;** Anesko, Shoiock, Ramirez, & Levine, 1987). The HPC is a 20-item questionnaire to be completed by teachers or parents concerning homework problems experienced by the student in question over the last two weeks. Items were rated on a four point likert scale rating from zero (*never*) to three (*very often*) (see Appendix I).

## Procedure

After obtaining parent consent, parents were asked to complete the demographic questionnaire, AHI-P, and HPC. Adolescents completed the AHI-A and HPC. The procedures were the same as those employed in Phase 1.

## **Phase 2 Results**

### **Confirmatory Factor Analysis**

Due to the small sample size, six individual Confirmatory Factor Analyses (CFAs) were conducted with each factor of the two versions of the AHI to determine the fit of items on individual factors. Factor models were determined by the results of the EFA. Analyses were performed using the Statistical Program for the Social Sciences (SPSS) and the Analysis of Moment Structures (AMOS) program. The maximum likelihood (ML) estimator was used with missing data points accounted for using the full information maximum likelihood (FIML) method. Each CFA produced a model of fit summary in which the following model fit indices were considered: chi-square statistic, root mean squared error of approximation (RMSEA), comparative fit index (CFI), and normed fit index (NFI). To demonstrate that the model conforms to the data, the chi-square statistic should not be significant (Floyd & Widaman, 1995). Care was taken when interpreting the chi-square statistic due to its sensitivity to sample size (Jöreskog, 1978). Demonstration of a good fit with the RMSEA index was set at a value of less than or equal to .08, and not greater than .10 (Brown and Cudeck, 1993). The CFI was considered to demonstrate an adequate fit when it reached a value of approximately .94 or greater, and the NFI was considered an adequate fit at .90 or greater (Sivo, Fan, Witta, & Willse, 2006).

Individual CFAs conducted on each factor of the AHI-P and AHI-A indicated poor model fit. Goodness-of-fit statistics for the AHI-P and AHI-A are presented in Table 7. The chi-square for each factor model was significant, indicating poor model fit. The RMSEA for each factor model was .087 or greater, indicating that some factor models were nearing minimum requirements, but overall indicating poor model fit for each factor. The CFI and NFI for each

factor indicated poor model fit, as they did not reach values of .90 or greater. Poor model fit may be the result of too few data points included in analysis.

Item regression weights were reviewed for each factor to determine potentially problematic items within each factor. Problematic items were identified for each factor, and are presented in Appendix G. Upon further data collection, these items will be further reviewed and considered for removal.

Table 7  
Goodness of Fit Indices Calculated for Individual Factors of the AHI-P and AHI-A

<b>Factor Model</b>	<b><i>df</i></b>	<b><math>X^2</math></b>	<b>RMSEA</b>	<b>CFI</b>	<b>NFI</b>
AHI-P		(N = 63 )			
Negative Homework Behaviors	252	439.02	.11	.78	.61
Proactive Behaviors	252	380.60	.09	.78	.58
Parent Contingencies	35	122.37	.20	.42	.41
AHI-A		(N = 44 )			
Negative Homework Behaviors	252	513.06	.13	.50	.37
Proactive Behaviors	104	177.04	.10	.76	.59
Parent Contingencies	77	115.87	.09	.68	.49

*Note:* RMSEA = root mean squared error of approximation; CFI = comparative fit index; NFI = normed fit index.

### **Construct Validity**

Construct validity was determined by calculating total scores of the AHI-P, AHI-A, and HPC. Total scores of the HPC and each version of the AHI should correlate positively to demonstrate good convergent validity, as they measure similar constructs. To test this hypothesis, correlations were run between the HPC and the parent and adolescent versions of the AHI. Results of the correlation between the parent-completed HPC and the AHI-P indicated a significant, positive relationship between total scale scores on each measure  $r(42) = .86, p < .01$ . Results of the correlation between total scale scores on the adolescent-completed HPC and the AHI-A also indicated a significant, positive relationship between the measures  $r(30) = .73, p <$

.01. Correlations between the AHI-P and AHI-A were not significant  $r(27) = .32, p = .09$ .

Correlational results are presented in Table 8.

Table 8

Construct Validity: Correlations between the AHI-P, AHI-A, and HPC.

	Measure	1	2	3
1.	AHI-Parent	--		
2.	AHI-Adolescent	.32	--	
3.	Homework Problem Checklist	.86**	.73**	--

*Note:* Homework Problem Checklist refers to the measure completed by the same participant as the AHI; \*\* $p < .01$

### Reliability

Internal consistency reliability analyses were conducted for the AHI-P and AHI-A using the same procedures as Phase 1. The Total Scale alpha coefficient for the AHI-P was .95, and the Total Scale alpha coefficient for the AHI-A was .93, indicating some redundancy between items. Six items could be removed from the AHI-P and four items from the AHI-A to increase Total Scale internal consistency. Internal consistency reliability analyses yielded alpha coefficients ranging from .94 to .34 on AHI-P factors and ranging from .91 to .75 on AHI-A factors. Seven items could be removed from the AHI-P and four items from the AHI-A to increase the reliability of individual factors (see Appendix H for a list of items qualifying for elimination to increase reliability).

## Discussion

The purpose of the current study was to create psychometrically sound self- and parent-report measures for the assessment of adolescent homework problems. The results provide preliminary support for the reliability and validity of the AHI. Exploratory factor analyses on the AHI-P and AHI-A indicated that each measure best fits a three-factor structure, the three factors being Negative Homework Behavior, Proactive Behavior, and Parent Contingencies. Total scale internal consistency of both AHI versions was good. Internal consistency of individual factors was good for the Negative Homework Behavior and Proactive Behavior factors of the AHI-P, while the Parent Contingencies factor had adequate internal consistency. All AHI-A factors demonstrated good internal consistency.

Confirmatory factor analyses of each factor indicated poor model fit for each factor model. Six individual factor analyses were conducted due to inadequate sample size. Given the small sample size and the number of items contained in each factor, these results should not be considered stable. Model fit of each factor may improve as problematic items are eliminated.

Findings indicate that the AHI-P and AHI-A demonstrated significant, positive relationships with the HPC, indicating that the measures assess similar constructs. This finding is consistent with the expectations of the researcher that the AHI and HPC would converge as measures of homework problems in adolescents. The AHI also provides some advantages over the HPC, in that it includes studying and classroom behaviors. Additional data collection will hopefully further support this finding. Findings also indicated that parent and self reports of adolescent homework behavior differs according to the respondent. This may result from the aforementioned increased responsibility and independence expected of adolescents, causing parents to be less involved in their adolescent's homework routine and therefore less accurate in

their reporting of adolescent homework behavior. Further research on how parent- and self-reports of adolescent behavior differ would be beneficial in determining accuracy of reports, as well as further possible explanations for these findings.

Findings indicated good total scale internal consistency of both AHI versions collected using the second sample, and good internal consistency for the Negative Homework Behavior and Proactive Behavior factors for both versions of the AHI. The Parent Contingencies factor had poor internal consistency for the AHI-P, and adequate internal consistency for the AHI-A.

The current study has several limitations. First, the sample collected for the EFA was skewed towards a higher income population. Given this limitation, measures were taken to collect a second sample that was less homogeneous in household income with some success. Second, the first sample collected did not contain an even distribution of ages and grades across the adolescents, with younger ages and grades being over-represented. Efforts were taken to collect a more heterogeneous sample for the CFA with little success. A third limitation is the sample size collected for the preliminary validation procedures. The sample was not large enough to provide a good indication of model fit in the CFA, resulting in the use of less than ideal statistical analyses to determine model fit between the factor structures indicated in the EFA with the second sample of data collected. Future research should include collection of more diverse populations, as well as a greater sample size for use in confirmatory factor analyses of the proposed factor structure.

Exploratory factor analyses, measures of reliability, and measures of construct validity show promise for the AHI as a reliable and valid measure of adolescent homework problems. Future research should focus on a larger sample size to validate the factor structure of the AHI with a more diverse population. Further development of the AHI should also explore the

measure's ability to distinguish between those populations that often experience greater struggles with homework completion, such as children suffering from Attention-Deficit/Hyperactivity Disorder and the typically developing population (Barkley, 2003). Further research may also focus on the ability of the AHI to detect treatment effects of specific homework interventions put into place. The continued refinement of the AHI would allow for additional research of homework difficulties faced by adolescents and provide the field with greater information in determining appropriate interventions for individual adolescents— a research topic that is often discussed, but rarely given deliberate consideration.

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**Appendix A: Demographic Questionnaire**

**DEMOGRAPHIC INFORMATION**

**Directions:** Please complete the following information about you and your child.

**Parent Information**

**Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Address:** \_\_\_\_\_ **Phone:** \_\_\_\_\_

\_\_\_\_\_

**Mother Occupation:** \_\_\_\_\_

**Father Occupation:** \_\_\_\_\_

**Annual Income:** \_\_\_\_\_

**Level of Education Completed Mother (Please check one):**

- Some Middle School
- Some High School
- High School Graduate
- Some College (at least one year) or specialized training
- College Graduate 4 year degree
- Some Graduate school (at least one year)
- College Graduate with Professional Degree (Masters or Doctorate)

**Level of Education Completed Father (Please check one):**

- Some Middle School
- Some High School
- High School Graduate
- Some College (at least one year) or specialized training
- College Graduate 4 year degree
- Some Graduate school (at least one year)
- College Graduate with Professional Degree (Masters or Doctorate)

**Child Information**

**Name:** \_\_\_\_\_ **Sex:** \_\_\_\_\_

**Age/Grade:** \_\_\_\_\_ / \_\_\_\_\_ **Race:** \_\_\_\_\_

## Appendix B

### Adolescent Homework Inventory- Parent; Pilot Version (AHI -P; Pilot Version)

**Directions:** Many children and adolescents have problems with homework. Please rate how often your child has done the following over the past month.

	<b>Never True</b>	<b>Seldom/ Rarely True</b>	<b>Sometimes True</b>	<b>Frequently /Often True</b>	<b>Always True</b>
1. Fails to bring home necessary materials.	1	2	3	4	5
2. Reads the textbook to prepare for tests.	1	2	3	4	5
3. Denies having homework.	1	2	3	4	5
4. Complains about homework.	1	2	3	4	5
5. Takes pride in his/her homework.	1	2	3	4	5
6. Unmotivated to study.	1	2	3	4	5
7. Puts off starting homework.	1	2	3	4	5
8. Rereads textbook or notes when he/she doesn't understand the assignment.	1	2	3	4	5
9. Completes homework independently.	1	2	3	4	5
10. Daydreams during homework.	1	2	3	4	5
11. Unmotivated to complete homework.	1	2	3	4	5
12. Easily distracted during homework.	1	2	3	4	5
13. Rewarded for good grades.	1	2	3	4	5
14. Fails to finish homework.	1	2	3	4	5
15. Takes too long to complete homework.	1	2	3	4	5
16. Reviews errors made on old tests (learns from past mistakes).	1	2	3	4	5

17. Makes careless mistakes on homework.	1	2	3	4	5
18. Does as little as possible to complete homework.	1	2	3	4	5
19. Fails to bring homework to class.	1	2	3	4	5
20. Rushes through homework.	1	2	3	4	5
21. Dissatisfied with completed homework.	1	2	3	4	5
22. Checks homework for correct answers.	1	2	3	4	5
23. Punished for bad grades.	1	2	3	4	5
24. Turns in homework late.	1	2	3	4	5
25. Frustrated when a parent/tutor tries to help with homework.	1	2	3	4	5
26. Studies adequately for tests.	1	2	3	4	5
27. Calls a friend for help with homework when needed.	1	2	3	4	5
28. Rewrites notes when studying.	1	2	3	4	5
29. Asks adults too often for help during homework.	1	2	3	4	5
30. Rewarded for completing homework.	1	2	3	4	5
31. Takes too many breaks during homework.	1	2	3	4	5
32. Completes homework in a quiet place.	1	2	3	4	5
33. Records homework assignments accurately.	1	2	3	4	5
34. Organizes his/her notes when studying.	1	2	3	4	5
35. Gets annoyed when asked to complete or correct mistakes on homework.	1	2	3	4	5
36. Punished for failing to complete homework.	1	2	3	4	5

37. Stays focused during homework.	1	2	3	4	5
38. Allows parent/tutor to assist with studying.	1	2	3	4	5
39. Talks to friends during homework (computer or phone).	1	2	3	4	5
40. Cooperates when homework is reviewed by a parent/tutor.	1	2	3	4	5
41. Starts homework without being reminded.	1	2	3	4	5
42. Asks for help from teacher when he/she doesn't understand an assignment.	1	2	3	4	5
43. Can't find where homework assignment is written.	1	2	3	4	5
44. Highlights or underlines important points in notes.	1	2	3	4	5
45. Studies material related to homework.	1	2	3	4	5
46. Takes legible, organized notes.	1	2	3	4	5
47. Organizes backpack for the next day.	1	2	3	4	5
48. Reads directions on homework and follows them.	1	2	3	4	5
49. Requires supervision during homework to ensure completion.	1	2	3	4	5
50. Fails to comprehend information needed to complete homework.	1	2	3	4	5
51. Requires adult help/instruction to complete homework.	1	2	3	4	5
52. Rewarded for studying.	1	2	3	4	5
53. Creates flashcards to study for a test.	1	2	3	4	5

54. Studies based on test format.	1	2	3	4	5
55. Reviews notes on a daily basis.	1	2	3	4	5
56. Waits too long to start long-term assignments.	1	2	3	4	5
57. Reviews material until memorized.	1	2	3	4	5
58. Loses homework.	1	2	3	4	5
59. Fails to comprehend material read.	1	2	3	4	5
60. Punished for failing to study.	1	2	3	4	5
61. Knows when long-term assignments are due.	1	2	3	4	5

## Appendix C

### Adolescent Homework Inventory- Adolescent; Pilot Version (AHI-A; Pilot Version)

**Directions:** Many children and adolescents have problems with homework. Please rate how often your child has done the following over the past month.

	Never True	Seldom/ Rarely True	Sometimes True	Frequently /Often True	Always True
1. Fails to bring home necessary materials.	1	2	3	4	5
2. Reads the textbook to prepare for tests.	1	2	3	4	5
3. Denies having homework.	1	2	3	4	5
4. Complains about homework.	1	2	3	4	5
5. Takes pride in his/her homework.	1	2	3	4	5
6. Unmotivated to study.	1	2	3	4	5
7. Puts off starting homework.	1	2	3	4	5
8. Rereads textbook or notes when he/she doesn't understand the assignment.	1	2	3	4	5
9. Completes homework independently.	1	2	3	4	5
10. Daydreams during homework.	1	2	3	4	5
11. Unmotivated to complete homework.	1	2	3	4	5
12. Easily distracted during homework.	1	2	3	4	5
13. Rewarded for good grades.	1	2	3	4	5
14. Fails to finish homework.	1	2	3	4	5
15. Takes too long to complete homework.	1	2	3	4	5
16. Reviews errors made on old tests (learns from past mistakes).	1	2	3	4	5

17. Makes careless mistakes on homework.	1	2	3	4	5
18. Does as little as possible to complete homework.	1	2	3	4	5
19. Fails to bring homework to class.	1	2	3	4	5
20. Rushes through homework.	1	2	3	4	5
21. Dissatisfied with completed homework.	1	2	3	4	5
22. Checks homework for correct answers.	1	2	3	4	5
23. Punished for bad grades.	1	2	3	4	5
24. Turns in homework late.	1	2	3	4	5
25. Frustrated when a parent/tutor tries to help with homework.	1	2	3	4	5
26. Studies adequately for tests.	1	2	3	4	5
27. Calls a friend for help with homework when needed.	1	2	3	4	5
28. Rewrites notes when studying.	1	2	3	4	5
29. Asks adults too often for help during homework.	1	2	3	4	5
30. Rewarded for completing homework.	1	2	3	4	5
31. Takes too many breaks during homework.	1	2	3	4	5
32. Completes homework in a quiet place.	1	2	3	4	5
33. Records homework assignments accurately.	1	2	3	4	5
34. Organizes his/her notes when studying.	1	2	3	4	5
35. Gets annoyed when asked to complete or correct mistakes on homework.	1	2	3	4	5
36. Punished for failing to complete homework.	1	2	3	4	5

37. Stays focused during homework.	1	2	3	4	5
38. Allows parent/tutor to assist with studying.	1	2	3	4	5
39. Talks to friends during homework (computer or phone).	1	2	3	4	5
40. Cooperates when homework is reviewed by a parent/tutor.	1	2	3	4	5
41. Starts homework without being reminded.	1	2	3	4	5
42. Asks for help from teacher when he/she doesn't understand an assignment.	1	2	3	4	5
43. Can't find where homework assignment is written.	1	2	3	4	5
44. Highlights or underlines important points in notes.	1	2	3	4	5
45. Studies material related to homework.	1	2	3	4	5
46. Takes legible, organized notes.	1	2	3	4	5
47. Organizes backpack for the next day.	1	2	3	4	5
48. Reads directions on homework and follows them.	1	2	3	4	5
49. Requires supervision during homework to ensure completion.	1	2	3	4	5
50. Fails to comprehend information needed to complete homework.	1	2	3	4	5
51. Requires adult help/instruction to complete homework.	1	2	3	4	5
52. Rewarded for studying.	1	2	3	4	5
53. Creates flashcards to study for a test.	1	2	3	4	5

54. Studies based on test format.	1	2	3	4	5
55. Reviews notes on a daily basis.	1	2	3	4	5
56. Waits too long to start long-term assignments.	1	2	3	4	5
57. Reviews material until memorized.	1	2	3	4	5
58. Loses homework.	1	2	3	4	5
59. Fails to comprehend material read.	1	2	3	4	5
60. Punished for failing to study.	1	2	3	4	5
61. Knows when long-term assignments are due.	1	2	3	4	5

## Appendix D

### Items Potentially Eliminated Due to Item Means

#### Items with means >4

##### AHI-Parent Version

My child (is)...

Rewarded for completing homework.

##### AHI-Adolescent Version

No items qualify.

#### Items with means <2

##### AHI-Parent Version

My child (is)...

Fails to bring home necessary materials.

Denies having homework.

Completes homework independently.

Fails to finish homework.

Fails to bring homework to class.

Dissatisfied with completed homework.

Turns in homework late.

Asks adults too often for help during homework.

Can't find where homework assignment is written.

Reads directions on homework and follows them.

Requires supervision during homework to ensure completion.

Fails to comprehend information needed to complete homework.

Requires adult help/instruction to complete homework.

Loses homework.

Fails to comprehend material read.

Punished for failing to study.

Knows when long-term assignments are due.

##### AHI-Adolescent Version

I fail to bring home necessary materials.

I deny having homework.

I complete homework independently.

I fail to finish homework.

I fail to bring homework to class.

I am dissatisfied with completed homework.

I turn in homework late.

I can't find where my homework assignment is written.

I read directions on homework and follow them.

I require supervision during homework to ensure completion.

I fail to comprehend information needed to complete homework.

I require adult help/instruction to complete homework.

I lose my homework.

I fail to comprehend material read.

I know when long-term assignments are due.

## Appendix E

### Eliminated Items

#### Items with Factor Loadings <.40

##### **AHI-Parent Version**

My child (is)...

Fails to comprehend information needed to complete homework.

Cooperates when homework is reviewed by a parent/tutor.

Allows parent/tutor to assist with studying.

##### **AHI-Adolescent Version**

I am rewarded for good grades.

I talk to friends during homework (computer or phone).

I am frustrated when a parent/tutor tries to help me with homework.

I am punished for failing to complete homework.

I ask adults too often for help during homework.

I am rewarded for studying.

I am punished for bad grades.

## Appendix F

### Phase 1 Items Potentially Eliminated to Increase Reliability

#### AHI-Parent Version

My child (is)...

**Factor 1: Negative Homework Behavior (.940)**

Talks to friends during homework (computer or phone) (.941).

Completes homework in a quiet place (.944).

**Factor 2: Proactive Behavior (.936)**

Creates flashcards to study for a test (.938).

**Factor 3: Parent Contingencies (.522)**

Rewarded for good grades (.588).

Rewarded for completing homework (.601).

Rewarded for studying (.605).

#### AHI-Adolescent Version

**Factor 1: Negative Homework Behavior (.898)**

No items increase reliability.

**Factor 2: Proactive Behavior (.912)**

No items increase reliability.

**Factor 3: Parent Contingencies (.832)**

I am rewarded for completing homework (.866).

Punished for failing to study (.838).

## Appendix G

### Potentially Problematic Items Determined by Regression Weights <.40

#### **AHI-Parent Version Factors**

##### **Negative Homework Behavior**

My child (is)...

Completes homework in a quiet place.

Talks to friends during homework (computer or phone).

##### **Proactive Behavior**

My child (is)...

Rereads textbook or notes when he/she doesn't understand the assignment.

Creates flashcards to study for a test.

##### **Parent Contingencies**

My child (is)...

Completes homework independently.

Rewarded for good grades.

Punished for bad grades.

Rewarded for completing homework.

Punished for failing to complete homework.

Rewarded for studying.

Punished for failing to study.

#### **AHI-Adolescent Version Factors**

##### **Negative Homework Behavior**

I take pride in my homework.

I read the textbook to prepare for tests.

I organize my backpack for the next day.

##### **Proactive Behavior**

I deny having homework.

I wait too long to start long-term assignments.

##### **Parent Contingencies**

I fail to bring home necessary materials.

I complete homework independently.

I fail to bring homework to class.

I am rewarded for completing homework.

I start homework without being reminded.

I am punished for failing to study.

## Appendix H

### Phase 2 Items Potentially Eliminated to Increase Reliability

#### AHI-Parent Version

My child (is)...

**Factor 1: Negative Homework Behavior (.936)**

Completes homework in a quiet place (.937).

Talks to friends during homework (computer or phone) (.939).

Reads directions on homework and follows them (.947).

**Factor 2: Proactive Behavior (.914)**

Rereads textbook or notes when he/she doesn't understand the assignment (.926).

**Factor 3: Parent Contingencies (.336)**

Punished for bad grades (.356).

Rewarded for completing homework (.379).

Rewarded for good grades (.440).

#### AHI-Adolescent Version

I (am)...

**Factor 1: Negative Homework Behavior (.903)**

Deny having homework (.907).

**Factor 2: Proactive Behavior (.913)**

No items increase reliability.

**Factor 3: Parent Contingencies (.832)**

Punished for failing to study (.838).

Rewarded for completing homework (.866).

## Appendix I

### Homework Problem Checklist

Name: \_\_\_\_\_ Date \_\_\_\_\_ Filled out by: \_\_\_\_\_

**Instructions:** For each statement, check the response that best describes your child's behavior during the last two weeks.

	Never	At Times	Often	Very Often
1. Fails to bring home assignments and necessary materials.	0	1	2	3
2. Doesn't know exactly what homework has been assigned.	0	1	2	3
3. Denies having homework assignments.	0	1	2	3
4. Refuses to do homework.	0	1	2	3
5. Whines or complains about homework.	0	1	2	3
6. Must be reminded to sit down and start homework.	0	1	2	3
7. Procrastinates, puts off doing homework.	0	1	2	3
8. Doesn't do homework satisfactorily unless someone	0	1	2	3
9. Doesn't do homework satisfactorily unless someone is in the room with him/her.	0	1	2	3
10. Daydreams or plays with objects during homework.	0	1	2	3
11. Easily distracted by noise or other activities.	0	1	2	3
12. Easily frustrated by homework assignments.	0	1	2	3
13. Fails to complete homework.	0	1	2	3
14. Takes unusually long time to do homework.	0	1	2	3
15. Responds poorly when told by parent to correct homework.	0	1	2	3
16. Produces sloppy or messy homework.	0	1	2	3
17. Hurries through homework and makes careless mistakes.	0	1	2	3
18. Shows dissatisfaction with work even when he/she does a good job.	0	1	2	3
19. Forgets to bring home assignments back to class.	0	1	2	3
20. Deliberately fails to bring assignment back to class.	0	1	2	3

## Vita

Meghan A. Geary is a doctoral student in clinical psychology at Louisiana State University. She graduated *Summa Cum Laude* from West Virginia University with a Bachelor of Arts degree in psychology in May of 2006. She is a member of the *Phi Beta Kappa* society of West Virginia University. Her graduate studies began in August of 2007 under the supervision of Dr. Mary Lou Kelley. She will be receiving her Master of Arts degree in May of 2010. Her area of specialization is child clinical psychology with current research interests in efficacious treatment and prevention of homework difficulties in children and adolescents and the effects of externalizing behavior disorders on the treatment and prevention of homework difficulties.