IMPACT OF EXPERIENCE, EDUCATION, PROFESSIONAL DEVELOPMENT AND PERCEPTION OF TEACHING ON THE ENDORSEMENT OF DEVELOPMENTALLY APPROPRIATE PRACTICES

by

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ABSTRACT

Developmentally appropriate practices (DAP) help to promote high quality child care environment. The likelihood that an early child care teacher or educator practices (DAP) may be impacted by a wide variety of factors including their experience, education, professional development and perception of teaching. Whereas many studies focus on the presence of DAP in the classroom, the current study focused on beliefs about DAP. Educators (N=100) completed a questionnaire that, among other things, asked educators about their beliefs about DAP. Overall the study found that the educator's education level and training, professional development, and perception of the job impacted their beliefs about DAP but that experience did not. In addition, the study found that "strong" DAP were more often endorsed than "weak" DAP. Together, these findings support the idea that educator's beliefs about how to promote a high quality child care environment are influenced by individual differences.

LIST OF ABBREVIATIONS AND SYMBOLS

$\underline{M}$	Mean: the sum of a set of measurements divided by the number of measurements in the set.
<	Less than
Min	Least possible quantity
Max	Greatest possible quantity
P	Probability associated with the occurrence under the null hypothesis of a value as extreme or as more extreme than the observed value
SD	Square root of the variation that exists from the average
p	Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value
r	Pearson product-moment correlation
t	Computed value of *t* test
<	Less than
=	Equal to

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Introduction

High quality classrooms that feature developmentally appropriate practices (DAP) are crucial to providing an optimal learning environment for young children (Fontaine, Torre, Grafwallner, & Underhill, 2006). As McMullen (2000) states, the "critical impact of developmental period of early childhood (birth to age 8) is widely accepted and well-documented in the education field as having lifetime effects on the success of later learning" (p. 97). Statistics show that for US children under the age of five, 60% are in some form of early care (Fontaine et. al., 2006). That amounts to more than 11 million US children in an early care education setting. Unfortunately, the majority of early care classrooms do not meet this standard of being high quality (Warash, Markstrom & Lucci, 2005). For example, Kreader, Ferguson, & Lawrence (2005) found developmentally appropriate quality care in just over 8% of infant/toddler classrooms, medium quality care in 51% of infant/toddler classrooms, and poor quality care in more than 40% of infant/toddler classrooms. One possibility is many educators do not believe DAP are important. Another possibility is educators believe DAP are important but they do not have the resources or knowledge to practice DAP.

Quality Child Care Environments

A high quality learning environment is one in which the educator builds positive and trusting relationships with the children. To accomplish this, educators usually create an environment that focuses on the children's strengths, needs, and interests (Sylva et al., 2007) and includes activities that are age-appropriate, culturally appropriate, fun, and challenging (Fontaine et al., 2006). For example, according to Tu (2006) early care settings may have learning centers

(e.g., art, blocks, computers, dramatic play, language, science) designed for planned activities for children during instructional or free play times and the centers allow educators to facilitate and support a child's learning. By providing learning centers that promote learning, time for individual and group play on a daily basis, low child-teacher ratios, and smaller group sizes, educators can better provide children with specialized and individual attention. Indeed, an educator who integrates a developmentally appropriate classroom is knowledgeable of the development of each child and respects and nurtures each child's differences and individuality (Layzer & Goodson, 2006; Leach, Barnes, Malmberg, Sylva & Stein, 2008; Recchia, Berr, & Hsuing, 1998). In addition to low child-staff ratios, small group sizes, etc., high quality early care and education classrooms are more likely to have educators with higher levels of education, specialized training, and may have teachers with extensive experience.

The impact of a quality early care environment cannot be overstated. Research shows quality early care enhances children's well-being and development, provides a secure environment (Layzer et al., 2006; Leach et al., 2008), enhances a child's daily happiness (Leach et. al., 2008), and can lead to more parent involvement (Layzer et al., 2006). A quality learning environment also leads to other short and long term developmental outcomes including social, emotional, cognitive, and language abilities (Leach et al., 2008; Logan & Sumsion, 2010; Melhuish, 2001; Pierrehumbert, Ramstein, Karmaniola, Miljkovitch, & Half, 2002), successful adjustment skills (NICHD, 2003), and pre-academics including math and reading (Dearing, McCartney, & Taylor, 2009; Leach et al., 2008).

Developmentally Appropriate Practices (DAP)

One of the main keys to ensuring a high quality classroom is the endorsement and implementation of developmentally appropriate practices in the education setting. DAP were first

initiated by the National Association for the Education of Young Children (NAEYC), the largest professional organization of early childhood educators, in 1987. DAP can be considered a sort of guide to providing an educational environment based on age-appropriate activities and expectations that focus broadly on the whole child (Goldstein, 2008). According to Hegde and Cassidy (2009), DAP is a "child-centered philosophy of education which is a perspective espousing how children actively learn and construct their own knowledge by interacting with peers, teachers, and materials" (p. 837). DAP provide structure for planning a classroom curriculum to combine all aspects of a child's development by focusing on the developmental ages and stages of children and the interactions and experiences of children in a classroom. Consequently, DAP provide the building blocks to a higher quality classroom. For example, McMullen et al. (2006) found educators, who used developmentally appropriate practices, had quality classrooms that contained child-directed activities, play, engaged children, problem based learning, literacy accents, and consistent routines. In contrast, classrooms that are developmentally inappropriate can lead to detrimental effects on a child's desire to explore and motivation and can lead to anxiety (Zeng & Zeng, 2005). Developmentally inappropriate classrooms have more worksheet activities, long waiting times between transitions, and more punishment (Burts et al., 1990). Children exhibit poor academic achievement in children, poor conduct, distractibility and less social (Hart, Burts, Durland, Charlesworth, DeWolf & Fleege, 1998) and exhibit increased stress behaviors (Burts, Hart, Charlesworth, & Kirk, 1990).

In a recent study, Pianta et al., (2005) found educator attributes were the most recognized in the identification of quality environments, and the quality was higher when the educators had teaching experience, years of experience, positive attitudes, and credentials. The authors

suggested future research should focus on the relationship among an educators' level of training, years of experience, and the educators' beliefs of how children learn in the classroom.

Education

Knowledgeable, skilled educators are important for a high-quality early learning environment (Fontaine et. al., 2006). Educators with high levels of education provide an environment that is responsive and constructive (Brownlee, Boulton-Lewis, & Berthelsen, 2008; Kugelmass & Ross-Bernstein, 2000; Manlove, 2001; Saracho & Spodek, 2007). For example, in a study by McCullen and Alat (2002), educators with a bachelor's degree or higher strongly endorsed DAP as a philosophy for teaching. In fact, McMullen (2000) found educators with a degree in early childhood education or child development education along with teaching experience provided higher DAP practices than educators with a degree in elementary education and those without any teaching experience. Hedge et al. (2009) further compared child care educators with classes from a community college to teachers who did not take college classes and found teachers, who had taken any courses in the area of education, psychology, or child development, offered more developmentally appropriate practices and higher quality in the classroom.

Education can impact a large number of individual classroom aspects like curriculum implementation (Purcal & Fisher, 2007), positive peer interaction (Purcal et al., 2007), children's learning (Brownlee et al., 2008), caregiver sensitivity (Burchinal, Cryer, Clifford, & Howes, 2002), teacher knowledge, teacher attitudes, and overall higher quality (Burchinal et al., 2002; Ghazvini & Mullis, 2002; Manlove, 2001; Saracho et al., 2007; Torquati, Raikes, & Huddleston-Casas, 2007). According to Kreader, Ferguson and Lawrence (2005), educators in these types of high quality classrooms have higher levels of education, attend specialized training, and have

many years of teaching experience. Even before NAEYC endorsed DAP, Cassidy and Buell (1995) went as far as to encourage future studies focus on teacher qualifications as related to a teacher's knowledge and appropriate classroom practices for the individual children.

Experience

Another aspect of teaching that can influence the classroom is years of experience. Past research has found brand new educators are often less effective than experienced educators although other research has found brand new educators are more effective because they are new to the field, more excited about teaching and possibly newly out of school. For example, a study by Rice (2010) found teachers with 20 years or more of teaching were more effective than teachers with no experience yet not more effective than teachers with 5 years of experience; although, this study included teachers in any age classroom and not only those that teach young children. Looking at early child care educators, Brousseau (1988) discovered a more experienced early child care educator is more likely to believe in a common classroom curriculum and believe the classroom children should be provided with more responsibility (i.e. assisting in developing classroom rules; active explorations).

Professional Development

One especially important experience teachers can earn comes from opportunities for professional development. Most instances of professional development encompass workshops, webinars or other types of training that highlight aspects of DAP (Purcal et.al, 2007). Also, professional development is important to the implementation of DAP and can be achieved through verbal learning (i.e. courses; presentations), observations of experienced teachers (i.e. modeling appropriate teaching behaviors by a lead teacher), and self-construction evaluation based on reflection of current practices (Riley & Roach, 2006). In fact, studies show professional

development can be a key to DAP in that educators who attend professional development usually scored higher on DAP on professional development questionnaires (Burchinal et al., 2002; Riley et. al., 2006). Educators who attend professional development opportunities are more likely to provide a classroom environment with high quality teaching practices and leading to an increase in a child's academic levels as well as promoting healthy social and emotional skills (Brownlee et. al., 2008; Doppelt & Schunn, 2009; Fontaine et al., 2006). A study by Hedge et al. (2009) examined educators who participated in an extensive training program that detailed how to implement DAP in the classroom and how to change their beliefs about how children learn. The authors found the educators who possessed these skills were more involved in providing DAP and concluded on-going professional development could actually shape teachers practice of DAP.

Perceptions of Teaching

Every educator has a perception of what is going to comprise a teaching career. The perception of teaching, positive or negative, can impact job satisfaction. All educators experience self-efficacy, which is the belief system in place that identifies the beliefs an educator has about their capabilities to effectively teach and to impact student learning. Self-efficacy has been found to be related to years of experience. A teacher with 0 to 23 years of experience displays an increase in self-efficacy although it begins to decline after 23 years (Klassen & Chiu, 2010). An educator who is satisfied will be more motivated and more successful. Successful educators who provide a classroom environment that is optimal to a child's learning have a sense of positive well-being, are satisfied in their role as a teacher, are more confident in their teaching abilities, and view themselves as self-sufficient (Moe, Pazzaglia & Ronconi, 2010). An educator who finds teaching to be fun, fascinating, and challenging will experience higher job satisfaction

(Maele & Houtte, 2012). Teacher education, professional development, experience and the perception of teaching are influenced by the beliefs of a teacher.

Teacher Beliefs

While a majority of research has focused on whether educators provide quality child care environments, there is some evidence educator beliefs may also be important to study. Teacher beliefs are values that influence teaching practices and relationships with children (Kim, 2011). According to Rosenfeld and Rosenfeld (2008), an educator who believes that all children have the capacity to learn provides more effective teaching. Tiberius (2001) also observed that the way an educator teaches and what they think about teaching is shaped by what the teacher believes about the roles and responsibilities of educators. Studies also show that a classroom can be highly influenced by the personal beliefs and images the educators have about their work in child care (Berthelsen, Brownleee, Irving, Boulton-Lewis, & McCrindle, 2000), which has led some researchers to conclude it is important to encourage educators to identify their belief system (Kraft, 2002). According to Middleton (2002), an educator's belief system is a combination of multi-cultural understanding and commitment that encompasses attitudes, beliefs, behaviors, and competence of the teachers. An educator's belief system has the potential to enhance a high quality classroom through understanding that children need to be confident, motivated, and healthy, and through an understanding of children's development (Lara-Cinisomo, Fuligni, Ritchie, Howes & Karoly, 2008).

An educators' belief system can be identified using various scales. The Teacher Beliefs Scale (TBS) was developed by Charlesworth, Hart, Burts, and Hernandez (1991) who used the NAEYC guidelines about DAP to identify beliefs and classroom practices. The Teacher Belief Questionnaire was made up of two scales: Teacher Beliefs Scale and Instructional Activities

Scale. The questionnaire identified developmentally appropriate practice, positive teacher - to - child relationships, and inappropriate classrooms practices such as worksheets and literacy activities that were considered to be ineffective. Other questionnaires related to beliefs were developed by Schaefer and Edgerton (1985) and Burts, Hart, Charlesworth, and Kirk (2001). For example, Schaefer and Edgerton's Parental Modernity Scale identified the traditional/authoritarian and progressive/democratic beliefs of parents using a 30 item scale that was based on questions about parents' beliefs regarding childrearing and education. In general, for an educators' belief system, past researchers have found a teachers' DAP beliefs are often more evident than their classroom practices, and a "teachers knowledge about child development strongly predicts DAP" (Jones, Burts, Buchanan & Jambunathan, 2000, p. 398).

Purpose of the Study

The aim of this study was to further examine relationships among several key variables often linked to high quality early child care environments and beliefs about DAP in the classroom including teacher experience, education and training, professional development, and perception of the job of educating young children. Specific directions of the study identified the relationship between DAP beliefs and the following components: 1) does an educator identify their job as a professional or a job with a paycheck?; 2) does an educator with more years of experience in the teaching field have stronger beliefs about DAP?; 3) does an educator with a Bachelors or higher versus no college degree or lower have differing views about DAP?; 4) does an educator with an early childhood education degree or non-early childhood education have beliefs that follow DAP?; and 5) how does professional development correlate with DAP?

Method

Questionnaires regarding the quality of early child care environments were given to 221 early care educators from 11 different child care centers and one non-profit child care agency. Instructions for completing the questionnaire were provided verbally and in writing. The questionnaire took approximately 20-30 minutes to complete, and participants were asked to complete it within a two-week window. Of the 221 questionnaires distributed, 100 were completed and returned for a response rate of 45 percent. The average age of participating educators was 38 years old (*SD*=14 years) with the youngest participant being 17 years old and the oldest being 66 years old.

For purposes of the study, the *Questionnaire for Teachers* was used to assess educator's beliefs. The *Questionnaire* is comprised of 9 sub-sections (see Table 1), although for this study only 5 of the sub-sections were analyzed: 1) *About You as a Teacher*, 2) *Your Beliefs about Early Care and Education*, 3) *Training and Workshops You Have Attended*, 4) *Your Education*, and 5) *About You*. These sub-sections were related to the main aims of the study. See Table 1.

The *About You as a Teacher* sub-section provided basic information about each participant's professional experience (e.g., total years teaching young children and how many years you plan to be a teacher) and the *About You* sub-section provided basic demographic information about each participant (e.g., gender, ages, and racial group). According to these sections, 98% (N=98) of the 100 participants were female while 2% were male (N=2). Also, 68% (N=68) were white (Caucasian) while 24% (N=24) were black (African American). The average age was 38 years old, and the average length of time working in early child care was almost 12 years. Roughly 50% (N=49) work 40 or more hours per week with an average pay of approximately $9.87/hour.

Your Beliefs about Early Care and Education asked educators about their current child care position (13 items) including how to characterize it (i.e., "I see my current child care position as my career or profession" and "I see my current child care position as a job with a paycheck"). *Your Beliefs about Early Care and Education*, partially developed based on the work of Schaefer and Edgerton (1985) and Burts et al. (1990) was broken down into two segments: beliefs about working with children and beliefs about developmentally appropriate practice. For beliefs about children, the educators identified his/her opinion about various topics involving parents, how children should be treated, home settings, child care settings, goals of education and more. For beliefs about developmentally appropriate practice, the educators identified their views about working with 3, 4 and 5 year olds. Topics included curriculum, learning areas, seat work, active exploration, rewards, punishments and more.

Your Education asked educators about their highest level of education (GED or high school) and education beyond high school including one year technical college degree, one year child development program, two year college degree, Bachelor's degree, some college courses or none. Of the 100 educators, 100% had a high school degree or GED; 5% had one year of technical college; 5% had a one year in a Child Development Program; 18% had some college; 14% held an Associates degree; and 46% and higher held a Bachelors degree or higher. The educators identified the major for the highest degree program (i.e. Early Childhood Education, Psychology, Education, Special Education, Other and non-applicable).

The *Training and Workshops You Have Attended* section asked educators to identify the types of professional development experiences they participated in including the specific seminars or workshops they may have attended (i.e. Child Abuse and Neglect, Special Education), specific content covered in the trainings (i.e. Child Development; Child Care

Professional and Family; Language Development; Quality Child Care and Licensing; Positive Guidance and Discipline; and Health, Safety and Universal Precautions) and whether the training had a positive effect on the quality of care the teacher provided.

Results

One hundred child care educators completed a questionnaire (i.e., *The Questionnaire for Teachers*) featuring 182 items across 9 sub-sections. The current study was especially interested in four main research questions related to the likelihood that educators endorse developmentally appropriate practices in the classroom. First, does experience predict whether teachers endorse or do not endorse developmentally appropriate practices in the classroom? Second, does level of education predict whether teachers endorse or do not endorse developmentally appropriate practices in the classroom? Third, does participation in professional development predict whether teachers endorse or do not endorse developmentally appropriate practices in the classroom? Fourth, does perception of the job of being an educator (i.e., job as career versus job as paycheck) predict whether teachers endorse or do not endorse developmentally appropriate practices in the classroom?

Although national organizations like NAEYC have established specific DAP (Bredekamp & Copple, 1997), no standard measure for educator beliefs about DAP exists, although other questionnaires (i.e. *The Teacher Belief Questionnaire*) have been developed using DAP guidelines. As a result, the current study operationalized beliefs about DAP by selecting items from the *Your Beliefs about Early Care and Education* sub-section of the questionnaire that were judged to correspond to DAP. These judgments were made independently by two professional child care educators familiar with DAP. Agreement on which of the items corresponded to DAP was 98% and disagreements were reconciled following discussion. In addition, the educators

judged whether the individual items represented “strong” or “weak” correspondence to DAP. Strong DAP items directly matched the wording of an established DAP. Weak DAP items did not directly match but either partially matched or could be inferred from an established DAP. Finally, an item was judged as non-DAP if it did not correspond to an established DAP, including if the item was related to home or parent practices or was otherwise unrelated to child care. Each of the items on this sub-section was rated using a 5-point Likert scale from strongly disagree to strongly agree. These ratings were totaled to create a variable for overall DAP (15 items), strong DAP (7 items), weak DAP (8 items), and non-DAP (15 items). The average rating for each set of items could range from 1-5. See Table 2 for breakdown of “strong” and “weak” DAP items.

Does experience predict whether teachers endorse or do not endorse developmentally appropriate practices in the classroom?

Experience was defined as total years as a child care educator. In addition, total years as an educator was subdivided into four categories: 0-3 years, 4-7 years, 8-11 years, and 12 or more years. Correlation was used to perform an initial analysis examining the relationship between years of experience and DAP, including a correlation for overall DAP, DAP items judged as strong, DAP items judged as weak, and non-DAP. According to these analyses, years of experience was not significantly correlated with ratings of DAP ($r(85)=.08$, $p>.05$), DAP strong ($r(88)=.09$, $p>.05$), DAP weak ($r(85)=.03$, $p>.05$), or non-DAP ($r(79)=.06$, $p>.05$) items. In addition, the mean endorsement of DAP was compared across the four experience categories. For overall DAP, a one-way ANOVA found no significant differences across categories, $F(3,86)=.74$, $p>.05$. A 3x4 repeated measures ANOVA with DAP (DAP strong, DAP weak, non-DAP) as the within subjects factor and experience as the between subjects factor (0-3 years, 4-7

years, 8-11 years, and 12 or more years) also found no effect for experience and no DAP by experience interaction. However, this analysis did reveal a main effect for DAP, $F(2,72)=166.57$, $p<.05$. Follow-up comparisons indicated that strong DAP items ($M=4.23$) were rated higher than either weak DAP items ($M=3.09$) or non-DAP items ($M=3.07$), which did not differ.

An alternative way to examine the relationship between experience and DAP is to consider the experiences within a particular environment. For this analysis, the mean endorsement of DAP was compared across the different licensure or accreditation levels that the center where the educator was employed had obtained. For overall DAP, a one-way ANOVA found significant differences across categories, $F(2,90)=7.44$, $p<.05$. Follow-up Tukey tests indicated that educators from accredited centers ($M=3.78$) were more likely to endorse DAP than educators from state licensed ($M=3.54$) or state exempt centers ($M=3.41$).

Does level of education predict whether teachers endorse or do not endorse developmentally appropriate practices in the classroom?

Education was defined in terms of whether the educator had earned a bachelor's degree or not and whether the educator had received some formal training in early childhood education. Crossing these two variables created an aggregate variable with four levels: those educators with a bachelor's degree and ECE training, those with a bachelor's but no ECE training, those with no bachelor's and ECE training, and those with neither a bachelor's degree or ECE training.

In addition, the mean endorsement of DAP was compared across the four education categories. For overall DAP, a one-way ANOVA found no significant differences across education categories, $F(3,80)=1.10$, $p>.05$. A 3x4 repeated measures ANOVA with DAP (DAP strong, DAP weak, non-DAP) as the within subjects factor and education as the between subjects factor (bachelor's degree and ECE training, bachelor's degree and no ECE training, no

bachelor's degree and ECE training, no bachelor's degree and no ECE training) also found no effect for education and no DAP by education interaction. However, this analysis did reveal a main effect for DAP, $F(2,68)=103.64$, $p<.05$. Follow-up comparisons indicated that strong DAP items ($M=4.23$) were rated higher than either weak DAP items ($M=3.09$) or non-DAP items ($M=3.07$), which did not differ.

Independent samples t-tests were conducted to determine the effect of degree (BA or no-BA) on endorsement of DAP (i.e., overall DAP, strong DAP, weak DAP and non-DAP). Across the four t-tests, only weak DAP revealed a statistically significant difference with educators having a BA ($M=3.23$) indicating a higher likelihood of endorsing weak DAP than educators without a BA ($M=2.94$), $t(80)=3.45$, $p<.05$.

Finally, independent samples t-tests were conducted to determine the effect of early childhood education coursework (ECE or no-ECE) on endorsement of DAP (i.e., overall DAP, strong DAP, weak DAP and non-DAP). Across the four t-tests, only strong DAP revealed a statistically significant difference with educators having ECE training (M=4.36) indicating a higher likelihood of endorsing strong DAP than educators without ECE training ($M=4.14$), $t(82)=2.19$, $p<.05$.

Does participation in professional development predict whether teachers endorse or do not endorse developmentally appropriate practices in the classroom?

Professional development was defined in terms of whether the educator had attended professional development workshops in the previous 12 months in any of the six areas of study in Child Development; Child Care Professional and Family: Health, Safety and Universal Precautions; Language Development; Positive Guidance and Discipline and Quality Child Care

and Licensing. The categories of professional development were categorized as 0-1 training sessions or 2 plus training sessions.

Correlation was used to perform an initial analysis examining the relationship between professional development workshops in the last 12 months and DAP, including a correlation for overall DAP, DAP strong, DAP weak and non-DAP. According to the analyses, professional development was correlated with endorsing developmentally appropriate practices but only for DAP that were identified as strong ($r(47)=.31$, $p<.05$). Professional development was not significant for overall DAP ($r(44)=.07$, $p>.05$), DAP weak ($r(45)=.16$, $p>.05$) or non-DAP ($r(46)=.21$, $p>.05$).

An independent samples t-test was conducted to determine whether the effect of few training sessions (i.e., 0-1 sessions) differed from the effect of many training sessions (i.e., 2 or more sessions) on endorsement of DAP (i.e., overall DAP, strong DAP, weak DAP and non-DAP). Across the two t-tests, only DAP strong revealed a statistically significant difference with educators who attended 2 or more types of professional development training in the last 12 months ($M=4.33$) more likely to endorse DAP than educators who attended 1 or fewer types of professional development training in the last 12 months ($M=3.98$), $t(45)=3.07$, $p<.05$.

Does perception of the job of being an educator predict whether teachers endorse or do not endorse developmentally appropriate practices in the classroom?

Perception of an educator was defined in terms of whether the educator perceived the current child care position as a “paycheck” or as a “career”. Independent samples t-tests were conducted to determine the effect of job perception (negative or positive) on endorsement of DAP (i.e., overall DAP, strong DAP, weak DAP and non-DAP). Across the four t-tests, none revealed a statistically significant difference between those educators who viewed their jobs

negatively and those who viewed their jobs positively in terms of endorsing DAP, *p*s>.05. One problem with this analysis though was that very few educators (*N*s=6-7) viewed their jobs negatively according to the both items used (i.e., few strongly agreed the job was a paycheck while they simultaneously disagreed the job was a career) while many showed the opposite pattern (*N*s=63-68).

Instead then, correlation was used to perform an analysis examining the relationship between negative perceptions of the current child care position (i.e., participants endorsed items indicating that they viewed the job as a "paycheck" or reported that they "feel stuck" in the job) and positive perceptions of the current child care position (i.e., participants endorsed items indicating that they viewed the job as a "career" or reported they "learn and grow" in the job) and the endorsement of overall DAP, DAP strong, DAP weak and non-DAP. According to these analyses, positive perceptions of being an educator as a career was not related to any DAP measure (*r*s ranging from -.019 to .053, *p*s>.05). However, negative perceptions of being an educator were related to overall DAP ($r(90)= -.33$, $p<.05$) and weak DAP ($r(91)=-.30$, $p<.05$). These correlational analyses indicated that the more negatively an educator viewed the job the less likely they were to endorse DAP, especially for weak DAP, but that endorsing DAP was unrelated to a positive perception of the job.

Discussion

The purpose of this study was to explore the relationships between the level of education, professional development, teaching experience and perception of the job on beliefs about DAP. Past studies have shown factors like these can influence DAP (e.g., Pianta et al., 2006). The current study measured beliefs about the endorsement of DAP, whereas, past studies measured the actual in-classroom DAP practices. In addition to an overall measure of DAP beliefs, two

additional measures were created: beliefs about “strong” DAP and beliefs about “weak” DAP. The purpose of these measures was to determine if different DAP bring about different beliefs from educators.

Items were judged as “strong” DAP if they were based on practices related to individual learning (i.e. children doing activities over and over again), activities offered in the classroom (i.e. children choose their own activities; activities are responsive to individual differences; personal involvement), exploration of the classroom and materials (i.e. active and available), use of materials to encourage appropriate behavior (i.e. praise of positive behaviors in the classroom), and children’s involvement in the classroom (i.e. assisting in establishing classroom rules). Items were judged as “weak” DAP if only part of the statement was developmentally appropriate or the statement contradicted a statement in DAP. Examples of weak statements include things like: the curriculum should be taught as separate subjects at separate times (the learning centers in the classroom are separate, but the classroom should work as a whole) or children should work silently and alone (children also need time to interact). A final set of items, referred to as non-DAP, consisted of statements that were related to the future, what goes on at home, biology of a children (e.g., impulsive behavior), obedience to parents and other components that were not based on stated practices.

Years of Experience and Developmentally Appropriate Practices

Unlike what previous studies suggested, the current study did not find that years of experience in early child care was related to the endorsement of DAP. This was somewhat surprising considering a previous study by Pianta et al. (2005) which found that DAP was higher in classrooms when educators had with more experience, especially teaching experience. One possibility is that the measure of experience in the current study was just too simple. Here

experience was measured simply by using the educator's number of years in child care. No consideration was given to whether the educators worked part time or full time, were paid or unpaid, had worked consistently in child care, had been in the same job for a long period of time, or the quality of the child care provider where they worked. For example, an educator working for a provider who does not emphasize DAP may not show an increase in DAP beliefs over time. Also, it is possible more experienced teachers may sometimes rely heavily on their own routines or standards for approaching children's learning or managing a classroom rather than outside practices like DAP.

Although experience and beliefs about DAP were unrelated in the current study, one interesting finding from these analyses was that strong DAP were more often endorsed than weak DAP. Strong DAP beliefs are considered to be more positive, age-appropriate and focused on the importance of enhancing a child's learning. Although experience still did not influence the endorsement of strong and weak DAP, it is encouraging that strong items were commonly endorsed, even by educators who were still early in their career. This also suggests educators may not view all DAP equally.

Level of Education and Developmentally Appropriate Practices

Similar to experience, education level also was not found to be related to beliefs about DAP – at least not according to the main measure, which was divided into four categories. Since studies by McCullen et al. (2002) and Hedge et al. (2009) found that educators with a degree presented DAP in the classroom, it was expected a relationship would be found between the level of education and beliefs about DAP. In a study by McCullen et. al (2002), educators with a bachelor's degree or higher strongly endorsed DAP as a philosophy for teaching. One challenge of the study was that the participants reported DAP beliefs through self-reporting which is

similar to one of the participants in a study by McMullen et al. (2002) in which the educators reported beliefs about DAP instead of using actual classroom observations.

Although beliefs about DAP did not appear to differ across the four categories of education and training, subsequent analysis did show educators with a bachelors degree were more likely to endorse weak developmentally appropriate practices than teaching practices that are not directly related to being developmentally appropriate as compared to those without a bachelors degree. Of course these educators were still more likely to endorse strong DAP than weak, but the tendency for educators holding a bachelor's degree to endorse weak DAP may indicate that education helps educators pick up on some of the subtler, less obvious aspects of DAP. This finding closely identifies with a study by Hedge et al. (2009) who identified that teachers who had taken college classes provided more developmentally appropriate practices in the classroom.

Subsequent analysis also showed that educators with an ECE background were more likely than educators without an ECE background to endorse strong developmentally appropriate practices. Strong DAP beliefs were most likely more endorsed than weak DAP because ECE focuses on the whole child, the teaching environment and focuses on the positive aspects of the classroom a child needs to be successful in school and in life. Those with an ECE background are aware of the differences between appropriate and non-appropriate classroom practices and are more likely to exhibit the positive (i.e. strong DAP) practices because of the knowledge they receive. It may also be the educators with ECE training are so in tune with DAP they notice clear differences between those that are strong and those that are not. Perhaps this influences their decision not to endorse some of the weak items.

Professional Development and Developmentally Appropriate Practices

In the current study, professional development included several different types of training sessions the educators could indicate they had attended provided they were focused on one of the following six areas: child development, child care professional and family, health and safety, language development, quality child care and licensing, and positive guidance and discipline. Previous findings suggested that professional development was crucial to high quality early care and education programs (Riley et. al., 2006). Professional development has been shown to increase a teacher's knowledge, changes teachers' beliefs and improve instruction practices (*Creative Effective Teaching and Learning Environments*, 2009). In addition, professional development enhances DAP because the educator receives training in areas such as how to set up a classroom environment, age-appropriate activities, communication strategies to building a positive teacher-child relationship and other DAP topics.

In support of these earlier studies, the current study found professional development was related to educator's endorsement of DAP, but only for strong items. Further, educators who attended at least 2 professional development sessions in the past 12 months were able to show this difference. In contrast, there were no significant findings between professional development and weak DAP beliefs or non-DAP beliefs. A relationship was not found between professional development and weak DAP perhaps because professional development focuses on the strong DAP and shows educators appropriate ways to avoid the weak DAP components. Professional development opportunities usually teach educators about what is and is not appropriate in the classroom and tends to focus on what is considered a strong belief.

The findings show professional development can have a meaningful effect on beliefs about DAP and closely identifies with a study by Hedge et al. (2009) found that educators who

participate in on-going professional development could change their negative thoughts and beliefs about developmentally appropriate practices which would lead to a stronger sense of beliefs and improve classroom quality. In addition, the findings relate to a study by Fontaine et al. (2006) which concluded teachers who participated in professional development and attended more training had a higher quality classroom.

Perception of the job being an educator and Developmentally Appropriate Practices

In this study educators were asked to respond to several items about their beliefs about their current position. Two of those items reflected a negative perception of the job, one suggesting it was only a job with a paycheck and the other indicating it was a job where they felt stuck. Two of those items reflected a positive perception of the job, one suggesting the job was viewed as a career and the other indicating it was a job with an opportunity to learn and grow. Interestingly, educators who viewed their jobs negatively in regards to seeing it as a paycheck or as feeling stuck were less likely to endorse DAP, especially weak DAP. However, a relationship was not found between educators who viewed teaching positively as a career or as an opportunity to learn and grow and the endorsement of DAP. These findings suggest a positive perception of the job does not increase beliefs about DAP but a negative perception of the job can decrease beliefs about DAP. Perhaps a majority of educators who feel as though they are making a positive difference in the lives of the children are more committed to quality teaching (Cooper & Davey, 2011). In support, Williams and Forgasz (2009) found educators who teach for intrinsic reason want to support children and have a desire to work with children which identifies with the educator in the study who felt that making a difference in the life of a child led to a commitment to teaching.

Conclusion

According to Bredekamp and Copple (2011), an educator who follows DAP must set five goals: 1) create a caring and loving environment; 2) learning and development is enhanced through teaching; 3) curriculum should be planned to help children achieve goals; 4) the children's learning and development must be assessed and 5) family relationships are crucial to a child's learning environment. Believing those goals are important goes a long way toward ensuring they are implemented in the classroom. The results of the current study lend support to this idea. Beliefs about DAP were influenced somewhat by educational background, professional development involvement, and the perception of teaching. Only years of experience did not seem to influence beliefs about DAP. Educators of young children must possess the knowledge, skills, and philosophies required to implement DAP, but they must also believe implementation is important. Perhaps the most consistent finding from this study was "strong" DAP were consistently endorsed over "weak" DAP. It may be worthwhile for directors of child care programs and organizers of professional development seminars to be as straightforward as possible when introducing DAP so that classroom activities are tied directly to a preferred practice. Also, future studies could measure both beliefs and DAP and the actual practice of DAP to determine how closely related the two are because, in the end, a developmentally appropriate classroom better equips a child with the necessary skills to succeed in school, home and life.

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Table 1: The Nine Sub-sections on the *Questionnaire for Teachers*

Sub-sections	Number of Items	Analyzed in the Current Study
About You as a Teacher	8	X
Your Beliefs About Early Care and Education	43	X
Trainings and Workshops You Have Attended	43	X
Your Education	10	X
Supports for Child Caregiving	12	
About Your Work as a Child Care Teacher	40	
Your Health and Well-Being	4	
About You	16	X
About the Children in Your Class	6	

Table 2: Strong and Weak DAP Statements

Strong DAP Statements	Weak DAP Statements
	Children should be treated the same regardless of differences among them.
Children's learning results mainly from being presented basic information again and again.	In order to be fair, a child care teacher must treat all children alike.
Activities in child care settings should be responsive to individual differences in development.	Children learn best by doing things themselves rather than listening to others.
Children should be allowed to cut their own shapes, perform their own steps in an experiment, and plan their own creative drama, art, and writing activities.	Children have a right to express their own point of view and should be allowed to express it.
Children should learn through active exploration.	Each curriculum area should be taught as a separate subject at separate times.
Teachers should use treats, stickers, or stars to encourage appropriate behavior.	Children should work silently and alone on seatwork.
Children should be involved in establishing rules for the classroom.	Teachers should use punishments or reprimands to encourage appropriate behavior.
	Children should be instructed in recognizing the single letters of the alphabet, isolated from words.