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The effects of maternal parenting style and religious commitment on self-regulation, academic achievement, and risk behavior among African-American parochial college students[☆]

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Abstract

This study explored relations between religiosity, both parent and student, and maternal parenting style and student academic self-regulation, academic achievement, and risk behavior among African-American youth attending a parochial college. Eighty-five students completed self-report survey measures of religiosity, self-regulation, academic achievement, and risk behavior. Participants also completed youth report measures of parental religiosity and perceived maternal parenting style. Correlational analyses show authoritative parenting to be associated with high levels of academic performance and study skills. Additional correlations revealed that highly religious students tend to perform well academically, study better, and engage in fewer risk behaviors than youth less committed to religion. Although no direct relations were observed between parenting style and student religiosity, maternal parenting style was found to moderate relations between parental and student religiosity. Findings are discussed in terms of their relevance to the population studied. © 2008 The Association for Professionals in Services for Adolescents. Published by Elsevier Ltd. All rights reserved.

Keywords: Self-regulation; Risk behavior; College; Religiosity; African-American; Religion; Parenting style

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Self-regulation during the adolescent years has been construed in a variety of ways. In general, self-regulation during adolescence involves the ability of the youth to function as an autonomous individual (Patock-Peckham, Cheong, Balhorn, & Nagoshi, 2001). A key feature of autonomy is the ability to make appropriate decisions. A self-regulated individual sets attainable goals and takes appropriate actions to achieve these goals, utilizing their resources while remaining aware of their limitations (Miller & Byrnes, 2001). These individuals show control over their psychological processes and the ability to adapt to their environment. Two domains of adolescents' lives that have often been examined through the lenses of self-regulation theory are academic achievement and risk behavior.

Academic self-regulation can be defined as self-regulated learning; that is, the motivational and behavioral processes allowing individuals to activate and sustain cognitions, behaviors, and emotions in a systematic way toward the attainment of their own learning goals (Schunk & Zimmerman, 1994). Rohrkemper (1989) referred to self-regulated learning as a process of adaptation, such that the self-regulated learner is one who takes charge of his/her own behaviors and emotions to facilitate the act of learning (Byrnes, Miller, & Reynolds, 1999; Rohrkemper, 1989). The self-regulated learner is also an individual who understands the motives and strategies that are necessary for learning to occur (Boekaerts, 1996; Pintrich & De Groot, 1990; Schunk & Zimmerman, 1994; Wolters, 1998). For example, when faced with difficult academic challenges, self-regulated learners understand when and how to use strategies that increase persistence and performance while other, less self-regulated students tend to give up (Schunk & Zimmerman, 1994). The self-regulated learner purposefully uses metacognitive strategies that incorporate self-monitoring and evaluative components that allow for self-observation, self-judgment, and self-reaction (Zimmerman, 1989). The self-regulated learner is one who is intrinsically motivated and feels able to succeed (Schunk & Zimmerman, 1994).

In terms of risk behavior in the area of drug use, self-report data have shown that individuals who lack self-regulation tend to use drugs more often than individuals who are highly self-regulated (Novak & Clayton, 2001; Wills, DuHamel, & Vaccaro, 1995). Data collected via the Self-Regulation Questionnaire (SRQ, Aubrey, Brown, & Miller, 1994; Brown, Miller, & Lawendowski, 1999) have shown that individuals who have difficulties with self-regulation also show impairment in the ability to control consumption of legal drugs, such as alcohol (Patock-Peckham et al., 2001). In addition, individuals who are daily users of drugs are more likely to decrease this use if they are highly self-regulated (Novak & Clayton, 2001).

One of the salient and often studied predictors of self-regulation (and academic success and drug use, as well) is parenting style. The relationship between parenting styles and developmental outcomes in children and adolescents has long been the subject of interest to researchers. A number of parenting characteristics have been found to be related to developmental outcomes in children (Baumrind, 1971; Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994). Diana Baumrind's parenting style typology is based on two specific parenting characteristics, parental warmth and parental control, yielding four distinct styles when examined in two-dimensional space (Maccoby & Martin, 1983). Authoritative parenting is characterized by the presence of clear parameters for children's behavior with reasonable and rational negotiation within set boundaries. Authoritative parents tend to use strict sanctions only when necessary, encourage autonomy and independence, and are consistently responsive and warm. In contrast, authoritarian parents

attempt to shape, control, and evaluate the behavior and attitudes of their children in accordance with an absolute set of strict standards, using punitive measures for control (Grolnick & Ryan, 1989). Permissive parents encourage autonomy, but provide little direction and minimal consequences when their children misbehave (Patock-Peckham et al., 2001). Neglectful, or uninvolved, parents tend to show little warmth or attention to their children, while providing them with little and/or poor guidance.

Research on parent–child socialization has consistently found that the authoritative parenting style is strongly associated with academic achievement, autonomy, prosocial behavior, and children's internalization of values (Baumrind, 1989; Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Grusec & Goodnow, 1994; Morrison, Rimm-Kaufman, & Pianta, 2003; Shek, Lee, & Chan, 1998; Steinberg, Lamborn, Dornbush, & Darling, 1992). The ability of children to exhibit acceptable standards of behavior motivated not by anticipation of external consequences but by intrinsic or internal factors is seen as effective internalization of parental values (Grusec & Goodnow, 1994). Authoritative parenting tends to be related to academic success and little externalizing behavior problems, when compared to authoritarian and permissive parenting (Jones, Forehand, & Beach, 2000; Juang & Silbereisen, 1999; Morrison et al., 2003; Shek et al., 1998). At a more general level, authoritative parenting has been associated with higher levels of adolescent self-regulation than permissive and authoritarian parenting (Brody & Flor, 1998; Brody & Ge, 2001; Patock-Peckham et al., 2001). For the purpose of the current study, only maternal parenting style was measured due to the vast majority of the current sample being raised, at least in part, by their mother or maternal guardian.

A discussion of the internalization of parental values is incomplete without the inclusion of culture and religion, two understudied factors that are, however, known to play important roles both as a moderator and as a mechanism. In terms of moderating effects, it is clear that both the meaning and consequences of parenting styles vary across different ethnic and cultural groups (Chao, 2001; Finkelstein, Donenberg, & Martinovich, 2001). For example, among African-American families, authoritarian parenting is more common than it is in European-American families (Mason & Butler, 2004; Reitman, Rhode, Hupp, & Altobello, 2002), however, due to differing cultural and extra-familial contexts, the meaning and consequences of authoritarian parenting are different. Authoritarian parenting, for example, tends to result in significantly fewer negative outcomes for African-American adolescents than it does for European-American adolescents (Mason & Butler, 2004). In terms of mechanisms of internalizing parental behavioral standards, religion is a potential vehicle for internalization that has been largely overlooked in the research (Flor & Knapp, 2001). Together, culture and religion may also interact in ways that are important for our understanding of adolescent internalization and self-regulation. For example, religion may play a more prominent and different role in the academic and behavioral socialization of adolescents among African-American families than among families from other ethnic backgrounds (Walker & Dixon, 2002). African-American adolescents tend to be more religious, both in belief and participation, than European-American adolescents (Walker & Dixon, 2002).

A topic of much concern both for religious parents and for researchers is how parental religious values and behavioral standards are internalized and adopted by children. The processes involved in the internalization of religion may be the same as those at play in the internalization of conscience, self-regulation, and other behavioral standards (Brody & Flor, 1998; Kochanska, 1994; Kochanska, Coy, & Murray, 2001; Kochanska, DeVet, Goldman, Murray, & Putnam,

1994). Religious and moral values are communicated early on in the socialization process between parents and children and there is a gradual transition made between other-regulated religions to self-regulated and fully internalized religion (Buzzelli, 1993; Nucci & Turiel, 1993). Just as parents are most successful using authoritative practices in promoting self-regulated behavior for their children in the academic and behavioral domains, the same may be the case for the parenting practices that foster internalized, self-regulated religion. Parents are most successful when they use a small amount of power assertiveness in combination with reasoning or induction in their parenting style as opposed to being overly strict and rigid or overly permissive (Grusec & Goodnow, 1994; Okagaki & Bevis, 1999; Ryan, Rigby, & King, 1993).

However, in the context of religion there is the added challenge for successful child internalization in that often the families that are the most religious are also the families that are the strictest, most rigid, and authoritarian, and therefore less likely to be using authoritative child-rearing practices (Ellison & Sherkat, 1993; but see Lindner-Gunnoe, Hetherington, & Reiss, 1999 for a contrasting perspective). Indeed, many religious parents may be fearful that if they loosen the reins on their child and lose a bit of control, their child will be exposed to too many other options and will choose another path. Self-determination theory posits the core human need for personal autonomy in decision-making and in the self-regulation of behavior (Deci, 1980; Deci, Vallerand, Pelletier, & Ryan, 1991), and suggests that there is a continuum in the extent to which behavior is self-determined and autonomously regulated from external motivation or regulation (where individuals engage in activities purely because of external pressure or contingencies), to introjected (internalized rules or demands that pressure an individual to behave in a certain way), and finally to identified and fully integrated regulation (where individuals do things because they are a central part of their own identity and goals). The ultimate goal for the successful internalization of religious values is that children get to the integrated level of intrinsic religion, where an individual's beliefs are incorporated into his/her notion of self (Ryan et al., 1993). When there is little self-determination in the area of religious values, youth report poorer life satisfaction, lower self-esteem, and a poor sense of meaning in life (Ryan et al., 1993).

The adolescent and young adult years pose another unique challenge to the internalization of parental religious values. Peak occurrence of dropping out of the church takes place during the late adolescent and the young adult years (Dudley, 1993; Ellison & Sherkat, 1993). As children enter adolescence, independence, personal autonomy, identity formation, and self-determination become of considerable importance (Feldman & Elliott, 1993) and the search for one's identity as separate from others often lead adolescents to reject and rebel against parental values, and religious values are often the first to go (Markstrom-Adams & Smith, 1996; Sabatelli & Mazor, 1985). Ozorak (1987) investigated the likelihood that adolescents would change, expand, or abandon their religious beliefs during adolescence and found that the reasons youth flee from religion are typically related to authority figures in general and specific undesirable religious practices that are required of them, and not due to fundamental spiritual beliefs. Adolescents who begin to reject religion may be rejecting patterns of authority more than the religion itself, suggesting that it is important to understand the specific religious socialization practices used by adults (Giesbrecht, 1995). Giesbrecht (1995) found that authoritative parenting, but not parental religiosity, was significantly related to intrinsic religious commitment, and that authoritarianism was linked with a lack of religious internalization, at least among this sample of primarily Caucasian

adolescents (Giesbrecht, 1995). The extent to which such findings generalize to more ethnically diverse families, however, remains unclear.

Brody, Stoneman, and Flor (1996) examined links between parental religiosity and children's academic and socioemotional competence during early adolescence among rural African-American families. They found that parental religiosity was related to more cohesive family relations, lower levels of inter-parental conflict, and fewer externalized and internalized problems among adolescents. Results of the study did not find a direct link between religiosity and adolescent self-regulation. Rather, the study found that religiosity was indirectly linked to adolescent self-regulation primarily through its positive relationship with family cohesion and negative relationship with inter-parental conflict (Brody et al., 1996). Others have studied adolescents within the church and found risk behaviors such as drug and alcohol use and delinquency to be common and related to extrinsic religious orientations (Erickson, 1992; Haerich, 1992). Further, strong religious affiliation for African-American students appears to be positively related to academic performance (Jeynes, 2003).

The present study seeks to clarify the relationships between religiosity, parenting style, self-regulation, academic achievement, and risk behaviors in a sample of young African-American students attending a historically Black, Seventh-Day Adventist College. Historically black colleges, many of which are religiously affiliated, make up only 3% of all institutions of higher education in the nation, but they graduate 33% of all African-Americans with bachelor's degrees and 43% of all African-Americans who go on to earn a Ph.D. (The College Fund/UNCF Annual Report, 1996). Historically black colleges have 17% higher retention rates for African-American students than other institutions of higher education (Kane, 1994). Clearly such institutions play a prominent role in the academic trajectories of African-American youth. Religiously affiliated colleges, like parents, also attempt to transmit religious values to students by providing moral and religious education and thus they too struggle with the problem of strict authoritarian rules and practices potentially leading to student rebellion and drop out. The use of rigid, fundamentalist, authoritarian strategies in the transmission of religious values with college age students at such colleges may also be counterproductive to the formation of internalized and sustained religiosity (Dumestre, 1995).

Little is yet known about such relationships in this understudied population. Indeed, this study represents the first time for such issues to be explored within African-American parochial college students. Previous research has focused on younger adolescents (Ball, Armistead, & Austin, 2003; Brody & Flor, 1998; Kochanska et al., 1994; Steinman & Zimmerman, 2004; Wills, Gibbons, Gerrard, Murrey, & Brody, 2003; Wills, Yaeger, & Sandy, 2003), predominantly Caucasian students (Flor & Knapp, 2001; Kochanska et al., 1994; Okagaki & Bevis, 1999), and/or African-American youth in regular educational settings (Brody & Flor, 1998; Steinman & Zimmerman, 2004).

Given the literature reviewed and the research questions of interest, our hypotheses are as follows:

Hypothesis 1: A high degree of maternal authoritative parenting will be associated with high levels of academic achievement and self-regulation, as well as low levels of risk behaviors.

Hypothesis 2: High levels of individual religiosity will also be associated with increased academic achievement, enhanced self-regulation, and decreased risk behaviors.

Hypothesis 3: The combination of high maternal authoritative parenting and high parental religiosity will have a unique effect on academic achievement, self-regulation, and risk behaviors.

Hypothesis 4: Parental religiosity will only be predictive of student religiosity when maternal authoritative parenting is high.

Method

Participants

Eighty-five students (30 males, 55 females) from a small, private, Seventh-Day Adventist, historically Black college in the Southern United States were selected from college enrollment data and agreed to participate in the study. While selection was random, it was intentionally stratified to include a proportion of students from each class level (21.4% freshmen, 16.7% sophomores, 27.4% juniors, and 34.5% seniors). The sample was 93% African-American, 1% Caucasian, 1% Hispanic, and 5% “mixed” or “other.” The majority of participants were Seventh-Day Adventists (86%), and the remaining 13% listed other religions (e.g. Baptist, Episcopalian). The majority of the sample (64.7%) came from dual parent households, while 25.9% came from single-parent households. The average parental income, as reported by the student participants, was between \$25,000 and \$34,999, with the median falling between \$35,000 and \$49,999.

Procedure

Participants were asked to attend two 1-h, small-group meetings approximately three weeks apart for group survey data collection. Meetings were held in common areas within dormitories or in a community hall within the church on campus. After giving informed consent, participants were given the surveys for that day and were provided instructions as to how to complete the forms. Consent was also given at that time for researchers to access student academic records.

Measures

Religiosity

Participant religious orientation was measured using the Intrinsic/Extrinsic Religious Scale (I/E-R; Gorsuch & McPherson, 1989). The I/E-R is a revised version of the Religious Orientation Scale (ROS; Allport & Ross, 1967). The intrinsic scale consists of eight items on a 5-point Likert scale ranging from strongly disagree to strongly agree, describing the extent to which an individual’s religious beliefs are internalized. The extrinsic scale consists of six items and describes the extent to which an individual’s religious beliefs are externally based and motivated. Cronbach α were .74 for intrinsic scale and .63 for the extrinsic scale.

Students also completed 38 selected items from the Valuegenesis Youth Survey (Search Institute, 1989). This survey has been administered by the Seventh-Day Adventist community to

examine the development of faith maturity and denominational loyalty in students attending parochial schools in the Adventist educational system. This instrument has been used successfully in other studies (Dudley, 1993; Weinbender & Rossignol, 1996). Items were arranged on a 7-point Likert scale, with 1 meaning never true and 7 meaning always true. Examples of the statements made on this measure were “I like to worship and pray with others” and “I feel God’s presence in my relationships with other people.” This measure provided a measure of student religiosity, with higher scores meaning the student was more religious. The observed α for this sample was .89.

Perceived parental religiosity was measured by taking the product of two student items on their survey. Students were asked to rate how religious their parents (1 = not religious, 2 = somewhat religious, 3 = deeply religious) were and how often their parents attended church (1 = never, 2 = less than once a month, 3 = once a month, 4 = two to three times a month, 5 = about once a week, 6 = several times week). Multiplying these two responses resulted in the formation of a parental religiosity variable.

Perceived maternal parenting style

Perceived maternal parenting style was measured via the Parental Authority Questionnaire (PAQ; Buri, 1991). The PAQ is a retrospective student report measure of recalled parenting practices which consists of 30 items measured on a 5-point Likert scale. Ten items each relate to maternal authoritativeness, authoritarianism, and permissiveness. The PAQ provides a continuous measure of each of these parenting styles. Reliability for the six PAQ scales ranges from .75 to .85 for maternal styles and .74 to .87 for paternal styles (Buri, 1991). The observed internal consistency reliabilities for the maternal scales used here were .83 for authoritarianism, .86 for authoritativeness, and .66 for permissiveness.

Self-regulation

Three measures of self-regulation were derived from the Motivated Strategies for Learning Questionnaire (MSLQ; Pintrich & De Groot, 1990; Pintrich, Smith, Garcia, & McKeachie, 1991). The MSLQ consists of student self-report items measured on a 7-point Likert scale. The standardized subscales used were:

- (a) Academic self-regulation: 12 items pertaining to metacognitive self-regulation (assessing the extent to which a student monitors his/her thought processes) and four items pertaining to effort regulation (assessing the extent to which an individual monitors and adjusts his/her effort to a task) were combined to represent overall academic self-regulation with larger number indicating better self-regulation ($\alpha = .70$).
- (b) Regulation of the academic environment: eight items pertaining to how well an individual structures his/her learning environment (i.e. time management skills, quiet study area, consistent study schedule, etc.) ($\alpha = .78$).
- (c) Study skills: 19 items tapping the extent to which an individual thinks critically about his/her work, elaborates upon learned material, organizes course work, and goes over difficult material ($\alpha = .90$).

Risk behavior

Participants completed the Multiple Problem Behavior Index (MPBI; Jessor & Jessor, 1977). The MPBI examines three areas of adolescent behavior: problem drinking, delinquent-type behavior, and use of drugs. Variables were combined and recoded to yield scores for the following: frequency of marijuana smoking, frequency of other drug use, alcohol use, minor behavior problems (lying, fighting, skipping school), major behavior problems (stealing, shoplifting, damaging property), tobacco smoking, and an overall total behavior problems that was the sum of the minor and major behavior problem scales. Additionally, participants answered an item regarding feelings of depression in the last month (not at all, once in a while, some of the time, most of the time, all of the time) (Valuegenesis Youth Survey; Search Institute, 1989, 1990). An overall risk behavior composite was calculated by summing the composites from the MPBI and the item from the Valuegenesis survey.

Academic achievement

Academic achievement was represented by the cumulative GPA for each student at the end of the semester during which the students completed the surveys. Students consented to researcher access to their academic record prior to survey completion.

Results

Preliminary demographics

We examined student and family demographic information and their relationships with the major variables used in the study, with the results are summarized in Table 1. Gender was found to be related to academic self-regulation, $t(83) = -2.31$, $p < .05$, and overall risk behavior, $t(80) = 2.26$, $p < .05$, such that females tended to be more self-regulated and to engage in fewer risky behaviors than males. There were no differences in any of the constructs across religious denomination or family income. Family composition (two parents vs. other) was associated with student religiosity, $t(83) = 2.38$, $p < .05$, intrinsic religious orientation, $t(83) = 2.54$, $p < .05$, and parental religiosity, $t(83) = 2.96$, $p < .05$, such that students from two parent households were more religious than students from single-parent or guardian households, as were their parents. No other variable of interest was related to family structure.

Hypothesis 1: the relationships of maternal parenting to academic achievement, self-regulation, and risk behavior

Table 2 illustrates the bivariate correlations of all measures used in our analyses. Maternal authoritative parenting was positively associated with academic achievement and study skills, but was not significantly associated with risk behaviors. Maternal authoritarian parenting was actually negatively associated with study skills, such that the more a student perceives his/her parent to be authoritarian, the poorer his/her academic study skills. Maternal permissiveness was also negatively associated with study skills, as well as negatively associated with academic

Table 1
Means, standard deviations, and preliminary analyses.

	Mean (S.D.)	Male mean (S.D.)	Female mean (S.D.)	Gender <i>t</i> -value	Two-parent family mean (S.D.)	Single-parent family mean (S.D.)	Family composition <i>t</i> -value
Academic achievement	2.86 (.62)	2.74 (.71)	2.93 (.55)	−1.36	2.91 (.65)	2.76 (.52)	1.04
Overall risk behavior	13.49 (7.94)	16.33 (9.75)	11.88 (6.24)	2.26*	13.53 (7.60)	13.40 (8.80)	.07
Academic self-regulation	.01 (1.00)	−.32 (.93)	.19 (1.00)	−2.31*	.14 (1.02)	−.26 (.93)	1.74
Regulation of environment	−.01 (1.00)	−.04 (.94)	.00 (1.04)	−.19	.07 (1.03)	−.18 (.94)	1.04
Study skills	.00 (1.01)	.03 (.81)	−.01 (1.11)	.18	.05 (1.04)	−.09 (.94)	.56
Student religiosity	4.85 (.65)	4.80 (.71)	4.88 (.62)	−.54	4.95 (.70)	4.65 (.47)	2.38*
Parental religiosity	14.25 (3.87)	13.73 (3.88)	14.55 (3.87)	−.92	15.16 (3.30)	12.37 (4.33)	2.96*
Intrinsic religious orientation	32.76 (5.07)	32.47 (5.15)	32.93 (5.07)	−.40	33.70 (5.00)	30.78 (4.73)	2.54*
Extrinsic religious orientation	16.67 (3.81)	15.93 (4.48)	17.07 (3.36)	−1.22	17.07 (3.99)	15.81 (3.32)	1.42
Authoritative parenting	36.61 (7.98)	35.45 (7.23)	37.24 (8.36)	−.98	36.84 (8.12)	36.15 (7.82)	.37
Authoritarian parenting	34.92 (7.41)	36.55 (6.93)	34.04 (7.57)	1.49	34.48 (7.38)	35.81 (7.51)	−.77
Permissive parenting	20.54 (5.61)	20.62 (5.21)	20.50 (5.86)	.09	20.29 (5.46)	21.07 (5.99)	−.60

* $p < .05$.

self-regulation. It is also interesting to note that maternal permissive parenting is related to decreased intrinsic religion and increased extrinsic religion.

Hypothesis 2: the relationships of religiosity to academic achievement, self-regulation, and risk behavior

Student religiosity was positively associated with academic achievement, academic self-regulation, environmental regulation, study skills, and intrinsic religious orientation (see Table 2). Student religiosity was also negatively associated with risk behaviors, such that the more religious a student reports being, the fewer risk behaviors he/she tends to engage in.

Intrinsic religious orientation was associated with higher academic achievement, better study skills, and decreased risk behaviors. Not surprisingly, as intrinsic religious orientation increases, extrinsic religious orientation decreases. Extrinsic religious orientation is also negatively associated with study skills. In addition, increased parental religiosity was positively associated with increased academic achievement, but was not associated with any self-regulation variables or risk behavior.

Table 2
Zero-order correlations of measures used.

	1	2	3	4	5	6	7	8	9	10	11	12
1 Academic achievement												
2 Overall risk behavior	-.37**											
3 Academic self-regulation	.34**	-.13										
4 Regulation of environment	.10	-.07	.00									
5 Study skills	.03	-.06	.00	.00								
6 Student religiosity	.19 ⁺	-.42**	.29**	.20 ⁺	.44**							
7 Parental religiosity	.20 ⁺	-.06	.15	.14	-.07	.08						
8 Intrinsic religious orientation	.31**	-.37**	.18	.07	.35**	.63**	.11					
9 Extrinsic religious orientation	-.11	.09	.08	.04	-.20 ⁺	-.12	-.01	-.20 ⁺				
10 Authoritative parenting	.18 ⁺	-.14	.09	.10	.28**	.15	.14	.02	.03			
11 Authoritarian parenting	-.10	.08	-.04	-.04	-.38**	-.06	-.01	-.04	.11	-.42**		
12 Permissive parenting	-.11	-.02	-.28*	-.02	.20 ⁺	-.04	-.09	-.21 ⁺	.22*	.15	-.24*	

⁺ $p < .10$; * $p < .05$; ** $p < .01$.

Hypotheses 3 and 4: the interactive effects of maternal authoritative parenting and parental religiosity on academic achievement, self-regulation, and risk behavior

In order to test the hypotheses that the combination of maternal authoritative parenting and parent religiosity will uniquely predict academic achievement, self-regulation, risk behaviors, and student religiosity over and above the main effects of each, a series of moderated regressions were performed. The main effects of maternal authoritative parenting and parent religiosity were entered into the first step of a hierarchical regression, with the interaction term (authoritative parenting \times parent religiosity) entered in the second step. We examined the change in R^2 , as well as the standardized β weights associated with the interaction term. Academic achievement, academic self-regulation, regulation of the study environment, study skills, and student religiosity were each examined in this manner. The only significant interaction seen was for student religiosity, such that high levels of maternal authoritative parenting and high levels of parent religiosity predicted increased levels of student religiosity, $\beta = .24$, $t(82) = 2.23$, $p < .05$, $\Delta R^2 = .06$, $\Delta F(1, 78) = 4.99$, $p < .05$. This finding is interesting in that neither the main effect for mother's authoritative parenting nor parent religiosity significantly predicted student religiosity ($\beta = .13$ and $.09$, respectively, $p > .25$). This suggests that parent religiosity is only associated with student religiosity when one's mother is perceived as highly authoritative.

Discussion

The purpose of this study was to examine relationships between maternal parenting style, parental religiosity, student religiosity and intrinsic religion, self-regulation, academic achievement, and risk behaviors within a sample of African-American parochial college students. Although some of these variables have been explored individually among younger students (Ball et al., 2003; Brody & Flor, 1998; Kochanska et al., 1994; Steinman & Zimmerman, 2004; Wills, Gibbons, et al., 2003; Wills, Yaeger, & Sandy, 2003) and among predominantly Caucasian

students (Flor & Knapp, 2001; Kochanska et al., 1994; Okagaki & Bevis, 1999), the combination of these factors and the role they may play in African-American parochial college settings represent a novel contribution to the literature. Religiously affiliated, historically Black colleges play a critical role in fostering the academic and career development of many African-American youth (Kane, 1994; The College Fund/UNCF Annual Report, 1996). Central to the mission of such institutions, and likely included in the goals of many parents for their children, is that students will be highly and intrinsically religious, that students will refrain from disallowed risky behaviors, that they will be motivated and self-regulated learners, and that they will ultimately do well in school. The present study offers new data relevant to these issues.

The first hypothesis, regarding maternal authoritative parenting and its associations with academic achievement, self-regulation, and risk behaviors, was partially supported. Previous research has shown that the authoritative parenting style is closely associated with academic competence and decreased risk behaviors, at least for Caucasian youth (Baumrind, 1989; Dornbusch et al., 1987; Patoek-Peckham et al., 2001; Steinberg et al., 1992). While there was no association with risk, there was a significant positive association between maternal authoritative parenting and study skills for African-American youth attending parochial colleges, as well. Also, students tended to perform better academically if they perceived their mother as highly authoritative. It is also important to note that highly authoritarian maternal parenting was actually associated with poorer academic skills. As the primary distinction between authoritative and authoritarian parenting is in the level of warmth and responsiveness shown to the child, these findings support the notion that a high degree of maternal psychological control can actually be counterproductive for an individual's development. These are important findings as they are consistent with previous research with primarily Caucasian children and younger adolescents.

The second hypothesis presented was largely supported. The level of an individual's self-reported religiosity, as well as the extent to which these religious beliefs are internalized, seem to potentially be functioning as a promoting factor of desirable outcomes and a protective factor against negative outcomes. This is an important and encouraging finding to parochial college administrators as religious commitment is an important educational objective in such settings. To know that students perform better academically when they have a strong intrinsic religious orientation is supportive of the notion that religious beliefs are relevant in one's everyday life. This finding is consistent with previous findings using a largely middle-aged sample ($M = 51.9$ years) that point out the important role that religious internalization plays in the development of competence and achievement (Hathaway & Pargament, 1990).

The third hypothesis, regarding the multiplicative effect of high maternal authoritative parenting and parental religiosity, was not supported. It appears that, while associations are seen at the bivariate level, there were no significant interaction effects to be seen. Additional analyses revealed the same set of null findings for the interactions between parental religiosity and authoritarian and permissive parenting. It is possible that, in regards to academic achievement, self-regulation, and risk behaviors, the effects of parenting style and parental religiosity are independent of one another. This is not the case for student religiosity, such that hypothesis four was largely supported. The relationships between parental religiosity and authoritative parenting and student religiosity were null at the bivariate level, but in situations of high parental religiosity and high authoritative parenting, student religiosity tends to be high. It appears that authoritative parenting, although not directly linked with increased religiosity among African-American youth,

as suggested by Giesbrecht (1995), is still important as a facilitative condition for the transmission of parental religious values to children when parental religiosity is high. This same interaction was not seen for authoritarian and permissive parenting. This finding is consistent with previous research that suggests the use of an authoritarian parenting style is associated with a failure to foster internalization of parental values (Grusec & Goodnow, 1994).

The present study makes numerous contributions to the literature by providing data on an important and understudied population of youth – namely, African-American parochial college students, and by bringing together a number of different constructs (self-regulation, at-risk behavior, religiosity, intrinsic religion, and parenting style) that have typically only been explored individually or in pairs in the past (Brody & Flor, 1998; Patock-Peckham et al., 2001; Steinberg et al., 1992). This study suggests that religion has an important role to play in the transmission of values and behavioral standards for such youth, and that the larger context of parenting may also be important within this population.

There are several limitations of the current study that could be addressed in future research. The focus here on a fairly small and homogenous sample of African-American, Seventh-Day Adventist college student sample begs for replication in future research with larger and more diverse samples of youth. Future research should also attempt to move the observed results beyond a strictly student, self-report design. It would be advantageous to collect data directly from parents, in regard to their religiosity and parenting style. This data should also be collected for both mothers and fathers, in order to observe any unique associations that might be present across the gender of the parents. Lastly, it is important to keep in mind that the findings discussed in this paper were correlational in nature, such that the directionality of the observed relationships cannot be determined. Future longitudinal or cross-lag designs can be used to provide support for causal mechanisms among the data.

References

- Allport, G. W., & Ross, M. (1967). Personal religious orientation and prejudice. *Journal of Personality and Social Psychology*, 5, 432–443.
- Aubrey, L. A., Brown, J. M., & Miller, W. A. (1994). Psychometric properties of the self-regulation questionnaire (SRQ). (Abstract). *Alcoholism: Clinical and Experimental Research*, 18, 429A.
- Ball, J., Armistead, L., & Austin, B. J. (2003). The relationship between religiosity and adjustment among African-American, female, urban adolescents. *Journal of Adolescence*, 26, 431–446.
- Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology Monographs*, 4, 1–102.
- Baumrind, D. (1989). Rearing competent children. In W. Damon (Ed.), *Child development today and tomorrow* (pp. 349–378). San Francisco, CA: Jossey-Bass.
- Boekaerts, M. (1996). Self-regulated learning and the junction of cognition and motivation. *European Psychologist*, 1, 100–112.
- Brody, G. H., & Flor, D. L. (1998). Maternal resources, parenting practices, and child competence in rural, single-parent African American families. *Child Development*, 69, 803–816.
- Brody, G. H., & Ge, X. (2001). Linking parenting processes and psychological functioning and alcohol use during early adolescence. *Journal of Family Psychology*, 15, 82–94.
- Brody, G. H., Stoneman, Z., & Flor, D. (1996). Parental religiosity family processes, and youth competence in rural, two-parent African American families. *Developmental Psychology*, 32, 696–706.
- Brown, J. M., Miller, W. R., & Lawendowski, L. A. (1999). The self-regulation questionnaire. In L. VandeCreek, & T. L. Jackson (Eds.), *Innovations in clinical practice, Vol. 17* (pp. 281–292). Sarasota, FL: Professional Resource Exchange.

- Buri, J. R. (1991). Parental Authority Questionnaire. *Journal of Personality Assessment*, 57, 110–119.
- Buzzelli, G. A. (1993). Morality in context: a sociocultural approach to enhancing young children's moral development. *Child & Youth Care Forum*, 22, 375–386.
- Byrnes, J. P., Miller, D. C., & Reynolds, M. (1999). Learning to make good decisions: a self-regulation perspective. *Child Development*, 70, 1121–1140.
- Chao, R. K. (2001). Extending research on the consequences of parenting style for Chinese Americans and European Americans. *Child Development*, 72, 1832–1843.
- Deci, E. L. (1980). *The psychology of self-determination*. Lexington, MA: D.C. Heath and Company.
- Deci, E. L., Vallerand, R. J., Pelletier, L. G., & Ryan, M. R. (1991). Motivation and education: the self-determination perspective. *Educational Psychologist*, 26, 325–346.
- Dornbusch, S. M., Ritter, P. L., Leiderman, P. H., Roberts, D. F., & Fraleigh, M. J. (1987). The relation of parenting style to adolescent school performance. *Child Development*, 56, 1244–1257.
- Dudley, R. (1993). Indicators of commitment to the church: a longitudinal study of church-affiliated youth. *Adolescence*, 28, 21–28.
- Dumestre, M. J. (1995). Post-fundamentalism and the Christian intentional learning community. *Religious Education*, 90, 190–206.
- Ellison, C. G., & Sherkat, D. E. (1993). Obedience and autonomy: religion and parental values reconsidered. *Journal for the Scientific Study of Religion*, 32, 313–329.
- Erickson, J. A. (1992). Adolescent religious development and commitment: a structural equation model of the role of family, peer group, and educational influences. *Journal for the Scientific Study of Religion*, 31, 131–152.
- Feldman, S. S., & Elliott, G. R. (Eds.). (1993). *At the threshold: The developing adolescent*. Cambridge, MA: Harvard University Press.
- Finkelstein, J. S., Donenberg, G. R., & Martinovich, Z. (2001). Maternal control and adolescent depression: ethnic differences among clinically referred girls. *Journal of Youth and Adolescence*, 30, 155–171.
- Flor, D. L., & Knapp, N. F. (2001). Transmission and transaction: predicting adolescent's internalization of parental religious values. *Journal of Family Psychology*, 15, 627–645.
- Giesbrecht, N. (1995). Parenting styles and adolescent religious commitment. *Journal of Psychology and Christianity*, 14, 228–238.
- Gorsuch, R. L., & McPherson, S. E. (1989). Intrinsic/extrinsic measurement: I/E-revised and single-item scales. *Journal for the Scientific Study of Religion*, 28, 348–354.
- Grolnick, W. S., & Ryan, R. M. (1989). Parent styles associated with children's self-regulation and competence in school. *Journal of Educational Psychology*, 81, 143–154.
- Grusec, J. E., & Goodnow, J. J. (1994). Impact of parental discipline methods on the child's internalization of values: a reconceptualization of current points of view. *Developmental Psychology*, 30, 4–19.
- Haerich, P. (1992). Premarital sexual permissiveness and religious orientation: a preliminary investigation. *Journal for the Scientific Study of Religion*, 31, 361–365.
- Hathaway, W. L., & Pargament, K. I. (1990). Intrinsic religiousness, religious coping and psychosocial competence: a covariance structure analysis. *Journal for the Scientific Study of Religion*, 29, 423–441.
- Jessor, R., & Jessor, S. L. (1977). *Problem behavior and psychosocial development: A longitudinal study of youth*. New York: Academic Press.
- Jeynes, W. H. (2003). The effects of Black and Hispanic 12th graders living in intact families and being religious on their academic achievement. *Urban Education*, 38, 35–57.
- Jones, D. J., Forehand, R., & Beach, S. R. H. (2000). Maternal and paternal parenting during adolescence: forecasting early adult psychosocial adjustment. *Adolescence*, 35, 513–530.
- Juang, L. P., & Silbereisen, R. K. (1999). Supportive parenting and adolescent adjustment across time in former East and West Germany. *Journal of Adolescence*, 22, 719–736.
- Kane, T. J. (1994). *Race, college attendance and college completion*. (Tech. Rep. No 143). Washington, DC/Cambridge, MA: Brookings Institution/Harvard University, Kennedy School of Government.
- Kochanska, G. (1994). Beyond cognition: expanding the search for the early roots of internalization and conscience. *Developmental Psychology*, 30, 20–22.
- Kochanska, G., Coy, K. C., & Murray, K. T. (2001). The development of self-regulation in the first four years of life. *Child Development*, 72, 1091–1111.

- Kochanska, G., DeVet, K., Goldman, M., Murray, K., & Putnam, S. P. (1994). Maternal reports of conscience development and temperament in young children. *Child Development, 65*, 852–868.
- Lindner-Gunnoe, M., Hetherington, E. M., & Reiss, D. (1999). Parental religiosity, parenting style, and adolescent social responsibility. *Journal of Early Adolescence, 19*, 199–225.
- Maccoby, E., & Martin, J. (1983). Socialization in the context of the family: parent–child interaction. In E. M. Hetherington (Ed.), *Socialization, personality, and social development*. In Mussen, P. H. (Ed.), *Handbook of child psychology, Vol. 4* (pp. 1–101). New York: Wiley.
- Markstrom-Adams, C., & Smith, M. (1996). Identity formation and religious orientation among high school students from the United States and Canada. *Journal of Adolescence, 19*, 247–261.
- Mason, H. O., & Butler, S. T. (2004). The effects of parenting styles on child behavioral outcomes. In *Poster presented at the APA annual convention*, Honolulu, HI.
- Miller, D. C., & Byrnes, J. P. (2001). Adolescents' decision making in social situations: a self-regulation perspective. *Applied Developmental Psychology, 22*, 237–256.
- Morrison, E. F., Rimm-Kaufman, S., & Pianta, R. C. (2003). A longitudinal study of mother–child interactions at school entry and social and academic outcomes in middle school. *Journal of School Psychology, 41*, 185–200.
- Novak, S. P., & Clayton, R. R. (2001). The influence of school environment and self-regulation on transitions between stages of cigarette smoking: a multilevel analysis. *Health Psychology, 20*, 196–207.
- Nucci, L., & Turiel, E. (1993). God's word, religious rules, and their relation to Christian and Jewish children's concepts of morality. *Child Development, 64*, 1475–1491.
- Okagaki, L., & Bevis, C. (1999). Transmission of religious values: relations between parents' and daughters. *The Journal of Genetic Psychology, 160*, 303–318.
- Ozorak, E. W. (1987). The development of religious beliefs and commitment in adolescence. (Doctoral dissertation, Harvard University). *Dissertation Abstracts International, 48*, Z5053.
- Patock-Peckham, J. A., Cheong, J., Balhorn, M. E., & Nagoshi, C. T. (2001). A social learning perspective: a model of parenting styles, self-regulation, perceived drinking control, and alcohol use and problems. *Alcoholism: Clinical and Experimental Research, 25*, 1284–1292.
- Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology, 82*, 33–40.
- Pintrich, P. R., Smith, D. A., Garcia, T., & McKeachie, W. J. (1991). *A manual for the use of the motivated strategies for learning questionnaire (MSLQ)*. Ann Arbor, MI: NCRIPAL, The University of Michigan.
- Reitman, D., Rhode, P. C., Hupp, S. D. A., & Altobello, C. (2002). Development and validation of the Parental Authority Questionnaire-Revised. *Journal of Psychopathology & Behavioral Assessment, 24*, 119–127.
- Rohrkemper, M. M. (1989). Self-regulated learning and academic achievement: a Vygotskian view. In B. J. Zimmerman, & D. H. Schunk (Eds.), *Self-regulated learning and academic achievement: Theory, research, and practice* (pp. 143–167). New York: Springer.
- Ryan, R. M., Rigby, S., & King, K. (1993). Two types of religious internalization and their relations to religious orientations and mental health. *Journal of Personality and Social Psychology, 65*, 586–596.
- Sabatelli, R. M., & Mazor, A. (1985). Differentiation, individuation, and identity formation: the integration of family system and individual developmental perspectives. *Adolescence, 79*, 619–633.
- Schunk, D. H., & Zimmerman, B. J. (1994). *Self-regulation of learning and performance: Issues and educational applications*. Hillsdale, NJ: Erlbaum.
- Search Institute. (1989). *Administrative manual for the Valuegenesis Test Project*. Minneapolis, MN.
- Search Institute. (1990, October). *A study of the influence of family, church, and school on the faith, values and commitment of Adventist youth*. (Valuegenesis Report 1). Minneapolis, MN: Author.
- Shek, D. T. L., Lee, T. Y., & Chan, L. K. (1998). Perceptions of parenting styles and parent–adolescent conflict in adolescents with low academic achievement in Hong Kong. *Social Behavior & Personality, 26*, 89–99.
- Steinberg, L., Lamborn, S. D., Darling, N., Mounts, N. S., & Dornbusch, S. M. (1994). Over-time changes in adjustment and competence among adolescents from authoritative, authoritarian, indulgent, and neglectful families. *Child Development, 65*, 754–770.
- Steinberg, L., Lamborn, S. D., Dornbush, S. M., & Darling, N. (1992). Impact of parenting practices on adolescent achievement: authoritative parenting, school involvement, and encouragement to succeed. *Child Development, 63*, 1266–1288.

- Steinman, K. J., & Zimmerman, M. A. (2004). Religious activity and risk behavior among African-American adolescents: concurrent and developmental effects. *American Journal of Community Psychology*, 33, 151–161.
- The College Fund/UNCF Annual Report. (1996). *Leadership for America's future*. Fairfax, VA: Author.
- Walker, K. L., & Dixon, V. (2002). Spirituality and academic performance among African-American college students. *Journal of Black Psychology*, 28, 107–121.
- Weinbender, M. L. M., & Rossignol, A. M. (1996). Lifestyle and risk of premature sexual activity in a high school population of Seventh-Day Adventists: Valuegenesis 1989. *Adolescence*, 31, 265–281.
- Wills, T. A., DuHamel, K., & Vaccaro, D. (1995). Activity and mood temperament as predictors of adolescent substance use: test of a self-regulation mediational model. *Journal of Personality and Social Psychology*, 68, 901–916.
- Wills, T. A., Gibbons, F. X., Gerrard, M., Murrey, V. M., & Brody, G. H. (2003). Family communication and religiosity related to substance use and sexual behavior in early adolescence: a test for pathways through self-control and prototype perceptions. *Psychology of Addictive Behaviors*, 17, 312–323.
- Wills, T. A., Yaeger, A. M., & Sandy, J. M. (2003). Buffering effect of religiosity for adolescent substance use. *Psychology of Addictive Behaviors*, 17, 24–31.
- Wolters, C. A. (1998). Self-regulated learning and college student's regulation of motivation. *Journal of Educational Psychology*, 90, 224–235.
- Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology*, 81, 329–339.