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Finding the Most Meaningful Forms of Parental Involvement: A Synthesis of Meta-Analyses

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THE COLLEGE AT BROCKPORT

Finding the Most Meaningful Forms of Parental Involvement: A Synthesis of Meta-Analyses

Capstone Project

Sarah Lawson

12/18/2015

Abstract

Conventional wisdom has it that parental involvement positively affects students academically (Castro et al., 2015; Fan & Chen, 2001; Hill and Tyson 2009; Jeynes, 2007). Research confirms: Parents' involvement in their children's learning is essential to school success, once school starts, "A family is where the children are first nurtured and where they spend 70% of their waking hours (including weekends and holidays) outside of school" (Clark, 1990, p. 22).

That said, definitions of 'parental involvement' and 'school achievement' confusingly differ. While some researchers use specific terms and definitions, others use a broad and open analysis of the terms. Although research suggests that parental involvement (PI) significantly influences children's school achievement, it is important to understand which aspects of PI prove most critical. Accordingly, in this meta-synthesis, I offer research conducted within the last five, an in depth and up-to-date understanding of how parents can be involved in their children's education in ways that most favorably impact their children's school achievement.

The following themes emerged from this synthesis: home-based involvement encompasses the most effective forms of parental involvement under the coded subcategory of "other" demonstrating that categorizing definitions of parental involvement does reveal trends in most effective forms. Grade level trends suggest elementary grades expect and need a higher

level of parental involvement which may explain lower parental involvement effect sizes at that age. Lastly, homework supervision and parental attendance do not appear to be positively related to school achievement which suggest a paradox of parental involvement, because increased parent collaboration is applied when a child has difficulty in school, but when a child is achieving high academic success they may be able to complete homework independently causing a skew in the form of PI in the subcategory of home-based, directly relating to school.

Parental Involvement: What Is Important to Consider?

Numerous studies provide specific and general ways that parental involvement has the potential to affect educational outcomes. A vast amount of researchers have made attempts to define parental involvement. For example, Hoge, Smit & Crist (1997) broke parental involvement into 4 components: parental expectations, parental interest, parental involvement in school and family community. Some just divide parental involvement into home- and school-based forms (Hill, Castellino, Landsford, Nowlin, Dodge, Bates, & Pettit, 2004). Epstein (2011) created a framework that is often used by educational researchers that lists 6 types of parental involvement. Another major player in parental involvement is the Hoover-Dempsey and Sandler model of parental involvement (1995, 2005). This is an extensive 5 level means of explaining why parents get involved and how it leads to an effect on student achievement.

Other studies vary by paying closer attention to the factors that influence the success of parental involvement. One can be the age of the children when the parents are involved (Hango, 2007; Somers et al., 2011); another factor is the gender of the parent involved (Kim,

2015); or factors that pertain to parental involvement programs or others ways to encourage involvement (Jeynes, 2010).

In addition to the assortment in definitions and factors there can also be disconnect in the measurement of school achievement outcomes. For example, Fan (2001) and Epstein (2002) describe PI in the forms of isolated activities, programs and learning experiences that typically included, but are not limited to learning that takes place in school. McNeal (2001) and Epstein and Sheldon (2002) poist that parental involvement also affects behavioral outcomes. Studies in more recent years, by authors such as Tekin (2011) or Hornby & Lafaele (2011), broaden the discussion of PI to include cognitive outcomes.

What drives all of these studies is the notion that parental involvement has a positive influence on students' school achievement. However, "the wide range of topics covered and the nuances of these studies show us that parent involvement is a multifaceted and multidimensional phenomenon" (Castro et al., 2015, p. 34). Given the number of factors that can be assessed and many different means to assess achievement, the concept of parental involvement is not an easy one for researchers to organize for school administrators to implement for parents. Depending on the study, differing conceptions of PI can yield a variety of results and confuse. A meta-synthesis combines the extensive number of meta-analyses currently available so that a research-proven picture of parental involvement can be gained. The main goals of these meta-analyses are to understand how families' role in education can contribute to improving their children's school achievement.

Research Questions

Can a consensus on the definition of parental involvement be reached?

How can parents get involved to favorably impact their child's school achievement?

Rationale

Parental involvement is crucial in conveying interest and investment in a child's future; as PI impacts the child's overall well-being and success in school and in life. By investing time in and out of school, parents are demonstrating that they value their child's future. Parental involvement can help parents convey to their children that they value their education as well as their future.

The No Child Left Behind Act of 2001 provides a clear significance for parental involvement. Every school that receives Title I funding must have its own School Parents Involvement policy, these policies set guidelines in written format for incorporating parents in the planning and improving of Title I programs. A school-parent compact is also required for the schools and parents to improve student academic achievement. The school-parent compact holds both the parents and school accountable, schools must provide curriculum that allows students to meet the state's academic achievement standards, while parents must be responsible for supporting their children's learning. (United States, 2004).

The profuse amount of research on parental involvement has proved to make the task of informing policy makers, teachers and parents a difficult one. The issue is that there is a wide

range of methodologies, research questions and findings that need to be synthesized so that beneficial parental involvement initiatives can be employed.

Problem Statement

It is essential parents learn the best practices of parental involvement because it is significantly linked to their child's school achievement. It is difficult to find the best forms of parental involvement because there are so many definitions of parental involvement and school achievement in all of the research. The problem is, there is a lack of agreement regarding the definition of parental involvement and school achievement. It is believed that parental involvement has a positive relationship with school achievement; however studies and meta-analysis of various dimensions of parental involvement make it difficult to find the best forms and thus ways to implement it with parents.

Significance of the Problem

If parental involvement is improved student success will improve. Castro et al. (2015) found, "Parent participation has a significant and positive effect on students of all races at all academic levels" (p. 35). Too many studies fail to look at parental involvement as a multifaceted construct and miss the opportunity to provide the reader with the best forms of parental involvement. Patall, Cooper, and Robinson (2008) reveal the significance of specifying the type of parental involvement, because traditional notions need to be brought to light, "The overall effect of parent involvement in homework was small and often not significant" (p. 1087). If

specific research is done to find the best forms of parental involvement, the integration of those forms can significantly improve students' academic success.

Purpose of the Study

There has been a great deal of research pertaining to parental involvement but there also appear to be gaps in the findings. The goal of this research is to share the most beneficial forms of parental involvement and help sort through the vast definitions of parental involvement. Research in this study will prove that although parental involvement can take on many definitions, some forms are more significantly linked to school achievement than others. By looking at parental involvement as a multidimensional construct it, "Will help to identify the particular parental involvement strategies that foster academic and emotional functioning... and advance our understanding of the mechanisms through which they operate. Such contributions to the knowledge base are critical to informing effective parent involvement programs" (Wang & Sheikh-Khalil, 2014, p. 611).

This study sets out to show that, out of all definitions identified for parental involvement and school achievement, it is essential to synthesize them to find the most powerful forms. This synthesis of meta-analyses explores how to foster and support parents in this area of parental involvement, because parental involvement, as traditionally perceived, may not be as beneficial to school achievement as once thought. To find school achievement we must find the most influential forms of parental involvement.

Beneficiaries

This information will prove to be of interest to teachers, schools, and will be especially helpful for parents. As a graduate student, in the field of education, I have been through numerous courses explaining the significance of interactions with children during their emergent language acquisition. Through research I have learned that parental involvement is significant at all ages. It is critical that parents have access to information on the best exchanges to have with their children. The research will be synthesized in such a way that others will be able to have a clear understanding of parental involvement so that they may then implement programs and learned strategies to improve student academic achievement.

Chapter 2: Methods

Study Approach

To tackle the research questions, a qualitative synthesis of meta-analyses, focusing on parental involvement and its impact on academic achievement, was conducted. A qualitative research synthesis that is relatively new was used, known as a meta-synthesis. A meta-synthesis is, “An interpretive, rather than an aggregating method that aims to integrate the findings from qualitative studies that examined the same or closely related topic” which is in this case was conducted to investigate the relationship between parental involvement and students' academic achievement (Wilder, 2015, p. 380). For the most part, meta-synthesis focuses on qualitative research, but can also be expanded to include quantitative research. This meta-syntheses falls under the latter part, it expands to include quantitative research due to the fact

that the meta-analyses used in the study included effect sizes. It can be noted that research was done using the mixed research approach. This approach is defined by Clark and Creswell (2015) as, “A set of procedures for collecting, analyzing, and mixing both quantitative and qualitative methods in a study to understand a research problem” (p.387).

School Achievement

The definitions of the terms ‘academic success’ or ‘academic achievement’ in past studies have been broad. In this meta-synthesis, the term school achievement will be used to discuss the benefits of parental involvement. While some studies assess achievement in the form of standardized testing versus non-standardized testing (Castro et al., 2015), others assess school success as psychological welfare or more abstract terms than grades (Jeynes, 2015). These are indeed all forms of success, but they vary immensely and for that reason it makes comparing effect sizes a difficult task. For the purposes of this study, in order to show how parents can best impact their child’s school achievement, the findings in the meta-analyses analyzed will be clearly noted, because the outcome of the parental involvement’s effectiveness is swayed depending on the measurement used for achievement.

Parental Involvement

In discussions of parental involvement, a controversial issue that continues to arise is the various factors that can impact the relationship between parental involvement and school achievement. For the purposes of this study parental involvement will be measured through both the schools’ and parents’ perception of involvement. It will also take into account parental

involvement in school and at home as well as the less measurable field of parent expectation and attitudes.

In this study parental involvement can be broken down into 3 categories.

School involvement covers the activities that take place at school; parents volunteering for school events and coming into the classroom, communicating with teachers and supplying school materials would all be examples of this. The second category, also along the more traditional lines is home-based school involvement.

Home-based school involvement pertains to support that comes outside of school, this could be, exposure to intellectually stimulating activities that parents engage in with their children such as reading together and other homework assistance. The third component to parental involvement is a less established one, parental expectation and aspirations. This component is of extreme emphasis and for that reason, *parental aspirations and expectations*, in this study will be thought of as hope or desire for aspirations and expectations may be thought of as a more realistic belief parents have for their children's success in short term academics and longer term collegial thoughts.

General involvement entails any vague or non-classify definitions or definitions that mix home and school based involvement. It is essential to include because studies up until the point still have difficulties defining forms of involvement and can often leave them general to avoid having to do so.

It should be noted that the Hoover-Dempsey and Sandler model is not completely and precisely applied in this study, but rather used as a foundation to build new sorting methods off of. Hoover-Dempsey and Sandler use four forms of involvement: values, goal, expectations and aspirations being the first, involvement at home, involvement in school and the one that was grouped with involvement in the school for this study, but is left independent in their model is, parent/teacher/school communication. Due to the fact that communication with the teacher and school can be done from home without any physical presence, this was something that was felt could be classified in the home-based category.

Moderators

There are many factors than can be applied to assess the impact of parental involvement. For example ethnicity (Jeynes, 2015), gender of parent involved (Jeynes, 2015) and socioeconomic status (Kashahu, Dibra & Bushati, 2014) are all factors that can take a life of their own during the studies on parental involvement. The inconsistency in the consideration of these factors in various studies makes data collection for synthesis a difficult process. In addition, paying too close attention to any one of these factors can lead to a landslide of findings will less focus on type of parental involvement forms and instead, more on the factor itself. In this study the only factors that looked at are the age (grade level) at which parental involvement is applied and the gender of the parent involved.

Methodology

A qualitative research synthesis of meta-analyses' quantitative data that focuses around parental involvement and academic achievement was conducted. The synthesis method calls on various approaches to assimilate findings from meta-analyses over the past 5 years. The method is referred to as reciprocal translational analysis, which takes concepts from one study and translates it to another so that the findings can evolve into something more (Urquhart, 2011). The more modern approach used in this study is a meta-synthesis.

The scope of the meta-synthesis is left open to the researcher, in this analysis the decision was made to focus on parental involvement's impact on academic achievement through analyses within the last 5 years. Due to the fact that school achievement and parental involvement are broad topics themselves it was important the scope remained broad so that findings would not be eliminated in the process.

Study Selection

The search set out to find meta-analyses that analyzed the relationship between parental involvement and school achievement. This was conducted using EBSCOhost, an online research database, using the keywords of "parental involvement," "achievement" and "meta-analysis" with the discipline in education. During the process a combination of the descriptors were used, while limiting the time of the studies to January 1, 2010 through the most reasonable present time, October 31, 2015, allowing for time for a synthesis to be performed by the end of the 2015 calendar year.

The initial search yielded 1,683 results of different forms such as books, articles, research reports, etc. A total of 419 studies were selected from the original group because they were meta-analyses with a clear association of parental involvement and achievement. Fine tuning this number occurred by requiring the studies to be scholarly and or peer reviewed, have the full text available online and had a clear methodology involving a meta-analysis with sufficient quantitative information, leaving 49 studies.

The 49 studies fulfilled the previous requirements and were then checked against all of the inclusion criteria. First, it needed to be published between 2010 and 2015. Second, it had to include a definition for the parental involvement type that was not a program, it must be a form of involvement. Third, the study must relate to school achievement, not achievement outside of that realm (sports, friendships, etc). Lastly, the study must show a relationship between parental involvement and school achievement by means of correlation coefficients. This sample was now composed of 2 meta-analyses made up of a total of 89 studies with 498 correlations for the relationship between parental involvement and achievement.

Coding

Each effect size from the collected studies was an independent variable that was coded into one of the following categories:

1. General Description:

1a. *General or Vague:* Parents make an active effort to participate in things relating to their child in and out of school.

2. School- Based Involvement:

2a. Attendance and Participation in School: Parents physically come into the school building to assist with their child's learning in some capacity.

3. Home Based Involvement:

3a. Directly Relates to School

i. Communication with Children on School Issues: Parents engage in conversations with their children about topics related to school.

ii. Homework Assistance: Parents provide their children with help on their homework.

iii. Reading with Children: Parents spend time at home listening to or reading books with their child.

3b. General/ Mixed

i. General Home Involvement: Parents support their children while outside of school, in the home.

ii. Mixed Home Involvement: Parents help at home with a balance of academic support and other intellectual enhancement that does not directly relate to school.

3c. "Other"

i. Intellectual Enrichment: Parents provide their children with opportunities

outside of school to develop their vocabulary knowledge through events, such as visiting a museum or zoo.

ii. Parental Expectations: Parents desires regarding their child's future attainment in school. This relates to both grades and higher level schooling.

iii. Parenting Style: Parents' choice in the way the raise their child, authoritarian, authoritative, uninvolved, permissive or any combination in between.

The measure of school achievement is the relationship between parental involvement and academic achievement that can be generalized across various measures of achievement.

The dependent variable regarding the type of school achievement was categorized as follows:

Standardized Testing: The relationship between parental involvement and achievement is assessed based on standardized scores.

Non-standardized Testing: The relationship between parental involvement and academic achievement is based on the assessments of individual's abilities or performances.

General Achievement: The relationship between parental involvement and achievement is based on students overall school performance, and/or combinations of different assessment types.

Specific Subjects: The relationship between parental involvement and achievement is based on scores received in the specific subject areas of mathematics, reading, sciences, or foreign languages.

Meta-analyses

In order to create a meta-synthesis each unit of analysis needed to be examined. Below are summaries for each of the meta-analysis selected for the meta-synthesis. Within the summary, in addition to the results, is the purpose of the study, the research questions used as well as their definitions of parental involvement.

Castro et al. 2015

The purpose of Castro's (2015) meta-analysis is a quantitative synthesis of research examining the relationship between parental involvement and academic achievement. Their focus was on 37 studies in kindergarten, primary and secondary schools over the 13 year span of 2000-2013. Their aim was to study the overall impact of parental involvement on all achievement. Using ERIC and Psych Info and Sociological Abstracts more than 5,000 studies were revealed. They narrowed those down to 308 and then 39 after carefully sifting based on four criteria. Published between 2000 and 2013, a measure of parent participation, targets school age children and studies the relationship between parental involvement and academic achievement through calculating correlation coefficients or regression models. The definitions for parental involvement were coded into seven different categories; general description of parental participation, communication with children on school issues, homework, parental expectations, reading with children, parental attendance and participation in school activities and parental style. Definitions of academic achievement also were grouped in 7 categories: general achievement, mathematics, reading, sciences, social studies, foreign language and other curricular subjects. The results of the meta-analysis indicated a positive association

between greater parental involvement and better academic results. Specifically the findings noted that different definitions of parental involvement show different effect sizes on students' achievements, the largest observed effect was with the definition of parental expectations, and communication with children about school activities was the second largest factor. On the other hand, parental supervision of schoolwork (homework) has little influence on academic achievement. The different definitions of academic achievement also effect the findings. The relationship between parental involvement and academic achievement are stronger in studies that use standardized measures. A question we are left to ponder is, why the greatest influence of parental involvement is most often found on overall achievement rather than more specific subjects?

Kim and Hill 2015

Kim and Hill (2015) of Harvard University conducted a meta-analysis in order to investigate the association between parental involvement for fathers versus mothers and how that effects the achievement of school age children, from kindergarten to 12th grade. Using the online database searches of ERIC, PsycINFO, Family & Society Studies Worldwide, Sociological abstracts and Dissertation Abstracts International, 3,772 abstracts were examined. Narrowing these down by requiring specific parental involvement strategies as well as academic outcome measures created a set of 122 studies. Over half were eliminated because lack of correlations, achievement outcomes, parental involvement definitions empirical, or mother versus father effect size. This then created a result of 52 useable studies published between 1980 and 2013.

In these studies types of involvement were broken into fathers versus mothers and then specifically within those categories: school involvement, home involvement, academic socialization, homework help, intellectual enrichment and mixed forms. Types of outcome measures used in the analysis were standardized tests, teacher rating scales, GPA, academic competence/performance and educational attainment. Factors such as grade level, ethnicity and gender were also evaluated. Three research questions were asked, the overall relationship between parental involvement and education when comparing mothers to fathers, the strength of the relationship across different types of parental involvement and the third question addresses how the relationship evolves when looking at age, gender and ethnicity of the children. The results of the meta-analysis indicated that in general, there is a positive association between parental involvement and student achievement and, interestingly enough it was equally strong for mothers and fathers. Longitudinal studies resulted in a stronger association for involvement and achievement than cross-sectional studies. However, the meta-analysis suggests that school-based involvement and intellectual enrichment at home are stronger for mothers than fathers when relating to achievement. Meaning, fathers' involvement in school is less strongly associated with academic achievement when compared to mothers, and this is especially at the elementary school level.

Chapter 3: Results

Analysis

In reviewing the meta-analyses for this meta-synthesis a large amount of comparing and contrasting took place. By doing so a large amount of information is able to be dwindled down to reveal relationships that can be analyzed to create a multitude of findings. The major concepts examined were parental involvement and academic success, with an underlying look at other contributing factors.

	Kim & Hill 2015	Castro et al. 2015
Title	Including Fathers in the Picture: A Meta-Analysis of Parental Involvement and Students' Academic Achievement	Parental involvement on student academic achievement: A meta-analysis
Journal Source	Journal Article Journal of Educational Psychology	Journal Article Education and Urban Society
Keywords	parental involvement, parent participation, fathers, gender, achievement	Parental involvement; Parent participation; Academic achievement; Meta-analysis
Sample Size	52 articles 390 coefficients	37 articles 108 coefficients
Description	examined the strength of the association between educational involvement of fathers versus mothers and achievement of children (K- 12th grade)	Relationship between parental involvement and student academic achievement

Figure 1: Meta-Analyses' At A Glance

When the information was sorted according to meta-analyses definitions of parental involvement and school achievement the effect sizes results can be seen in the table below, respectively.

Calculating Average Effect Sizes

To calculate the average effect size the data was sorted into the chart that can be seen in Figure 2. Each effect size was recorded in its appropriate section. Once the data was sorted

the effect sizes were left separate but compared to one another. Essentially, a new average effect size was not calculated, rather a side by side synthesis of the meta-analyses' results was shown, "Conducting a meta-analysis by pooling summary effect sizes of the meta-analyses of interest is equivalent to a meta-analysis of combining all individual studies from these meta-analyses" (Tang, Caudy & Taxman, 2013, p. 3).

Parental Involvement by Type

Parental involvement can come in many different forms which can make it difficult to share findings amongst studies due to the fact that the type assessed is critical to its effect on students. By breaking down parental involvement types in this way, educators, policymakers and parents will be able to see the most effective forms of parental involvement that should be implemented in schools and at home.

The 2 meta-analyses selected vary in their definitions of parental involvement, measurement of academic achievement, and their assessment of factors that may affect the relationship. From the sorting of definitions of parental involvement provided by the meta-analyses categories emerged. In turn, this allowed the findings of the meta-analyses to be interpreted into a developed set of results. Using an open coding approach showed the categories 3 main forms of parental involvement and then are sorted within, as seen in the next figure.

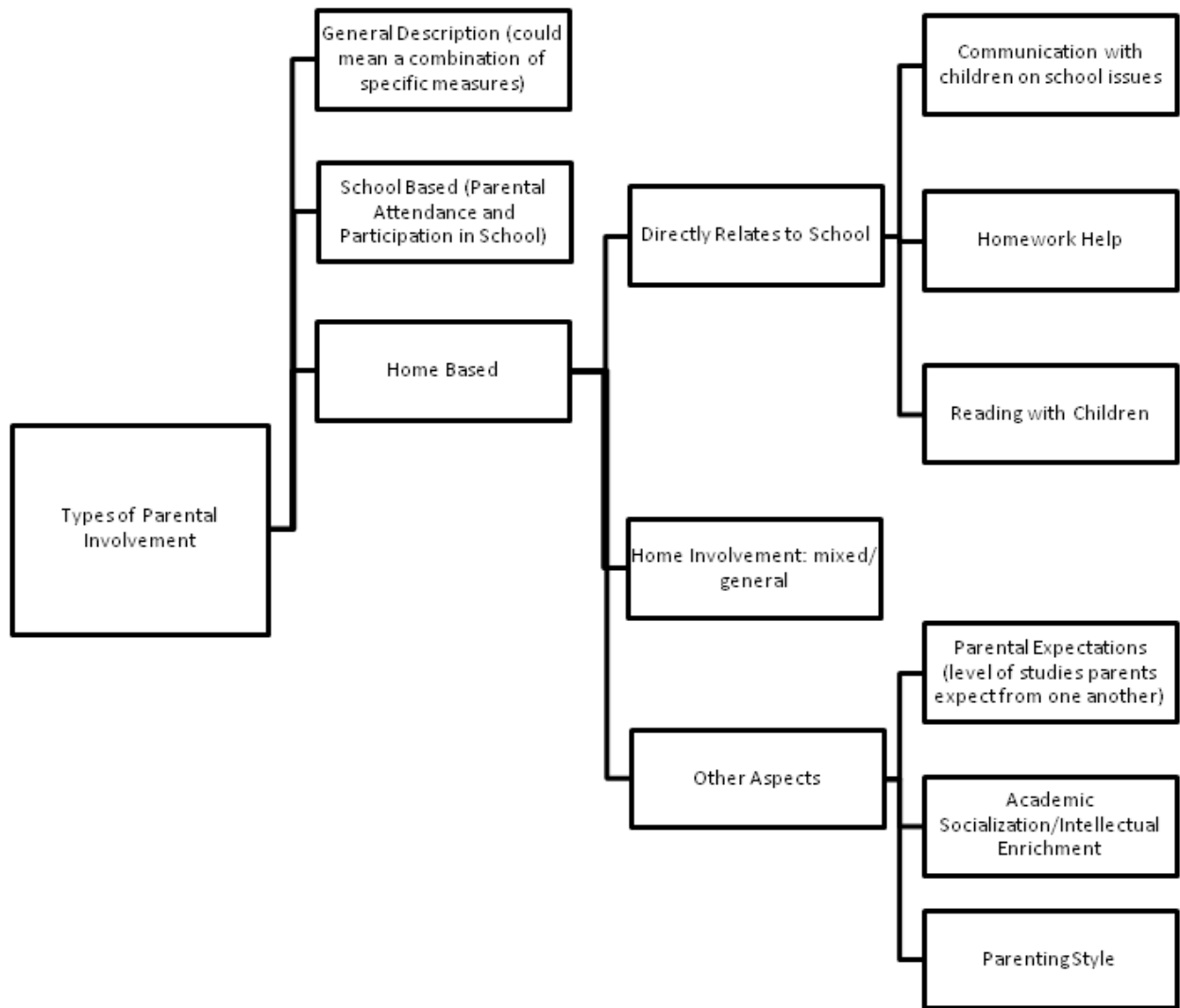


Figure 2: Types of Parental Involvement by Categories

Form of Parental Involvement	Kim & Hill 2015		Castro 2015
	Fathers	Mothers	
General			
General Description			.167
School Based Involvement			
Parental Attendance and Participation in School	.08	.16	.010
Home Based Involvement			
<i>General Home Involvement</i>			
Mixed Home Involvement	.12	.14	
General Home Involvement	.07	.08	
<i>Directly Relates to School</i>			
Communication with Children on School Issues			.2
Homework Assistance	-.02	-.05	.024
Reading with Children			.168
<i>Other</i>			
Intellectual Enrichment (at home)	.07	.14	
Parenting Style			.130
Parental Expectations/Academic Socialization	.23	.21	.224

Figure 3: Effect Size by Parental Involvement Type

When looking at all of the definitions provided in the 2 meta-analyses they can be broken into three major groups. The first group is *general parental involvement*, which could mean that the forms were not taken into account and rather just taken as a general idea, or it

could mean a combination of a specific set of forms. The second grouping can be classified as *school based*, this form pertains to involvement that happens directly in the school building. The last category is *home-based*, parental involvement that the parent does not need to enter the school to do, this is the broadest category than can be broken into subgroups because of its loftiness. The four subcategories are, home based involvement directly relating to school, home involvement that is general or unspecified, other aspects (such as expectations or parenting styles) and home involvement that mixes any of the subcategories. The effect sizes of each type of involvement is sorted in *Figure 3* above.

General Parental Involvement: General parental involvement was a term used in 1 of the 2 meta-analyses, Castro (2015). General parental involvement or overall parental involvement refers to either a vague description of parental involvement, failing to dive into the multiple facets that make up parental involvement or means a combination of specific measures. Castro 2015 falls into the first category, looking at the effect rate of overall parental involvement, within 37 studies finding it to be .167.

Direct School Based Involvement: This form of parental involvement refers to the physical attendance and participation in the school setting. This form was assessed in both of the meta-analyses, Castro (2015) and Kim & Hill (2015). Castro had a total of 21 studies that looked at the effect of school-based involvement and found the effect size to be .010. Kim looked at the difference in the effect size if the father came into the school or the mother. Kim and Hill found

14 studies to calculate the effect size for fathers' school involvement and found an effect size of .08. For mothers' school involvement the effect size of 18 studies was found to be .16.

Home-based Involvement:

Subtype 1: Directly related to school. When involvement in the home is related to academics it was put into this subgroup of at home parental involvement.

Communication: This can be communication about school with the child or with the child's teacher, homework help or simply reading with the child. Castro (2015) found the effect size for communication with children in regards to school issues. Castro et al. had 6 articles in their study that addressed it and found it to be .2.

Homework Help: Also within this subgroup is the ever so prevalent, homework help. Castro (2015) had 18 studies that led to a combined effect size of .024. Kim & Hill (2015) looked at the effect that mothers and fathers have on homework assistance, finding fathers effect is .02 based on 8 studies and mothers .05 from 10 studies.

Reading with Children: The third form of parental involvement in the subcategory of home involvement that directly relates to school is reading with children. This could mean reading assignments that are required of parents to do with their children by the school, recommended by the school or reading that is independently decided on by the parents. Castro 2015 calculated the effect of reading based on 4 studies and the effect size was .168.

Subtype 2: Home involvement mixed or general. Similar to the group "general parental involvement" this subtype allows for home involvement that is left vague or combines various

forms within the home to be evaluated together. Kim and Hil (2015) looks at this type of involvement for mothers and fathers, finding that general involvement at home for mothers in the 22 studies calculated has an effect size of .14 and fathers has an effect size of .12 within 16 the 16 studies they used. With a smaller effect size, mixed home involvement yields .08 for mothers from 7 studies and .07 for fathers from 6 studies.

Subtype 3: Other. For lack of a better summarizing term the other subcategory of home involvement speaks to the more difficult to assess and fine aspects of parental involvement. Those things being, intellectual enrichment, parental expectations, academic socialization and parenting styles. Kim refers to, Intellectual Enrichment as, “home activities that are not directly related to school but can help develop children’s cognitive and metacognitive processes such as taking children to the museum” (2015). Kim looked at this effect when intellectual enrichment was implemented by mothers in 8 studies (.14) and by fathers in 4 studies (.07). Parental expectation and academic socialization are the goals and expectations that a parent sets for the child and how well they communicate the value in their expectations. Castro analyzed 8 studies finding a similar effect size of .224 and along the same line looking at mothers and fathers Kim found the effect size to be .21 in 19 studies and .23 in 9 studies, respectively. The third aspect of this subtype is parenting style and was looked at in the Castro (2015) meta-analysis, through analysis of 14 studies the effect size was .130.

The effect sizes from each study has been graphed in accordance to the type of parental involvement category it falls under as previously described. In *Figure 4*, the trends become

evident when the effect sizes are graphed along with the 95% confidence intervals. The majority of the effect sizes fall under .2, meaning they are non-existent or weak. Of these, one grouping is evidently lower than the rest, home involvement directly related to school in the form of homework assistance. In fact, Kim and Hill (2015) found this type of involvement to have a negative effect size regardless of the involved parent's gender. Another low effect size was seen in school-based involvement, parental attendance, the effect size of .010 is nearly non-existent.

On the other hand, there are 4 effect sizes falling in the .21-.3 range that can be considered moderate. All 4 of which fall under the large parental involvement type of home-based involvement. Looking more closely, 3 of the 4 are coded to be "other" types of home-based involvement, parental expectations, and academic socialization from both mothers and fathers. The fourth moderate effect size was communication with children on school matters.

Based on the coding it appears that the non-existent or weakest forms of parental involvement most often fall within the school-based or school related categories, while the moderate forms of parental involvement are found within home-based involvement, in the hard to define, "other" category.

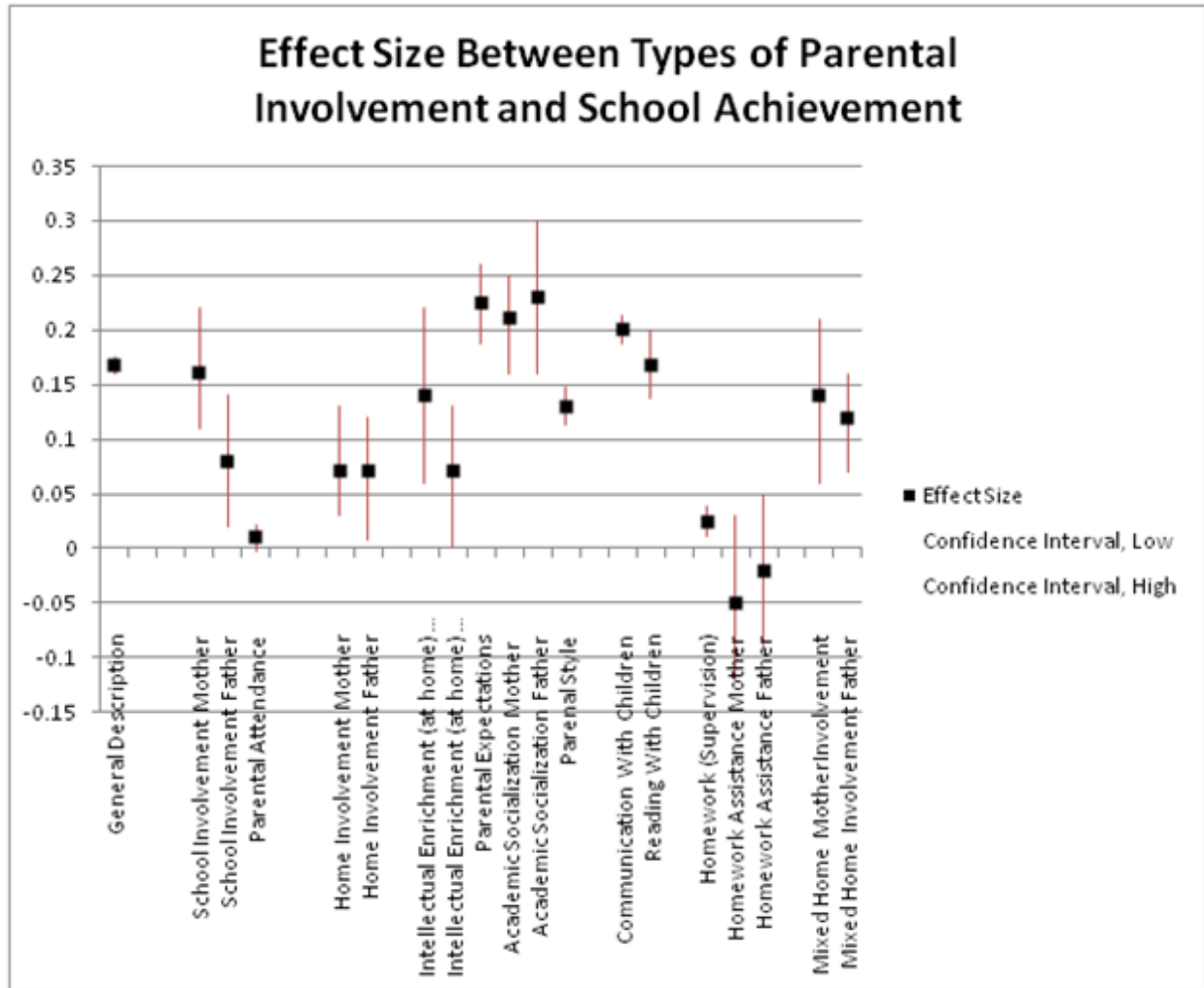


Figure 4: Effect Size Based on Type of Parental Involvement

Effect Size of School Achievement Based on Time of Involvement by Moderator

Variable: Grade Level

There are an immense amount of factors that can be applied to school achievement and parental involvement. In this study, gender of the parent involved was applied throughout because Kim and Hill (2015) studied the variance between the two genders. The other factor

that was looked at in this study is how the grade level the children are in at the time of the involvement affects their school achievement. The grade levels looked at by Castro (2015) were Kindergarten, Primary, Kindergarten through 6th grade and Primary, Secondary and Primary and Secondary combined. Kim and Hill (2015) calculated the effect sizes for fathers' and mothers' involvement in elementary (K-6), Secondary (7-8) and High School (9-12). The alignment of the categories can be seen in Figure 5.

Effect Size of Time of Involvement by Grade Level	Kim & Hill 2015		Castro 2015
	Fathers	Mothers	
Primary			
Kindergarten			.050
Primary			.125
K-6 (Elementary)	.10	.07	-.050
Secondary			
Secondary	.17	.26	.138
High School	.17	.13	
Combined			
Primary & Secondary			.091

Figure 5: Effect Size based on Grade Level Children Experienced Involvement

_____The primary group of grade level time of involvement reflects a non-existent to weak effect size with Castro (2015) finding Kindergarten and Primary grade level combination of involvement to have a negative effect size of -.050 from 6 studies. In the same grade level combination Kim and Hill (2015) found an effect size of .10 for fathers from 12 studies and .07 for mothers from 23 studies. When parental involvement was looked at for just the kindergarten age Castro found the mean effect of 11 studies to be .05. The resulting effect size from Castro's calculation of primary level involvement in 33 studies was .125.

The only moderate effect size that was calculated was at the secondary level, Kim and Hill found mothers' involvement in grades 7-8 was .26 from 10 articles. The fathers' effect size at this grade level was .17 calculated by Kim and Hill's collection of 9 articles. While Castro found the effect size at this grade to be .138 from 55 articles.

The remaining effect sizes, like almost all the others of parental involvement and school achievement by grade level factors, are all classified as weak, which can all be seen in Figure 6. Fathers' involvement at the high school level has an effect size of .17 according to Kim and Hill's (2015) 5 studies collected, while mothers have an effect size of .13 from 4 studies. Lastly, when primary and secondary level involvement is combined, the extended amount of involvement has an effect size of .091 according to 6 studies Castro calculated (2015).

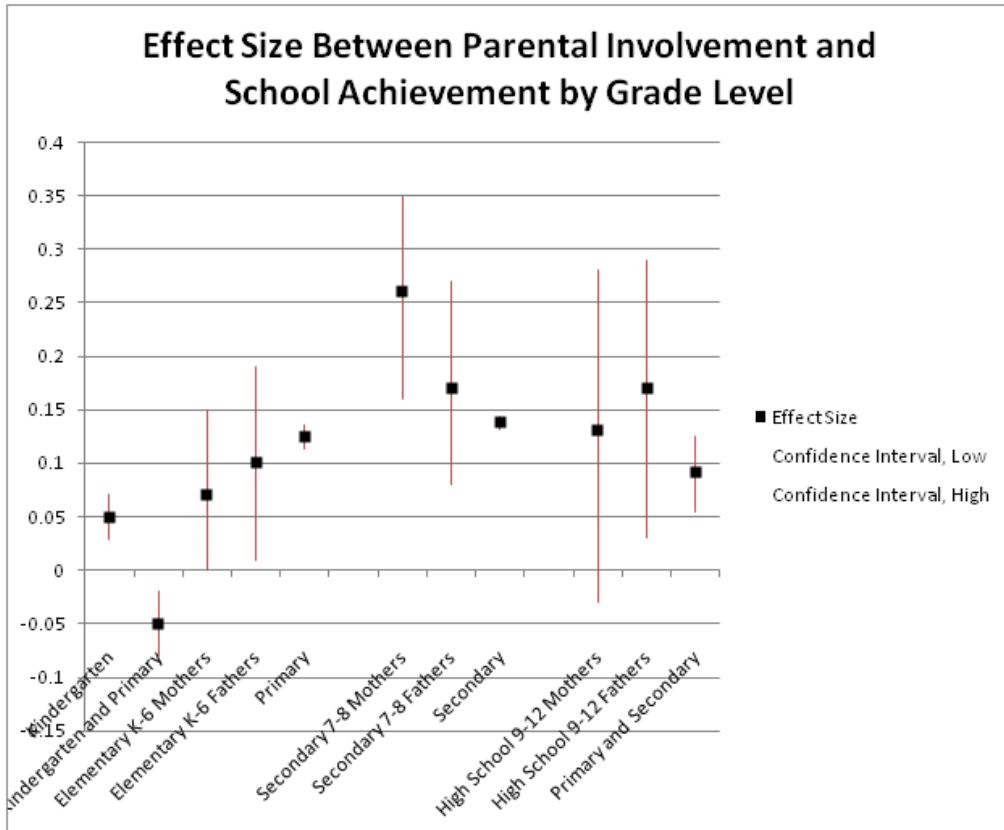


Figure 6: Effect Size of School Achievement based on Grade Level Children Experienced Parental Involvement

Chapter 4: Discussion

There have been a magnitude of studies over the years on parental involvement and the effect on children's school achievement. In these studies, there has been a lack of consensus on how to define the term parental involvement and what measure of school achievement to use to measure success. The findings of this study demonstrate a consensus on the definitions of parental involvement be reached if a systematic process is created for categorizing the various terms. It also demonstrates the ways in which parents can get involved to favorably impact

their child's school achievement, and that is through home-based "other" involvement, high expectations and academic socialization.

Lowest Effect

When the types of parental involvement are compared as a whole group there are 4 effect sizes that stand out as having the lowest (sometimes negative) effect on school achievement. Three of those four effect sizes can be grouped under home-based involvement in the subcategory of directly relating to school and that is parents providing homework assistance. Kim and Hill (2015) found that mothers and fathers who assist with homework see a negative association with school achievement. This introduces the paradox of parental involvement. When students are struggling with school it calls on the parents to provide extra support in the form of helping with homework as a first response to try to improve poor performance (Patall, Cooper & Robinson, 2008). On the other hand, parents who may provide additional types of parental involvement, like ones from the "other" category of home-based involvement (like intellectual enrichment) may be doing so because they have always placed value on education and homework assistance is just one facet, their child may not be struggling at all academically (Hill & Tyson, 2009; Kim & Hill, 2015). This is supported by Castro et al. (2015) when Wilder (2014) is quoted: "For example, after controlling for a child's inability, socio-economical status and ethnicity, Zellman and Weterman's (2014) findings indicated a significant positive correlation between parental in-school involvement and student reading scores. Additionally, after controlling for children's intelligence, Topor et al. (2010) argued that

parental involvement was significantly related to academic performance and children's perception of cognitive competence" (p.378).

Research Questions Answered

How can parents get involved to favorably impact their child's school achievement?

Highest Effect

Kim and Hill's (2015) meta-analysis effect sizes for academic socialization, as the type of parental involvement, had the strongest positive relation with school achievement, while Castro et al. (2015) found the strongest effect size to be parental expectations. This is consistent with prior theories and research (Hill & Tyson, 2009; Jeynes 2011). Academic socialization entails the attitudes and beliefs parents instill in their children and the value they place on education (Kim & Hill, 2015). Similarly, parental expectation is the value parents place on education expressed through their desires or wishes for their child's school attainment (Seginer, 1983). This is a prime example of how two very similar terms can be classified under different names by varying authors, causing gaps in findings. By providing broader categories and then subcategories, such as the ones provided in this study, it will make the results of studies easier to classify and draw information from. These two terms both fall under home-based involvement and then the "other" subcategory because the terms entail less measurable forms of ways parents are involved. Meaning, time spent volunteering in the classroom or helping with homework is easier to track than how a parent conveys their hopeful goals for their child's future. By sorting findings by parental involvement type's theme, it will group

similar definitions making it easier for schools, teachers and parents to find the most meaningful forms of way to implement parental involvement.

Moderator

The relationship between the two variables, parental involvement and school achievement, is a fascinating one in itself. There are many moderator factors that can be applied such as race, socioeconomic status and gender of the child, however in this study just 2 specific ones were analyzed. These were selected because of what was provided by existing meta-analytic research, these two are parent gender and student's grade level.

Parent's Gender

The relationship between fathers' involvement and school achievement is positive and just as or almost as strong as mothers' involvement even though fathers' mean level of involvement is lower than mothers' overall. Meaning, mothers may be more involved, but the involvement efforts that fathers make are meaningful and worthwhile to school achievement (Kim & Hill, 2015). This could be due to the fact that gender roles of mothers and fathers complement one another while they are parenting together. Mothers are more involved in their children's school lives (homework help, volunteering for school activities) while fathers provide exposure to cognitively stimulating, outside of school, activities (Paquette, 2004; Kim & Hill, 2015).

Unlike overall involvement of mothers and fathers varying, the mean amount of involvement in the school involvement category was equal. This means that the varying level of

school achievement found when mothers versus fathers are involved is not because the amount of time they spend involved, but rather suggests that it is the type, or quality of involvement they implement that effects school achievement. Kim and Hill note in their discussion that, “There have been no systematic studies exploring the subtler nuances of fathers’ involvement notably in schools, but such studies could shed light on the reasons for the differences observed” (2015, p. 11). This point makes sorting out the most effective types of parental involvement that much more important.

Grade Level

As students get older their ability for independence increases, for this reason, at the younger, elementary grades a higher level of parental involvement is expected by children and teachers. Once students enter middle and high school parental involvement opportunities may decline or be less requested because independence is expected and yearned for. This could explain the variability in the latter grades when compared to the elementary grades. Parents may find it more difficult to get involved as curriculum gets more challenging (Hill & Chao, 2009). Those who are also involved are because they place value in education and are continuing their involvement over the years (Epstein & Sanders 2002). For this reason the effect sizes at the primary grade levels encompass a greater amount of parents being involved because it is a demanding time in their child’s educational life. However, during the secondary years, parents who are involved do so under different motivations, they put emphasis on education under their own recognizance rather than because of outside expectations or

pressures. The mediator variable of student's grade level is worth further research because it has a significant tie to the motivation behind parents' involvement and in turn, which types of involvement they may implement.

Limitations

The first limitation of the study comes from only being able to use the existing research available at this time. The two meta-analyses that provided the variables and effect sizes only provided a few longitudinal studies but were based mostly on cross-sectional studies.

The second limitation of the study is the variability in the measurement of achievement amongst the studies. The outcome measures varied in all of the studies (i.e. subject grades, standardized test scores, etc.) Kim and Hill (2015) averaged all of the studies achievement effects together which only allowed for effect sizes in achievement measures to come from Castro (2015).

Third, a lack of ability to calculate the specific effect sizes between the two meta-analyses left some analyses to be desired. Effect sizes could have been averaged to find provide a clear look at the overall picture of each of the categories and subcategories rather than, or in addition to, the effect sizes individually accompanied by their confidence intervals on a graph.

Lastly, the coding is a significant limitation of this study and results should be considered with caution. The categories and subcategories that the independent variable of parental involvement types was broken into was done so by a single coder. This leads to a large bias in

terms of where the types were placed. For instance, should reading with children be considered a home-based involvement directly related to school or one in the “other” home-based subcategory?

Implications

In the context of these limitations, this synthesis of meta-analyses attempted to identify major categories that the vast definitions of types of parental involvement can be sorted into. Once creating the categories the types were coded and then analyzed for trends to see if any categories or subcategories yielded the highest or lowest effect sizes. This approach is critical because there are a large amount of studies conducted on the relationship between parental involvement and school achievement, but the studies lack a consistent method to compare amongst one another. This is due to the fact that, “There is a wide variability in the way parental involvement and achievement has been measured across studies” (Kim & Hill, 2015, p. 12).

The findings suggest that types of parental involvement can be sorted into categories and subcategories in order to look for trends in the effect sizes of various definitions across studies. The most effective and only types of involvement that reached a moderate effect size were: parental expectations, academic socialization (by mothers and fathers) and reading with children all fall under the same category of home-based involvement. More specifically, three of the four types of parental involvement: parental expectations, academic socialization (by mothers and fathers) fall under the subcategory of home-based involvement, “other”. For this

reason; parents, teachers and administrators must look for programs that can benefit parental expectations. However, as Castro et al. (2015) points out, “it seems that the largest effects are associated with variable outside the scope of administrators or policymakers. That is the case with parental expectations” (p. 43). This means that future investigative efforts may need to be expanded to find interventions that influence parents’ expectations.

On the other hand, the four weakest and some negative, forms of parental involvement are homework supervision, homework assistance (mothers and fathers) and parental attendance in school. Interestingly enough, three of the four categories all pertain to homework which falls under home-based involvement directly relating to school. The other type of involvement is referred to as school-based, which is parents’ physical attendance in the school setting. The findings provide trends in effect sizes supplied by 2 separate meta analyses (Kim and Hill, 2015; Castro et al., 2015). This calls for increasing efforts to design a parental involvement scale or system to systematically interpret patterns in types of parental involvement to help identify the effects of various associations. This study encourages future studies to further investigate associations between definitions used by different researchers in order to find the most effect types of parental involvement on student achievement.

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