“A ME DIS”: A STUDY OF JAMAICAN ADOLESCENT IDENTITY CONSTRUCTION AND ITS RELATIONS WITH ACADEMIC, PSYCHOLOGICAL, AND BEHAVIORAL FUNCTIONING.

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A Dissertation

Submitted to the Graduate College of Bowling Green
State University in partial fulfillment of
the requirements for the degree of

DOCTOR OF PHILOSPPHY

August 2006

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ABSTRACT

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Although the idea of identity construction from component parts into an integrated whole was theorized decades ago by Erickson (1968), it has only recently begun to be studied. Susan Harter's extensive work on the construction of the self attests to the fact that adolescents do perceive and evaluate themselves differently in different domains of life, and that these self-representations differ substantially from early to late adolescence (e.g., Harter, 1999). However, most of the research in this area has tended to focus on adolescents' self-evaluations (i.e., How *good* am I?) instead of valence-free adolescent self-descriptions (i.e., *Who* am I?). Not only is more research on adolescent self-descriptions warranted, but there also needs to be more research done on how adolescents actually go about integrating their multiple "selves" into whole identities, or "theories of self," as defined by Marcia (1987).

Therefore, the present study aimed to add to the current body of knowledge on adolescent identity construction by investigating how Jamaican adolescents comparatively valued six major life domains (academic, social, sexual, religious, family, and friends). A new graphical measure of relative domain valuing, the "Identity Pie", was adapted from Cowan, Cowan and colleagues work (e.g., Cowan & Cowan, 1988) and validated for use in this study. The relations between particular self-identification profiles and life adjustment were explored in addition to gender and developmental stage differences.

Overall, Jamaican adolescents reported comparable levels of domain valuing, and academic, psychological and behavioral functioning to U.S. adolescents. The Identity Pie proved

to be a valid measure of domain valuing and identity construction. The total sample valued life domains in the following order: schoolwork/family > religion/friends > sports > dating. Many expected gender and grade differences emerged; however, the similarities across gender and grade were overwhelming. Adolescents of both genders and all grade levels valued schoolwork and family among the highest domains and sports and dating among the lowest. Further, results revealed that relatively high valuing of the dating domain and having a strong peer-orientation were related to negative academic, psychological and behavioral outcomes. Implications and limitations of the current findings are discussed with special consideration of cross-cultural issues, and suggestions are made for future research in this area.

Overall, this study provides a detailed sketch of the Jamaican adolescent, which can be interesting and informative to anyone working with this population.

This dissertation is dedicated to the future of my beloved Jamaica,

‘Land of Wood and Water.’

Deo duce quaere optima.

ACKNOWLEDGEMENTS

I am indebted to my advisor, Dr. Eric Dubow, for his research mentorship over the years. His enthusiasm for my research interests in Jamaican youth was highly motivating, and his collaborative working style contributed to smooth and steady research progress. I also thank Drs. Dara Musher-Eizenman, Valerie Simon, and Jacquelyn Cuneen for their involvement in my committee, constructive feedback, and encouraging words.

I express gratitude to my family and friends for their ever-present prayers and support. I am especially appreciative of the support of my fiancé, Rolin Oliver Ferguson. I could not have achieved this goal without his care and selfless love during periods of high stress, mental exhaustion, and cranky moods. Most of all, his love for Jamaica and personal investment in her future served to inspire and refuel me many times along this journey.

Finally, many thanks to the Jamaican educators and students who allowed me into their classrooms and lives to understand them better -- I am continually impressed by your resilience and zest for life.

The completion of this dissertation was supported financially by funds provided by the Bowling Green State University Department of Psychology.

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INTRODUCTION[1]

The adolescent experience is something that we can all relate to in some way, having been adolescents at one point ourselves. It is not difficult to recall the excitement of experiencing new things, the desire to fit in with the peer group, the clashes with parents, or the process of coming to understand oneself. The concept of adolescence as a time of transition between childhood and adulthood is generally recognized across most cultures, but its features and expression vary. For example, the socially prescribed length and function of adolescence differ around the globe, as well as the degree to which adolescence is considered a distinct developmental period (e.g., Brown, Larson, & Saraswathi, 2002; Schlegel, 1995).

Western psychology views adolescence as a defined developmental period characterized by rapid change and growth occurring simultaneously in many different domains of life. Among the demands of adolescence, identity construction is one of the most prominent psychological goals according to Erik Erickson's theory of psychosocial development (Erickson, 1950, 1968, 1982). This widely accepted theory holds that identity formation is the major psychosocial developmental task of this life stage which challenges adolescents to integrate experiences from many domains of life into a coherent representation of the self: a self-identity. Much subsequent research including that of prominent researchers Jacqueline Eccles and Susan Harter has built on Erickson's (1968) central idea.

In the Western world, identity construction is a topic of inherent interest to those interacting with adolescents because identity confusion is such a salient part of the teenage experience. The personal identities that adolescents construct are likely to be related to the life domains that they value. Major adolescent life domains include the academic (grades, future orientation, career); social (youth culture, sports, extra-curricular activities, peer popularity,

[1] "A Me Dis" is Jamaican Patios for "This is I."

platonic friendships); sexual (physical attractiveness, romantic relationships, sexual activity); familial (bonds with family, activities done with family); and religious (private and public spirituality, morals) (e.g., Eccles, 1999; Rice, 1992; Wigfield, Eccles, & Pintrich, 1996). Research suggests that adolescents do not think of themselves solely in relation to any single life domain (e.g., either academic *or* social); rather, it is more likely that they identify with several domains to varying degrees (e.g., Harter, 1999). For example, imagine that an adolescent's identity is like a pie and each slice represents personal identification with a particular life domain. Life domains which the adolescent values more highly should constitute larger slices in his/her "Identity Pie" than life domains of lesser value to the adolescent. Further, the process of adolescent identity construction from various life domains is likely to be influenced by adolescent developmental stage (i.e., early, middle, or late adolescence). Different life domains may be more salient or more highly valued at various points in adolescence due to cognitive or pubertal maturity level.

Amongst all the life domains from which adolescents may choose to construct their identity, the academic domain is of particular importance because of the long-term implications that education has for adult livelihood. Parents, educators, and researchers alike have long been interested in factors that motivate adolescents to achieve academically. How adolescents value the academic domain relative to other life domains is related to their level of academic achievement (e.g., Eccles, Adler, Futterman, Goff, Kaczala, Meece, Midgley, 1983). It is also possible that the higher the value an adolescent places on the academic domain, the more important this domain will be to his/her personal identity; and stronger identification with the academic domain may, in turn, influence higher academic achievement.

Adolescent psychological well-being is another concern for parents, educators, psychologists, and the society in general. How is an adolescent's identity construction related to his or her psychological well-being? Are different identity profiles associated with better or worse outcomes?

Finally, it is also interesting to consider how the process of adolescent identity construction differs cross-nationally and cross-culturally. The majority of the research focusing on adolescent identity development, adolescent self-representations, and domain valuing has been done in North America. Therefore, international research is needed to answer questions of universality of the theories and research findings identified in North American populations. This study will examine these issues in a Jamaican adolescent population.

To further explore these issues, the remainder of this paper unfolds as follows. First there will be a review of adolescent identity development and domain valuing. Next, available research and theory from six major adolescent life domains (academic, social [encompassing friends and sports], family, religion, and dating) will be reviewed in the U.S. and Jamaican populations. Finally, based on the review of the literature, detailed aims and specific hypotheses of the current study will be outlined.

General Overview of Adolescent Development

"The trouble with the juvenile is not that he is not as yet a man, but that he is no longer a child." *~(Esar, 1968, p. 12)*

Though adolescence was once considered by the society at large, including the scientific community, to be a period of intense "storm and stress" (Hall, 1904), multitudinous research has shown that for most adolescents, it is not intensely tumultuous or conflictual (for a review, see Steinberg, 2001). Nevertheless, there are challenges which arise from the sheer number of

significant changes that onset at this age and may result in positive (e.g., identity integration) and negative (e.g., lowered self-esteem, lowered academic motivation, and poorer behavior) outcomes. Great biological (onset of puberty), psychological (development of competence and autonomy), cognitive (increased self-awareness, perspective-taking, abstract and hypothetical thinking), social (increased social comparison and competition, increased social relatedness with non-family members), and educational changes (movement from primary to secondary school to the work world) occur during adolescence (for reviews see, Eccles, 1999, & Wigfield et al., 1996).

Youth enter adolescence after exiting middle childhood, a stage of development in which establishing competence and personal esteem are most important. The Eriksonian challenge in middle childhood is to achieve "industry" by demonstrating competence or mastery in various life domains. According to Ericksonian theory, if these skills are not mastered, children acquire a sense of inferiority. For example, children who do not see themselves in elementary school as competent in various domains including the academic and social report more depression, social isolation, anger, and aggression (Eccles, 1999). Successful experiences and mastery in multiple domains lead to healthy positive views of competence and self. It is at this point that youth enter early adolescence, equipped either with a sense of competence, success, mastery, and self-esteem, or a sense of inferiority and failure.

The specific developmental tasks and basic psychological needs during adolescence change from the early to late stages of adolescence. However, the basic backdrop remains the same: there are ongoing biological and cognitive maturational processes at work throughout the entire adolescent period. Adolescents enter puberty and experience growth spurts, sex characteristics development, increased libido, and the genesis of fertility, with girls maturing

faster than boys between the ages of ten and fourteen. Cognitive changes during adolescence include the solidification of formal operational thinking, the ability to think abstractly about complicated problems, and the ability to consider the hypothetical. During this time, adolescents also gain an increased ability to self-reflect, and develop deeper self-understanding, stronger self-concept, as well as a greater interest in and understanding of others' internal psychological characteristics (Wigfield et al., 1996).

On entering adolescence, the primary Ericksonian psychosocial developmental task becomes the achievement of identity. Considering all the changes that occur during adolescence combined with the adolescent's looming entry into the adult world, it is not difficult to see why role confusion would be a threat to successful passage through this life stage. Identity may simply be defined as "a theory one has about oneself [which is] not necessarily wholly conscious" (Marcia, 1987, p. 165). In his influential book "*Identity: Youth and Crisis*," Erickson (1968) traces the origin of the terms "identity" and "identity crisis" back to a veteran's rehabilitation clinic during the Second World War where many patients were described as having "lost a sense of personal sameness and historical continuity," which was thought to be a failing of ego control (Erickson, 1968, p.17). Here arose the use of the term "ego identity." This same ego disturbance and inner identity confusion was later recognized in youth. Erickson conceptualized this curious youth phenomenon as "a war within themselves" and believed this turmoil to be normative to adolescence and young adulthood (Erickson, 1968, p.17).

Self-representations, also called self-perceptions or self-descriptions appear to be constructs highly related to identity, if not merely different names for the same construct. For example, as stated earlier, Marcia (1987) defined identity as a theory of self. Identity is, however, conceptually distinct from *self-concept*, which is by-and-large discussed in the psychological

literature as the degree to which the self is evaluated positively or negatively. A theoretical distinction has in the past been made (though it is not usually observed in practice) between valence-free self-descriptions (i.e., *Who* I am) and self-evaluations, like self-concept, which require judgment and comparison (i.e., How *good* I am). Whereas some researchers, like Harter (1999), argue that "the distinction between self-descriptions and self-evaluation is rather arbitrary" (p. 4), because self-descriptions rarely, if ever, exist without self-evaluation, it is clear that there is a conceptual distinction between the two, and that both are worthy of study. The present study will focus on self-descriptions (i.e., *Who* I am), partially because there has been a relative overabundance of research on self-evaluation (which includes the self-concept literature), and partially because it is inherently interesting to know how adolescents think about themselves in general.

In his writings, Erickson alluded to the necessity of identity construction through the "integration of the identity elements," (Erickson, 1968, p. 128) which I have coined "identity slices." Subsequent theorists and researchers have agreed with the idea of integrating several identity pieces to create an integrated whole. For example, Honess and Yardley (1987) summed up this sentiment by saying that in adolescence, there is a "newly emerging capacity to construct rather than to simply discover meaning" (p. 9). Similarly, the psychosocial perspective on adolescent identity formation focuses on balancing aspects of the self with the social environment and involves the "integration of 'selves or identifications'" (Swanson, Spencer, & Petersen, 1998, p.21). Johnson, Roberts, and Worell (1999) specifically investigated adolescent female development and agreed with the notion that adolescent girls have multiple identities and selves derived from the multiple contexts in which they live their lives such as family, ethnicity/culture/race, gender and sexuality, peers, and schools. Adolescence is also the period of

life during which adolescents examine their goals and values from childhood and decide which ones to keep within their identities and which ones to abandon. Harter's work also acknowledges that the capacity for construction of the self from multiple domains is particularly salient during adolescence:

> "During adolescence, newfound cognitive capabilities support the creation of multiple selves in different relational contexts. With regard to integration, cognitive abilities that emerge across the course of development allow the individual to construct higher-order generalizations about the self" (Harter, 1999, p. 9).

Susan Harter's extensive research suggests that in early adolescence, there is a "proliferation of selves that vary as a function of social context" (Harter, 1999, p. 66). Due to limited cognitive abilities, however, these different selves are somewhat over-differentiated and the early adolescent is typically unable to integrate all these pieces into a cohesive self-portrait. In middle adolescence, self-representations increase in number and become more nuanced as adolescents develop representations of themselves primarily in relation to different significant others. There is typically conflict, confusion, and distress associated with this stage due to middle adolescents' inability to reconcile their many, seemingly contradictory selves/roles. In late adolescence, "attributes reflecting personal beliefs, values and standards become more internalized" and adolescents can construct meaningful integrations of multiple "selves" into whole self-portraits. (Harter, 1999, p. 85).

Adolescent values are an interpretive lens through which to view adolescent identity construction from various life domains. This lens highlights the role of values as opposed to competencies. Graham and Taylor (2001) explained that "unlike beliefs about ability (Can I do it?), values have to do with desires and preferences (Do I want it?), and are more concerned with

perceived importance, attractiveness, or usefulness of achievement activities" (Graham & Taylor, 2001, p. 122). They added that "values have motivational significance because they guide thoughts, feelings, and behavior; for example, what we judge to be important, attractive, or useful influences the activities we choose, how we evaluate other people and events, and our worldviews" (Graham & Taylor, 2001, p. 122). Wigfield and Eccles (2000) emphasize that task values are very important to achievement in any particular domain; they are equally important as beliefs about competence. "Task values are crucial…because they impact individuals' choice. Individuals who feel competent at a given activity may not engage in it because it has no value for them" (Wigfield & Eccles, 2000, p. 94). Based on research findings, Eccles and colleagues have identified the following central aspects of values: attainment value (importance), intrinsic value (enjoyment), usefulness, interest, and cost (time or emotional costs) (e.g., Wigfield & Eccles, 2000). Adolescent valuing is domain-specific (Eccles & Wigfield, 1995; Eccles, 1993).

Much research has been done on how adolescents in the United States comparatively value different life domains. For early to middle adolescents, physical appearance, social activities, and social acceptance take precedence over academics, and these domains are strongly related to self-worth (Wigfield et al.,1996). In early to middle adolescence, as compared with late adolescence, social goals are more important than academic ones. In support of Wigfield et al.'s (1996) findings, Eme, Maisiak, & Goodale, 1979) found that high school students rated the most important adolescent problems in the following order: physical appearance (#1), careers (#2), grades (#3), parents (#6), peers (#8), and extra-curricular activities (#12). Similarly, Brown and Theobald (1998) found that North American Mid-Western adolescents valued different aspects of school in the following order: 1) peer relations; 2) academics; 3) other, and 4) extra-curricular. Additionally, results from a 1992 Gallup survey of adolescent youth suggest that although the

majority of adolescents reported that religion is important to them (80%), religion may rank lowest amongst the major life domains for adolescents. On this survey, adolescents rated friends, home, school, music, and television as more influential on their generation than religion (Gallup & Bezilla, 1992).

As reported earlier, there are some gender differences in what domains early to middle adolescents value. Eccles and colleagues completed three longitudinal studies which showed that males and females rank ordered their competence in various domains differently and in gender-stereotyped directions (Eccles, Barber, Jozefowicz, Malenchuk & Vida, 1999). In regard to valuing, boys rate sports as more important than do girls, whereas girls rate social activities and academics, specifically, English, as more important (Wigfield et al., 1996). The relational domain is a major focus in identity development for girls specifically (Johnson et al., 1999). There were very similar gender differences in adolescents' perceptions of self-competence. Early adolescent girls tended to rate themselves as competent primarily in academics, specifically English, then social activities and least in sports. On the other hand, boys rated their self-competence highest in sports, then academics, specifically, math, then social activities, and English (Eccles et al., 1999). In late adolescence (10^{th} -11^{th} grade), the gender differences in self-competence and task valuing of English, sports, and math (in that order) increase as compared to earlier adolescence (7^{th}-10^{th} grade) (Eccles et al., 1999).

Cross-cultural research on adolescent revelas some similarities to and differences relative to U.S. adolescents. For example, a 1985 survey of 15-19 year old Canadian teens showed that peer relationships was the number one value of these teens, as well as their greatest source of enjoyment and social support, which supports U.S. findings (Bennet & Westera, 1994). Research with Caribbean adolescents has shown that they also hold some similar values to U.S.

adolescents; however, they appear to value domains that are consistent with a collectivistic worldview more highly. For example, Richardson (1999) found that among Jamaican youth, family loyalty and parental obedience are highly valued, reflecting values of familism and respect. Another area of cultural dissimilarity lies in the gender differences in Caribbean adolescents' values. Caribbean adolescent males value aloneness and prestige more highly and tend to feel in control of their destinies more than do girls. Caribbean girls, on the other hand, value sincerity, academic/occupational excellence, social desirability, concern for others, and freedom to express creativity more than do their male counterparts. However, similar to North American girls, Caribbean girls have a stronger relational orientation than do boys (Richardson, 1999).

In sum, youth experience multitudinal internal (e.g., biological, cognitive) and external (e.g., educational, social) changes as they enter adolescence. The main psychosocial task of this life stage is identity formation. Psychological theory suggests that this process may be conceptualized as the construction of an Identity Pie from relative levels of identification with different life domains. Caribbean adolescents appear to be more similar to, than different from, U.S. adolescents in general development; however, they may value the family domain more highly than U.S. adolescents due to a stronger cultural group orientation, and there is also some evidence of cultural variation in gender differences of domain valuing.

This review will not turn to a more detailed examination of each life domain.

The Academic Domain of Adolescence

"An adolescent is a girl who occasionally interrupts her telephone conversations with a little homework." *~(Esar, 1968, p. 798)*

The academic domain is an important one during adolescence, though it is not necessarily important to every adolescent. By the time youth become adolescents, they will typically have spent most of their waking life engaged in academic related activities and will, therefore, already have been heavily influenced by this domain. The academic domain deserves attention not just because of adolescents' vast exposure to it, but also because adolescents' grades and academic careers will shape their future occupational goals, and vice versa. In fact, Swanson et al. (1998) proposed that the "academic experience provides a framework for determining one's worth in the larger society" (p.36). Grades are a marker of competence and achievement in the academic domain; hence, they are usually of great concern to parents and educators of adolescents. Although it may be easy for adults to value the academic domain with the privilege of life experience and maturity, it is interesting to investigate whether adolescents themselves value or identify with this domain and what the implications of such identification (for the lack thereof) may be for their functioning.

Research shows that adolescents do identify with the academic domain, but to varying extents, and this identification does have implications for life adjustment (e.g., Roberts & Petersen, 1992). First, the degree of adolescents' identification with the academic domain has implications for adolescents' perceived social standing. Roberts and Petersen (1992) studied the longitudinal relationship between academic achievement and social self-image during early adolescence with middle to upper-middle class U.S. adolescents and found that over the transition from 6^{th} to 7^{th} grade, academically-orientated students (as compared with socially- or

athletically-oriented) received larger boosts in social self-image from high achievement. On the other hand, students who were socially- or athletically-oriented with average or low GPAs experienced larger gains in social self-image over the 6th to 7th grade transition. The authors concluded that whereas there seem to be psychological incentives for the pursuit of academic excellence for academically self-identified students, "there are psychological disincentives [for high achievement]…among young adolescents who are oriented toward nonacademic pursuits such as athletics or popularity with peers" (p. 216).

Second, adolescents' identification with the academic domain also has implications for adolescent mental health. Research shows that there are positive correlations among adolescents' academic competence beliefs, academic values, school grades, and mental health (e.g, Eccles et al., 1999; Roeser, Eccles & Freedman-Doan, 1999; Roeser, Eccles, & Strobel, 1998). It is currently thought that there is a bidirectional relation between academic achievement and self-concept, beginning in middle school, at least for White North American adolescents (Wigfield et al., 1996). (It is noteworthy that some studies suggest that academic competence is much less important to African-American adolescents' self-worth and that academic competence can actually work against one's social acceptance.) Supporting these findings that academic identity is related to psychological functioning, Roeser et al. (1999) conducted a 10-year longitudinal study with primarily White, middle-class elementary through high school students and found that there were "distinct patterns of academic functioning and mental health" (p. 139). Using person cluster analytic techniques, the authors identified four major groups of adolescents with respect to academic functioning and mental health: a well-adjusted group with good grades and mental health, a poor academic motivation group with good mental health, a poor mental health group with good grades, and a multiple problems group with poor grades and mental health.

Girls were found to be slightly over-represented in the well-adjusted group and slightly under-represented in the multiple problems group. This group clustering in eighth grade had significant predictive ability for students' outcomes the following year after the high school transition to ninth grade. Academic GPA decreased across the high school transition mostly in the poor motivation and poor mental health groups. This, overall, presents strong evidence that academic orientation and psychological functioning are related. Similarly, Barber, Eccles, and Stone (2001) found that students who identified with a "brain" profile based on their peer activities (as opposed to jock, princess or criminal) had a more positive psychological adjustment.

There are some interesting ethnic differences in valuing and achievement in the academic domain have been found, especially between European-American and African-American students. For European-American adolescents, low expectations and low self-concept precede academic failure, but apparently this not the case for African-American students, whose academic self confidence is higher than White students' although their grades are lower (see Graham, 1994 for a review). African-American students have been hypothesized to devalue academic effort and school achievement for a few reasons: 1) sociology suggests that there are cultural barriers to success such as racial inequality which sends the message that their effort is unrelated to their outcomes in the society; 2) anthropology suggests that African-American students have an identity conflict in which they purposefully devalue values of the mainstream society to protect their own social identity; and 3) social psychology offers that devaluing the academic domain is a self-esteem protection mechanism (Graham & Taylor, 2001). An important caveat to this general finding that African-American adolescents devalue academics is that low income African-American adolescent girls, but not boys, have been found to value academic success by choosing high-achieving role models (e.g., Graham & Taylor, 2001). These

researchers found that among White, Latino, and African-American students of the same age, socioeconomic status, and grade levels, girls, irrespective of ethnicity, were least likely to choose low achievers as their models. In addition, whereas Latino and African-American boys were most likely to choose low achievers as their model, White boys were most likely to choose high achievers. Finally, that study also suggests that this gender difference becomes more salient with increasing age: older boys endorsed more low achieving role models.

Cross-national research with Black Jamaicans reveals that academic self-concept (i.e., personal identification with academic goals) is positively related to academic achievement, although the direction of this effect is unknown (e.g., Evans, 1999). Similar to African-American students, Jamaican adolescent girls have significantly higher achieving role models than boys and also report having more academic social support and more positive educational attitudes (Anderson, 2003; Evans, 1999; Samms-Vaughan, 2000). There is mixed evidence as to whether there is a gender gap in academic achievement; some large scale studies have found that there is, whereas Anderson's (2003) study, which focused exclusively on middle-class Jamaican adolescents in a traditional high school, found that there was not.

In sum, adolescent identification with the academic domain has been found to be related to adolescent psychological well-being. Notable ethnic differences in academic competence beliefs have been found within the U.S. Overall, low academic self-competence is related to low academic achievement for Caucasian-Americans, but not for African-Americans, and there are various explanations for why that might be the case. For Caribbean adolescents, academic identification is related to academic achievement. Additionally, Caribbean adolescent girls have been found to have higher achieving role models, higher levels of academic social support and more positive educational attitudes than adolescent Caribbean boys. The latter findings are

somewhat similar to findings among African-Americans but somewhat different from findings among European-American adolescents.

The Social Domain of Adolescence

"The only way to tie down a teenager is with a telephone cord."

~(Esar, 1968, p. 798)

The social domain of adolescent experience may include platonic friendships, popularity with peers , participation in organized extra-curricular activities (e.g., sports), and general participation in the youth culture (e.g., fashion). Peer relationships rank very highly on adolescents' priority list; prior U.S. research shows that they typically value this domain more highly than others (e.g., Brown & Theobald, 1998; Wigfield et al., 1996). There is evidence that the positive experiences of friendship positively affect several aspects of development, including psychological and socio-emotional well-being. For example, Crosnoe, Cavanaugh and Elder (2003) found that adolescents who had friends who enjoyed school and had high academic achievement had fewer academic problems than adolescents whose friends were less academically oriented. Conversely, negative friendship quality has been linked to detrimental outcomes including poor academic achievement and behavior problems (e.g., Burk & Laursen, 2005). For example, in a longitudinal analysis of Oregonian boys, Poulin, Dishion, and Haas (1999) found that "boys identified as antisocial in childhood showed poor-quality friendships at age 13-14 years and boys who were highly delinquent at age 13-14 years also reported low levels of relationship quality" (p. 42). Further, these researchers reported that the delinquency of these 13-14 year old boys (i.e., those with poor quality friendships and high levels of delinquency) escalated in subsequent years.

In regard to the formation of adolescent friendships, it has been widely found that “birds of a feather flock together.” That is, adolescents tend to have friends who are similar to them in many ways, including in identity status, academic achievement, sexual behavior, and delinquency (e.g., Akers, Jones, & Coyl, 1998; Billy, Rodgers, & Udry, 1984; Bradley, 1979; Urberg, Degirmencioglu, & Tolson, 1998). In regard to the direction of the relationship between friend choice and life adjustment, research tends to favor a bidirectional explanation (e.g., Akers et al., 1998).

Brown, Way, and Duff (1999) pointed out that there are gender differences in Caucasian-American adolescent friendships. For example, Caucasian middle-class suburban North American adolescent girls, as compared to boys, spend more time with their friends, have smaller groups of friends, have more open and intimate relationships, and expect to receive more kindness, loyalty, commitment, and empathy. Nevertheless, it is also clear that boys, especially African-Americans, also value and seek out intimate peer friendships. For example, in a qualitative study of friendship patterns among urban U.S. boys, Way and Pahl (1999) found that boys either had or desired friendships which involved disclosing feelings, secrets, and problems.

The extent of adolescents’ orientation towards peers can be problematic in its extreme form. Previous U. S. research has shown that adolescents with an extreme peer-orientation can be more poorly adjusted than those with moderate peer-orientations (e.g., Dornbusch, Carlsmith, Bushwall, Ritter, Liederman, Hastorf, & Gross, 1985). Fuligni and Eccles (1993) reported that an extreme peer-orientation may be related to an adolescents’ sense of powerlessness in the parent-child relationship, which relates to negative life adjustment outcomes.

The social domain of adolescents’ lives extends beyond peer relationships. Estimates of adolescent participation in at least one extra-curricular activity range from approximately 70% to

79% for White middle-class North American youth (Brown & Theobald, 1998; DeMoulin, 2002). The most common extra-curricular activities of these adolescents included athletic teams, religious groups, music groups, leadership organizations, service organizations, and programs of youth-oriented agencies such as 4-H, Scouts, and the YMCA. Demoulin (2002) found that males tended to be significantly more involved in athletics and music, whereas females were more involved in service organizations.

It has been debated whether extra-curricular participation impacts academic or social adjustment in adolescence. Some studies have shown that any type of activity involvement is related to completing more years of education and an increased likelihood of graduation from college (e.g., Barber et al., 2001). Others have found that students who participate in extra-curricular activities have higher educational expectations but do not necessarily perform significantly better academically (e.g., Brown & Theobald, 1998). Guest and Schneider's (2003) recent study found that activity alone does not necessarily predict higher grades; achievement is also dependent on socioeconomic status and the domain with which students primarily self-identify. In this study, only students from lower and middle class schools, where less than half the students matriculated into 4-year colleges, and who self-identified as athletic, achieved higher grades and aspired to higher educational levels (Guest & Schneider, 2003).

Barber et al.'s (2001) study supported these general findings. This longitudinal study identified four peer activity identities: the brain, jock, princess, and criminal in order to predict long-term adjustment. Results showed that extra-curricular involvement was an important predictor of pro-social activity involvement such as church attendance and volunteer community work, and predicted lower substance use and higher self-esteem. Involvement in sports predicted positive educational and occupational outcomes 8 years later, but higher rates of drinking.

Notably, having a brain identity was related to more positive psychological adjustment on nearly all measures. In general, psychological adjustment was more closely tied to an "identity" rather than to activity participation, although, the two appeared to be highly correlated with each other.

Sports participation is one of the most, if not *the* most, prominent extra-curricular activities. Using the National Educational Longitudinal Study (NELS) 1988 database at the grade 10 follow-up, Jordan (2000) found that 21% of 10^{th} grade North American students were participating in team sports and 15% in individual sports. International research on several continents including North America reveals that a large number of adolescent boys picture their ideal man as an athlete (Stiles, Gibbons, Sebben, & Wiley, 1999). These researchers hypothesize that this could be due to the adolescents' exposure to professional American sports. For American adolescent males, Stiles et al. (1999) found that the motivation behind this idealization of athletes encompasses wanting to be well-known, wanting to be admired, and to gain money and status.

Adolescent sports participation has benefits and costs (e.g., Eccles & Barber, 1999). The benefits include the development of leadership skills, cooperativeness, teamwork, self-discipline, coping skills in success and failure, respect for authority, competitiveness, and self-confidence. Children also learn self-evaluation, peer comparison, and healthy competition, which facilitate self-esteem. Finally, sports facilitate socialization and relationship development with peers and family. However, some of the risks of sports participation include repeated failure, exposure to criticism, poor role models, peer ostracism, and overambitious internal and external pressures to perform, all of which may lower self-esteem. (Stryer, Tofler, & Lapchick, 1998).

The relation between sports participation and academic achievement is similar to that of extra-curricular activities in general. There is a "small but consistently positive effect of sports

participation on academic achievement" (Jordan, 2000, p. 64). Specifically, Jordan (2000) found that sports participation in both team and individual sports (except for the African-American team) predicted GPA, general self-concept, and academic self-confidence after controlling social variables.

In sum, the psychological literature presents consistent evidence that adolescent friendships and peer groups are strongly related to several axes of adolescent outcomes, and there is likely to be a bidirectional relationship between the types of friends adolescents choose and their own life adjustment. There is mixed evidence for the effects of adolescent extra-curricular involvement on adolescent outcomes. U.S. research suggests that extra-curricular involvement (and sports participation specifically) is mildly positively related to academic achievement and/or other related constructs such as educational expectations, and this effect may be moderated by an adolescent's identity profile (i.e., academic versus athletic).

No literature on Jamaican adolescents' attitudes towards peer relationships or sports could be located; therefore, study hypotheses will be based on U.S. research.

The Domain of Romantic Relationships and Dating

"Adolescence is the period when girls stop making faces at boys and start making eyes."

~(Esar, 1968, p. 12)

Romance and sexuality are normal parts of adolescence. Florsheim (2003), editor of the book *Adolescent Romantic Relationships and Sexual Behavior*, states that "adolescent romantic relationships play an important role in shaping the general course of development during adolescence" (p. 3). It is important to note that most research done in this area has been done with heterosexual adolescents. This research suggests that adolescent romantic relationships affect several developmental tasks including the following: (1) identity development (in that

romantic experiences affect one's sense of self in this domain); (2) relationship development with family and peers (adolescents tend to spend less time with family and more with romantic attachments, which can create conflict); (3) sexual development (romantic relationships are the primary context in which adolescents learn about sexuality); and (5) academic development (romantic relationships may positively [e.g., encouraging achievement and providing support] or negatively [e.g., sexual behavior] affect academic development) (Florsheim, 2003). In regard to the prevalence of romantic relationships among American youth, the first wave of the National Longitudinal Study of Adolescent Health (1995) found that 65% of twelve to eighteen year olds had experienced a romantic relationship in the past 18 months. This effect was stronger for older adolescents and the median duration of these relationships was 14 months. There were negligible sex differences and racial differences in this finding with the exceptions of Asian-Americans who reported significantly fewer relationships (Florsheim, 2003).

Adolescent sexuality begins to develop at the onset of puberty. The junior high (12-14 years) can be a sexually confusing time because of the onset of puberty, the transition between school types and increased exposure to sexually mature adolescents. In high school (14-18 years), sexuality becomes more "serious, intense, exciting, and risky" because of "peer competition and [a] quest for intimacy" (Berkovitz, 1985, p. 39). The National Survey of Family Growth (1998) collated estimates of American female teenagers' participation in premarital sexual activity between 1971 and 1988, finding that approximately one in four fifteen year olds to four in five nineteen year olds had engaged in sexual intercourse (Forrest & Singh, 1990). Some ethnic differences were found; African-American girls reported a higher level of sexual activity than did European- and Latina-American adolescent girls, but this decreased over the years, whereas the rate for other ethnic groups increased. For U.S. adolescent boys, the National

Survey of Adolescent Males (1988) showed the following levels of participation in sexual intercourse: 5% at 13 years, 11% at 14 years, 21% at 15 years, 58% at 17 years, and 79% at 19 years. African-American adolescent boys reported an earlier age of first intercourse as compared to European- and Latino-American adolescent boys (Sonenstein, Pleck & Ku, 1991).

Some evidence suggests that levels of overall adolescent sexual activity for Caribbean adolescents are comparable to those in the U.S. Williams (2003) in a survey of adolescent sexual practices among Jamaican youth found that 47% of 13 - 17 year-olds reported having engaged in sexual intercourse. This percentage was significantly different for boys and girls: 73% of the boys and 23% of the girls reported having had sex. This reported gender difference in sexual activity may reflect different societal gender norms for adolescent sexual activity. In the Caribbean, although both genders are susceptible to peer pressure to engage in sexual activity, abstinence is more culturally desirable for females. On the other hand, for males, heterosexual sex was reported to mark a coming of age and to confer dominance and a sense of achievement. Similar to U.S. adolescent, family opinions influence Caribbean adolescents' sexual behavior (Smith, Roofe, Ehiri, Campbell-Forrester, Jolly, & Jolly, 2003).

In sum, romance and sexuality begin to develop noticeably in adolescence due to the onset of puberty. It is normative for adolescents to engage in romantic relationships and sexual activity. Adolescent romantic relationships affect other life domains such as family relationships because as the time spent with romantic partners increases, the time spent with family decreases. Age and male gender were positively correlated with more permissive attitudes towards sex and actual engagement in sexual activity among U.S. and Caribbean adolescents but the strength of this effect may be stronger in the Caribbean due to heavily gender stereotyped sexual behavior norms (Williams, 2003).

It should be notes that despite the moderate rates of sexual activity reported by Jamaican adolescents, traditional (adult) Jamaican culture is fairly closed to the discussion of sexuality. For example, there is minimal sex education in schools, contraceptives such as condoms are rarely, if ever, made available in schools, and parents rarely discuss sex with their children and adolescents.

The Religious Domain of Adolescence

"…Clearly the adolescent looks most fervently for…ideas to have faith in…At the same time, however, the adolescent fears the foolish, all too trusting commitment, and will, paradoxically, express his need for faith in loud and cynical mistrust." ~(Erikson, 1968, p. 128)

The religious domain of adolescent development is not an area that psychologists have commonly researched. Part of the reason for this may be that religious experience has traditionally not been viewed by psychologists as a having a psychological component. The study of the psychology of religion has only recently begun to be taken seriously, and even so, most of the research in this young and promising area has so far been with adults. Another possible reason for the neglect of the religious life domain in adolescence is the general societal impression that modern adolescents are not interested in religion. Current research shows that nothing could be further from the truth: U.S. adolescents overwhelmingly believe in a benevolent higher power and think that religion is very important (Gallup & Bezilla, 1992).

Gallup and Bezilla (1992) published a compendium of surveys on the spiritual beliefs and practices of U.S. teenagers and young adults based on over 500 interviews with a nationally representative sample of adolescents during the 1980s. Contrary to modern myth, results showed that nearly all American youth believe in God or a universal spirit (95%), most of those believing in a personal God (76%), and that God loves them (93%). 80% of adolescents reported that

religion is very important or fairly important and 75% reported that they are at least somewhat trying to follow the teaching of their religion. Only 5% reported that religion is not important at all. Eighty-two percent of teenagers reported having received religious training as a child and the majority of youth reported engaging in private religious activities such as prayer at least occasionally. Active participation in a religious community, however, was endorsed at a much lower level: only 48% of adolescents reported attending church. In general, more non-Caucasians and younger adolescents endorsed these beliefs and practices than Caucasians and older adolescents.

That religion would be important to adolescents is an idea that is consistent with the developmental view of adolescence this paper has promoted: one of identity construction from values. In fact, Erikson's (1968) psychosocial theory posited that identity-establishment, the main task of adolescence, involves developing an ideology, which can occur through the development of moral values and faith. Since then, other researchers and theorists have agreed and elaborated on the process of religious identity development. Wagner (1978) proposed that adolescents experience conflicts with religion because it is a normal "period of questioning or decision making and of forming one's philosophy of life" (p. 350). According to Wagner, as adolescents develop, childhood beliefs may be inadequate to address adolescent problems, and as they differentiate themselves from their parents, they must decide whether to keep or discard their parents' religious beliefs. Hill (1986) agrees with Wagner that religious questioning is a healthy sign in adolescence and that faith develops from a conventional, extrinsic, consensual, immature faith to a post-conventional, intrinsic, committed, mature faith (Hill, 1986). There has been some empirical validation of the theories that religion aids identity development. For example, high intrinsic religiousness and low extrinsic religiousness have been found to be

related to identity achievement, whereas lower church attendance has been found to be related to identity diffusion (e.g., Fulton, 1997; Marcia, 2002; Markstrom, 1999).

Adolescent religious participation has several other positive correlates: self-esteem (e.g., Bagley & Mallick, 1997); lower premarital sexual activity (e.g. Holder, Durnat, Harris, Daniel Obeidallah, & Goodman, 2000); lower drug/alcohol use, lower delinquency rates, and lower suicide risk (Weaver, Samford, Morgan, Lighton, Larson, & Garbarino, 2000). Religious participation has been found to have more psychologically protective effects for non-Caucasian American adolescents (e.g., Gallup & Bezilla, 1992; Weaver et al., 2000).

There is even less information in the psychological literature about the function of religion in the lives of Caribbean adolescents. It is known, however, that religion is highly valued by Caribbean society. Leo-Rhynie (1993) states that "Jamaicans are deeply religious people – they freely admit to the centrality of religious beliefs in the governance of their personal and family lives" (p. 8). In a large-scale survey of eleven to twelve year old Jamaican students, Samms-Vaughan (2001) found that frequent church attendance was positively correlated with academic performance after controlling for socioeconomic status.

In sum, although the religious domain has traditionally been understudied by psychological research, developmental theories predict that ideology and faith development are important features of adolescent identity construction. Consistent with these theories, evidence shows that both U.S. and Caribbean adolescents find the religious domain of life to be important.

The Family Domain of Adolescence

"Parents worry about their adolescent children because they still remember what they used to do during adolescence." *~(Esar, 1968, p. 12)*

There are notable developmental differences in parent-child relationships as youth transition from childhood to adolescence (e.g., Walters & Norrell, 1990). Early adolescents begin to distance themselves from parents in response to their increased desire for autonomy. They instead begin to fill that emotional space with close peers and non-family adult relationships (Eccles, 1999). As a result of these increased goals of peer social interaction and autonomy/identity, levels of parent-adolescent conflict increase relative to conflict levels in parent-child relationships (Dekovic, 1999; Swanson et al., 1998). Parent-adolescent conflict often occurs over both content (the rule) and process (decision/rule making) issues. Research suggests that such conflict is normative, and tends to be more frequent in trivial matters (e.g., physical appearance, chores, music) than in core beliefs and values (e.g., sex, drugs, religion, vocation, politics) (e.g., Dekovic, 1999; Eccles, 1999; Montemayor, 1983; Steinberg, 2001). Research shows that there is actually only a small percentage of families that has high levels of conflict most of the time (e.g., Montemayor, 1983). In spite of the fact that most parent-adolescent conflicts occur over mundane daily issues, evidence suggests that these conflicts are significantly distressing to parents, though, apparently, not to adolescents (Steinberg, 2001). In fact, Silverberg's (1996) research suggest that mothers find such day-to-day conflicts more distressing than do fathers, perhaps because they conventionally fill the caretaker role more often than do fathers.

Parent-adolescent conflict (e.g., content, frequency, intensity) changes over the course of adolescence. In a meta-analysis of 53 studies, Laursen, Coy, and Collins (1998) found that: 1)

conflict rate and total conflict declined from early to middle to late adolescence; 2) negative conflict affect increased from early to middle adolescence (meaning that conflict is less frequent but more heated during middle adolescence); and 3) pubertal maturation was correlated positively with conflict affect, but not rate or level of conflict.

There is less research on parent-adolescent relationships in non-European American adolescents. What is known suggests that parent-child relationships among people of color tend to be somewhat different from European-Americans in some ways and similar to them in others. Parenting style is one area of notable difference. For example, African-American and Asian-American families have been found to be higher in authoritarianism than European-American families. Research overwhelmingly suggests that across cultures, authoritative parenting – characterized by warmth, firmness, and psychological autonomy granting - provides some benefits for adolescents (i.e., higher academic achievement, less depression and anxiety, higher self-reliance and self-esteem, and decreased chance of involvement with delinquent behaviors). Nevertheless, research also shows that the effects of authoritarian parenting are less negative for African-Americans and Asian-Americans than for European Americans. In fact, an authoritative parenting style does *not* enhance adjustment in some domains for African-Americans, such as academic achievement (Steinberg, 2001).

The family domain is as important to Caribbean adolescents as it is to U.S. adolescents, if not moreso. The parenting style among Caribbean families is typically highly authoritarian. As a result of this strong authoritarian style of parenting, parent-child verbal communication is often sparse, except as used for verbal discipline (i.e., to express anger or to give reprimands) (Leo-Rhynie, 1993).

In regard to adolescent values, Richardson (1999) found that among Barbadian adolescents, there was an overwhelming choice to favor their parents' over peers' values (i.e., this result was found in 21 of 24 presented scenarios). As has been found with North American research, Barbadian adolescents were more heavily peer-influenced on aspects of youth culture such as style, music, and other unsubstantial issues. However, they were more heavily parent-influenced on substantial issues such as religion, morals/values (e.g., regarding drugs and sex, keeping laws, academic honesty, money issues) and future orientation (e.g., career) (Richardson, 1999).

There were important gender differences moderating this finding: 1) a higher percentage of girls demonstrated certainty that they would follow parents' advice over peers; 2) boys were significantly more likely than girls to go along with peer values on issues related to sex (opposite sex friendships and engaging in sexual activity) though they were significantly more likely to go along with parents on drug use and drug-related friendships than girls; and 3) girls were significantly more likely than boys to accept parental standards in sexual activities and close family relationships/ activities/ obligations (Richardson, 1999).

Brown and Chevannes (1998) surveyed families in Caribbean communities from three English-speaking Caribbean countries in 1993 and found that there was a cultural attitude of "Tie the heifer, loose the bull" (Guyanese saying), meaning that boys were generally given much more social and sexual freedom but were more closely monitored. These societal gender biases might influence differential levels of parent-adolescent conflict for Caribbean adolescents along gender lines in several domains including social and sexual.

In sum, parent-child relationships change as children become adolescents. As adolescents seek greater autonomy from parents and increased interaction with peers, time spent with the

family decreases and parent-adolescent conflict increases. A low level of parent-adolescent conflict is normative and most conflict arises over mundane issues such as chores. Conflict rates generally decline across the adolescent period and there are many negative outcomes for consistently high-conflict families. Caribbean families tend to be more authoritarian in parenting style and Caribbean adolescents, especially girls, appear to value highly family life.

The Current Study

Overall, there is much more literature on the U.S. adolescent population than the Caribbean adolescent population. This indicates that the psychological literature needs more research on Caribbean adolescent psychological development. Overall, this research suggests that adolescents do value all the major life domains examined (academic, social, sexual, religious and family), and that they value some domains more highly than others (e.g., the social domain tends to be more highly valued than the academic domain, in general).

Although the idea of identity construction from component parts was theorized decades ago, it has not been studied in the fashion suggested in this paper – as an Identity Pie. The closest constructs to this Identity Pie idea in the literature have been Harter's (1999) work in domain specific perceived self-competence and Barber et al.'s (2001) "peer activity identity profile." It could be logically hypothesized that adolescents' pattern of relative domain valuing might be a good proxy for their pattern of personal identification with each of these major life domains. By this logic, adolescents might construct their identity profiles, or "Identity Pies" based upon their relative valuing of these major life domains. This is an interesting hypothesis that has yet to be explored, and the current study proposes the use of a graphical Identity Pie construction technique to examine this hypothesis. Exploring identity formation in this unique way could contribute a novel understanding of how adolescents think about themselves.

This Pie technique has been used in the past by Carolyn and Phillip Cowan and colleagues in their research with new parents' identification with various available life roles such as parent, partner, and worker (e.g., Cowan & Cowan, 1988; Cowan, Cowan, Coie & Coie, 1978). Cowan and Cowan (1988) used this "pie" technique to investigate parents' involvement in each role and their self-satisfaction. They gave participants a page with a circle 4 inches in diameter and instructed them to divide the Pie into sections "so that each section reflected the salience or importance of each aspect of the self, not necessarily the time spent in each role" (Cowan & Cowan, 1988, p. 112). These researchers calculated parental involvement in each role using the degrees of the arc of the circle corresponding to each pie slice. For satisfaction, they compared discrepancies in participants' pies for actual and ideal selves.

A modified version of this Pie technique is ideal for use in the current study for three main reasons. First, Cowan, Cowan, and colleagues have successfully used this technique multiple times to explore self-representations and the importance of multiple roles with which individuals identify. Given that the central thesis of this study is the integration of multiple selves into an integrated whole, this Pie technique seems ideal for measuring general identity construction. Second, this technique is extremely appropriate in that it matches well with the developmental stage of the participants – adolescence. This technique holds the potential to be particularly effective with adolescents because, unlike most measures in psychological research which are word-based (e.g., rating scales), the Identity Pie is graphical. A graphical representation of the self may be a more interesting and understandable way of operationalizing the concept of identity construction for an adolescent sample. The Identity Pie has a third area of uniqueness compared to the existing rating scales measuring domain valuing (i.e., Eccles and Harter), which makes it ideal for use in the current study: unlike the traditional rating scales, the

Identity Pie measures *relative* valuing of life domains, not *absolute* valuing. The design of the Identity Pie forces adolescents to prioritize or rank order their valuing of life domains; if one domain is given a large portion of the pie, the others must necessarily be given smaller portions of the pie. This design intentionally mimics real-life choices adolescents face in investing finite resources (e.g., time and energies) in some areas of life versus others. So, although at first glance, a forced-choice procedure may seem like an artificial experimental manipulation, it is expected to approximate real-life decision-making more closely than its alternative (i.e., rating scales) which requires adolescents to *rate* (not *rank*) their valuing of each domain independent of the others.

Aside from mere curiosity about adolescent development, understanding how adolescents construct their identities could also have implications for their current and future functioning in each of these life domains. More research is also needed to answer question of whether different identity profiles or "Identity Pies" relate to different mental health profiles for adolescents. Of particular interest to those who interact with adolescents is their degree of identification with the academic domain because academic performance is positively related to psychological well-being and future professional success. Is stronger identification with the academic domain always related to positive academic and psychological outcomes or does the level of identification with the other major life domains affect the relation between academic identification and positive outcomes? What is the identity profile of the most academically successful adolescents and the least academically successful adolescents? Because the current psychological literature has not investigated identity construction in this manner, it cannot confidently answer these intriguing questions in the U.S. adolescent population, let alone in other populations.

The literature on Caribbean adolescent psychological development is sparse and warrants much more empirical research to build it. Because there remain may gaps in the research on Jamaican adolescents, this study bases many of its hypotheses on findings with U.S. adolescents. Therefore, support (or the lack thereof) for these hypotheses will indicate areas of potentially interesting cross-cultural differences. Further, cross-cultural research could be very beneficial in identifying the universal and culture-dependent aspects of current adolescent development findings and theories developed in the U.S. Therefore, the aims of the current study are three-fold:

1. First, this study aims to validate the Identity Pie as a novel way of measuring adolescent identity construction via relative life domain valuing. It is hypothesized that the Identity Pie will be significantly and positively correlated with existing measures of domain valuing.
2. Second, this study aims to investigate how Jamaican adolescents construct their identities from the six major life domains – schoolwork, religion, sports, dating, family and friends – by examining the size of the Identity Pies slice each domain will hold relative to the others.
    a. *Overall*: Prior research suggests that adolescents differentially value life domains. Two clear findings have emerged across U.S. studies: 1) the social domain is typically valued most highly; and 2) the academic domain tends to rank second (e.g., Brown & Theobald, 1998; Eme et al., 1979; Wigfield et al., 1996). Therefore, in this study, it is hypothesized that consistent with U.S. adolescents, Jamaican adolescents will value the six life domains differentially with the social domains (i.e., friends and sports) occupying the largest Identity Pie slices and the academic domain occupying the second largest.

b. *Gender Effect:* Jamaican female adolescents have consistently been found to have more positive attitudes towards education, to attend church significantly more frequently, to be more parent-oriented than peer-oriented, and to report lower levels of sexual activity compared with Jamaican male adolescents (e.g., Anderson, 2003; Brown & Chevannes, 1998; Evans, 1999; Richardson, 1999, Samms-Vaughan, 2000). Therefore, it is hypothesized that girls in this study will value the academic, religious and family domains more highly, and the dating domain less highly than will boys. In the absence of research on Jamaican adolescents' attitudes towards sports, boys are expected to value the sports domain more highly than girls based on U.S. findings (e.g., Eccles et al., 1999; Jacobs et al. , 2002; Wigfield et al., 1996). Because Jamaican culture also endorses Western gender-stereotyped roles as evidenced by gender-differentiated high school curricula (e.g. Parry, 2000), it is a reasonable expectation that Jamaican adolescents may conform to these stereotypical gender norms in the sports domain.

c. *Developmental Differences*: Prior research suggests that: 1) the importance of the social domain relative to the academic may decline with age (e.g., Wigfield et al., 1996); 2) adolescents over time distance themselves emotionally from their families (Erickson, 1968); 3) the importance of religion declines somewhat across adolescence (Gallup & Bezilla, 1992); and 4) adolescent participation in sexual activities increases with age (Sonenstein et al., 1991). Therefore, it is hypothesized that younger adolescents will value the social domain more highly (especially in relation to the academic domain), the family and religious domains more highly, and the dating domain less highly than will older adolescents.

3. Third, this study aims to explore how identity construction via domain valuing relates to adolescent functioning.
    a. It is hypothesized that domain valuing will be correlated significantly with adolescents' life adjustment. Two specific predictions are made in regard to the academic domain and one prediction is made in regard to the religion domain. First, Eccles' and colleagues' research suggests that U.S. adolescents are more successful in a life domain if they value that domain more highly (e.g., Eccles, Wigfield, & Schiefele, 1998). Therefore, it is hypothesized that Jamaican adolescents who identify strongly with the schoolwork domain will have higher grades than those who do not. Second, based on Barber et al.'s (2001) research findings that U.S. students who identified strongly with the academic domain had more positive psychological adjustment than other students, it is hypothesized that Jamaican students with larger academic identity pie slices will report greater life satisfaction and fewer depressive symptoms. Finally, based on Samms-Vaughan (2000) findings that church attendance was significantly related to better academic outcomes among Jamaican children and adolescents, it is hypothesized that adolescents in this sample who assign relatively with larger slices religion Identity Pies slices will have higher grades.
    b. U.S. research suggests that adolescents identify themselves with certain profiles such as "brain" or "jock" based on their likes and dislikes (e.g., Barber et al., 2001). Therefore, it is hypothesized that Jamaican adolescents in this study will fall into several distinct profiles or clusters based on their valuing of the six different life domains. In general, clusters are expected to relate to the outcome variables in ways outlined in Hypothesis 3a. That is, if a cluster of highly schoolwork-oriented

Jamaican adolescents emerges, they are expected to have higher grades and life satisfaction, and fewer depressive symptoms and conduct problems. Similarly, if a cluster of highly religion-oriented Jamaican adolescents emerges, they are expected to also have higher grades.

METHOD

Participants and Procedures

Two hundred and forty-six male (*n* = 105) and female (*n* = 141) students from a traditional high school in Kingston, Jamaica participated in this study. The majority of participants was of African descent, of Jamaican citizenship (93.6%), and came from middle-class homes with employed parents/guardians. Students were recruited from grades 7, 9, and 11 and had a mean age of 14.44 years as shown below in Table 1.

Table 1.

Descriptive Statistics on Study Participants

Grade	Number of participants	Mean age (& age range) in years
7	57 (15 males, 42 females)	12.47 (11.17 – 14.83)
9	127 (61males, 66 females)	14.32 (13.00 – 15.17)
11	62 (29 males, 33 females)	16.32 (15.00 – 18.00)
All	246 (105 males, 141 females)	14.44 (11.17 – 18.00)

Two sample recruitment methods were used in order to achieve a maximally representative sample by minimizing self-selection effects that occur with the sole use of parental consent procedures. For the first half of data collection, parental consent forms were sent to parents via their adolescents (n=103). For these adolescents, there was a 34% return rate indicating parental approval for participation in the study and surveys were administered after school with adolescents' assent. During the second half of data collection, parental consent was waived for adolescent participants (n = 143). As is customary in Jamaica, a school official approved the study and gave permission for students to participate contingent upon each student's individual assent. Five male students of this second set refused participation; assenting students completed the surveys during a class period. The survey administration procedure in

both sample recruitment methods was virtually identical with the exception of the time of administration (i.e., class period versus after school). The principal investigator introduced herself, explained the survey purpose and instructions, then remained in the classroom while students completed the questionnaire. The principal investigator also described instructions individually to students who arrived late to testing sessions. For their participation, each student received the chance to win a movie voucher. See Appendix A for the Parental Consent Form and Appendix B for the Student Assent Form.

Analyses were done to examine any differences in study variables between the two methods of administration in this study (i.e., students who gave assent only versus students who received parental consent in addition to giving their assent.) A control was applied for grade level in these analyses because there were more ninth and eleventh graders who gave assent only whereas seventh graders were evenly distributed between both administration methods. Results revealed that there were no significant differences in domain valuing on the Identity Pie except in the family domain, $F(1,211) = 11.94$, $p < .001$. Students who gave their assent only ($\underline{M}$ = 21.31, $\underline{SD}$ = 7.83) assigned significantly larger slices to the family domain than did students who also received parental permission to participate ($\underline{M}$ = 18.17, $\underline{SD}$ = 7.22). This group difference in valuing of the family domain is somewhat counter-intuitive and may not be meaningful. It would be more intuitive to speculate that students who would have been more likely to follow through on delivering the consent forms to their parents might have valued the family domain more highly than those who did not follow-through, or those whose parents denied them permission. Therefore, it is possible that this statistically significant effect is an artifact and does not represent a meaningful difference. For this reason, in addition to the fact that this group

difference in valuing based on recruitment method was detected in only one of the six domains, no attempts will be made to statistically control for this finding.

In addition, recruitment method was not related to demographic variables overall. Neither parental occupational prestige nor the two major types of family structure, which comprised the largest proportion of the sample (80.49%) -- 2-biological parent households and mother-headed households -- was related to the recruitment method used.

However, as expected, significant differences in several outcome variables were found between students in the two sample recruitment procedures. Compared to students who gave their assent only, students who also received parental permission reported higher grade averages, $F(1,211) = 6.50$, $p < .05$; higher self-esteem, $F(1,211) = 6.71$, $p < .05$; greater life satisfaction, $F(1,211) = 9.78$, $p < .05$; and fewer conduct problems, $F(1,211) = 9.59$, $p < .05$. Much previous research with children and adolescents has documented that when parental consent is requested in studies, there are extremely low return rates and the highest risk youth, including low achievers, are disproportionately represented among families that do not return consent forms (e.g., Kearney, Hopkins, Mauss, & Weisheit, 1983; Lueptow, Mueller, Hammes & Master, 1977; Severson & Ary, 1983). Therefore, it was the explicit intent of this study to correct for this common sample selection bias by using both sample recruitment methods to increase its representativeness. Therefore, no statistical control was applied to correct for these group differences in outcomes based on sample recruitment method.

Measures

Demographic information. Adolescents indicated their sex, age, nationality, grade level, and family structure. As proxies for socioeconomic status, adolescents also reported their parents'/guardians' occupations and whether those occupations were professional/managerial/

ownership in nature. The prestige of parents' occupations was coded by two independent raters using Stevens and Hoisington's (1987) coding system. An inter-rater reliability coefficient of 0.94 was achieved. The dichotomous measure of parental ownership/management correlated significantly and positively with the continuous measure of parental occupational prestige, r = .170. Finally, family structure was grouped into three categories: 2 biological parent households (n = 83), biological mother-headed households (n = 115), and other types of household configurations (n = 48) including biological father-headed households, step-families of any kind, and parent-absent households headed by related or non-related guardians. Parents of adolescents from mother-headed households ($\underline{M}$ = 48.31, $\underline{SD}$ = 11.47) had significantly higher occupational prestige than parents of adolescents from 2 biological parent households ($\underline{M}$ = 43.76, $\underline{SD}$ = 10.80), $F(2,216) = 3.60$, $p < .05$.

Identity construction. a. Identity construction via domain valuing was first measured using the Identity Pie. Adolescents were allotted 20 slices (5% of the pie each) with which they constructed Identity Pies by dividing the slices among the six life domains (i.e., family, sports, religion, dating, school, and friends) according to how highly they valued and identified with each domain. Participants had the freedom to represent as many or as few domains in their constructed Identity Pies as well as to determine the relative importance of domains by assigning comparatively more or fewer slices to each domain. Along with the six specified life domains, adolescents also were allowed to assign slices to an "other" domain representing any additional important area(s) of their lives not captured by the six prescribed domains. Although there is substantial research evidence that several of the six selected domains are important to adolescents in general, the addition of the "other" category allowed for some individual and

cultural variability. Domain valuing for each domain was calculated as the percentage of the pie allotted to each domain.

The Identity Pie used in this study was different from the one used by Cowan, Cowan, and colleagues (e.g., Cowan & Cowan, 1988; Cowan, Cowan, Coie & Coie, 1978) in two main ways. First, adolescents chose among domain names (e.g., dating), not roles (e.g., romantic partner) because it might be easier for them to understand or identify with the wording of the former rather than the latter. Second, the current Identity Pie was pre-divided into twenty equal slices, which adolescents assigned to various domains rather than drawing in the slices by hand. This modification was made to decrease the potential measurement error that may be caused by poorly drawn lines.

Although the Pie technique has been used successfully in the past to measure new parents' role identification, it has never before been used to measure adolescent identity construction. Therefore, two well established and validated rating scales also were administered as secondary measures of adolescent values. The correlation between the Identity Pie and these two measures was expected to serve as validation of the Identity Pie technique.

b. The first established values measure consisted of 4-item scales adapted from Eccles et al. (1983) and Wigfield and Eccles' (2000) widely used Usefulness, Importance, and Intrinsic Value Items. These items have been used by Wigfield, Eccles, and colleagues throughout their empirical investigation of the expectancy-values theory, and are, therefore, well validated. Roeser et al. (1999) reported reliabilities on different versions of this scale ranging from .72 to .80. Because Eccles and colleagues described intrinsic value as including interest and enjoyment, in this study, separate items were written to address each aspect. Therefore, each domain scale in this study had 4 items assessing perceived usefulness (e.g., "In general, how useful is what you

learn in your faith?") with response choices ranging from (1) "not at all useful" to (7) "very useful;" importance (e.g., "For me, being good at dating is…") with response choices ranging from (1) "not at all important" to (7) "very important;" interest (e.g., "In general, I find spending time with my family to be…") with response choices ranging from (1) "very boring" to (7) "very interesting;" and enjoyment (e.g., "How much do you enjoy schoolwork?") with response choices ranging from (1) "not at all" to (7) "very much." The mean score of each scale and its internal consistency were calculated. Cronbach's alpha coefficient for all six domains exceeded 0.75. Specifically, the following coefficient alphas were calculated for each domain: schoolwork = 0.75, dating = 0.92, friendship = 0.86, religion = 0.91, sports = 0.93, and family = 0.88.

c. The second well-used values measure employed in this study was the "How Important are Each of These Things to You" subscale from Harter's (1988) Self-Perception Profile for Adolescents. This scale was modified to include the family, religious, and friendship domains which were added to Harter's athletic, academic, and romantic relationship domains. Harter did not report internal consistencies for this scale because there are only 2 items in each domain: a face valid importance item (I) and a reverse-scored importance item (II). For example, for the sports domain, the items were: "Some teenagers think it is important to be good at sports, but other teenagers don't care much about being good at sports," and "Some teenagers don't think that being athletic is important, but other teenagers think that being athletic is important." As outlined by Harter (1988), students first were instructed to read each pair of statements and to choose the one that was more like them, then to rate whether that statement was "sort of like them" or "very much like them." In the present study, responses on items 1 to 6 were scored such that responses endorsing the importance of the domain received higher scores (i.e., sort of true for me = 3; really true for me = 4) and responses endorsing the lack of importance of the domain

received lower scores (i.e., sort of true for me = 2; really true for me = 1). Items 7 to 12 were reverse scored. As a measure of reliability, the two items in each of the six domains were correlated with each other. For all domains except schoolwork, the two items were significantly correlated with each other, and correlated more strongly within domains than across domains ($0.20 < r < 0.59$, $p < .01$). See Table 2 for the corresponding correlation table.

Table 2

Intercorrelations Among Twelve Modified Harter Importance Items

Item	School I	Dating I	Sports I	Religion I	Family I	Friends I
School II	**0.09**	0.01	-0.06	0.11	0.09	0.08
Dating II	0.10	**0.20****	0.06	-0.00	0.13*	0.17**
Sports II	0.08	0.04	**0.58****	0.00	0.10	0.17**
Religion II	0.19**	-0.02	-0.01	**0.47****	0.22*	0.06
Family II	0.16*	0.03	0.04	0.32**	**0.44****	0.18**
Friends II	0.25**	0.06	0.14*	0.04	0.15*	**0.33****

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

The non-significant correlation between the two original Harter items in the schoolwork domain is, perhaps, counter-intuitive. However, it is likely that participants considered School Item I, which discussed intelligence, to be conceptually distinct from School Item II, which addressed schoolwork. For consistency with the remainder of the questionnaire, which used "schoolwork" as the label for the academic domain, the first item on this scale (addressing intelligence) was not used. Therefore, for the academic domain, the modified Harter domain score derives from a single item: "Some teenagers don't think that doing well in school is really important but other teenagers think that doing well in school is important."

d. As a fourth and final measure of the adolescents' relative valuing of the life domains, adolescents were asked to rank how important the five domains were to them from "most important" (1) to "least important" (5).

Adolescent well-being.

a. Depressive symptoms were measured using the Center for Epidemiological Studies Depression Scale (CES-D) developed by Radloff (1977) (reported coefficient alpha = .85 - .87). The internal consistency of this 20-item scale in this study was consistent with previous findings: Cronbach's alpha = 0.84. Adolescents were asked to indicate how often they had experienced several symptoms over the past week, and responses were indicated on a Likert-type scale ranging from 1 (rarely or none of the time; less than 1 day) to 5 (most or all of the time, 5-7 days). Two sample items from this scale were "I was bothered by things that don't usually bother me" and "I felt sad." The wording of a few items was changed to be more culturally understandable to Jamaican adolescents. Items 4, 8, 12, and 16 were reverse scored and the item mean was calculated for each adolescent.

b. Life Satisfaction was measured using the 5-item Satisfaction with Life Scale (SWLS) developed by Diener, Emmons, Larsen, and Griffin (1985) (reported coefficient alpha = .87). Two sample items from this scale were: "In most ways my life is close to my ideal" and "I am satisfied with my life," and these items were scored on a Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree) and item means were computed for each adolescent. The internal consistency of this measure was comparable to previous findings: Cronbach's alpha = 0.82.

c. Conduct problems were measured with the eleven-item Conduct Problems Scale used by Storvoll, & Wichstrom (2003), originally adapted from Olweus' (1989) Scale of Antisocial

Behavior and the National Youth Longitudinal Study in the USA (Windle, 1990). The Conduct Problems scale required adolescents to indicate how many times in the last twelve months they had demonstrated conduct problems including status offenses (e.g., skipping school), property offenses (e.g., vandalism, theft, breaking in to steal), person offenses (e.g., fighting with a weapon) and school-related conduct problems (e.g., swearing at a teacher). Frequency of involvement was rated on a six-point scale: 0 (never), 1 (once), 2 (2-5 times), 3 (6-10 times), 4 (10-50 times), and 5 (more than 50 times) and ratings were averaged to provide item means for each adolescent. For use in the current study, actual dollar value amounts originally written into three items were replaced with labels of “expensive” or “inexpensive” to facilitate cultural translation. Storvoll et al. (2003) did not report Chronbach’s alpha for their use of this scale, however, it demonstrated adequate internal consistency in the current study: Cronbach’s alpha = 0.71.

d. To measure academic achievement, adolescents reported their percent average grade on their most recent set of school-wide exams.

See Appendix C for the adolescent questionnaire.

RESULTS

Overview of Data Analyses

Preliminary analyses. i) Descriptive statistics. Descriptive statistics are presented for all major study variables including the main predictor variable, Identity Pie domain valuing, and the outcome variables: grades, depressive symptoms, life satisfaction, and conduct problems. Intercorrelations among the measures of adolescent adjustment are presented as an index of the validity of these measures with the current sample. Recall that the current sample consisted of 246 adolescents (105 males, 141 females) from predominantly middle-class homes. In addition, it was of interest to see how Jamaican adolescents compared to average U.S. samples on the study variables. Therefore descriptive statistics are also presented for an adolescent U.S. sample on study measures, as available.

ii) Assessing for Covariation Among Demographic Variables and Major Study Variables. Next, correlations among demographic variables (i.e., parent occupational prestige, parental managerial positions, and family structure) and domain valuing were computed. This was done to assess for systematic covariation of any demographic variables with adolescents' Identity Pie construction, which would indicate that such demographic variables should be included as covariates in the repeated-measures analyses to follow.

Main results. Hypothesis 1. Analyses were computed to validate the Identity Pie by correlating the size of adolescents' pie slices (i.e., the percentage of the pie allocated to each domain) with their ratings on corresponding domains of the modified Eccles and Harter scales. In addition, regression analyses were computed to identify the best predictors of Identity Pie valuing among the modified Eccles items in each domain (i.e., usefulness, importance, interest, and enjoyment).

Hypothesis 2. 2 (gender) x 3 (grade) x 6 (domain) repeated-measures ANOVAS and follow-up contrasts were computed to examine systematic differences in Identity Pie domain valuing for the total sample and for each gender and grade level separately. In addition, chi square tests were computed to assess domain valuing using the single-item domain valuing measure included in the survey.

Hypothesis 3. First, grade and gender differences, in outcomes measures. Second, domain valuing on the Identity Pie and the Modified Eccles Scale were correlated with life adjustment outcomes to explore potential relationships among them and to compare the sensitivity of the Identity Pie to the Modified Eccles Scales. Third, K-means cluster analyses were computed to differentiate distinct patterns of Identity Pie domain valuing, then ANOVAs and follow-up contrasts were computed among the emergent clusters to assess for systematic differences among clusters in life adjustment outcomes.

Preliminary analyses

i) Descriptive Statistics. Descriptive statistics for domain valuing as measured by the Identity Pie, Modified Eccles Scale, and Modified Harter Scale are presented in Table 3 for the current sample. Table 4 shows descriptive statistics for the outcome variables (i.e., grades, depression, life satisfaction, and problem behavior). Table 5 compares Jamaican adolescents in the current sample to adolescents in prior US samples on study variables where U.S. data is available.

Table 3

Means and Standard Deviations for Domain Valuing on the Identity Pie, and Modified Eccles and Harter Scales for the Total Sample and Each Grade and Gender Separately

		Identity Pie		Modified Eccles		Modified Harter	
Domain		M	SD	M	SD	M	SD
Overall							
	Family	20.06	7.88	5.88	1.19	3.42	0.75
	Sports	11.50	7.09	5.12	1.61	2.88	0.88
	Religion	17.35	8.78.	5.77	1.26	3.43	0.74
	Dating	8.67	0.30	4.42	1.81	3.21	0.73
	Schoolwork	21.48	7.99	5.15	0.84	3.45	1.01
	Friends	15.40	6.61	6.28	0.91	3.63	0.61
	Other	4.61	7.51	n/a	n/a	n/a	n/a
Males							
	Family	11.21	9.03	5.78	1.21	3.33	0.79
	Sports	12.72	7.47	5.31	1.72	2.95	0.92
	Religion	15.79	9.09	5.49	1.33	3.27	0.76
	Dating	9.81	7.10	4.94	1.65	3.21	0.73
	Schoolwork	20.34	7.01	5.74	0.90	3.34	1.10
	Friends	14.47	6.71	6.29	0.90	3.58	0.66
	Other	4.61	7.94	n/a	n/a	n/a	n/a
Females							
	Family	19.21	6.82	5.45	1.17	3.49	0.71
	Sports	10.60	6.69	4.98	1.52	2.82	0.85
	Religion	18.71	8.32	5.98	1.17	3.56	0.70
	Dating	7.82	5.50	4.03	1.84	3.21	0.74
	Schoolwork	22.32	8.57	6.11	0.75	3.53	0.98
	Friends	16.07	6.48	6.28	0.92	3.66	0.57
	Other	4.64	7.21	n/a	n/a	n/a	n/a
Grade 7							
	Family	20.79	7.89	6.61	0.71	3.73	0.51
	Sports	12.90	7.38	5.30	1.57	3.02	1.57
	Religion	19.04	9.33	6.33	0.98	3.55	0.98
	Dating	5.96	5.04	3.52	1.96	3.21	1.96
	Schoolwork	22.63	9.45	6.58	0.56	3.36	0.56
	Friends	13.16	6.17	6.13	0.98	3.54	0.98
	Other	4.65	7.43	n/a	n/a	n/a	n/a
Grade 9							
	Family	20.60	8.18	5.70	1.29	3.35	0.80
	Sports	12.34	6.98	5.31	1.49	2.91	0.85
	Religion	16.51	8.34	5.71	1.21	3.45	0.75
	Dating	8.97	6.85	4.61	1.81	3.15	0.76
	Schoolwork	21.07	8.11	5.85	0.83	3.48	0.94
	Friends	15.44	6.39	6.27	0.95	3.67	0.57
	Other	4.40	7.61	n/a	n/a	n/a	n/a
Grade 11							
	Family	18.25	7.00	5.61	1.05	3.26	0.73
	Sports	8.42	6.21	4.55	1.77	2.69	0.86
	Religion	17.50	9.04	5.41	1.43	2.69	0.85
	Dating	10.58	5.30	4.86	1.37	3.33	0.63
	Schoolwork	21.25	6.01	5.59	0.76	3.46	1.01
	Friends	17.42	6.92	6.46	0.72	3.60	0.61
	Other	5.08	7.51	n/a	n/a	n/a	n/a

Table 4

Means and Standard Deviations for Outcome Variables for the Total Sample and Each Gender and Grade Level Separately

Outcomes	M	SD
Overall		
% Grade Average	77.47	10.77
Depression	0.77	0.48
Life Satisfaction	4.24	1.44
Problem Behavior	0.16	0.34
Males		
% Grade Average	75.82	10.38
Depression	0.74	0.43
Life Satisfaction	4.31	0.45
Problem Behavior	0.25	1.57
Females		
% Grade Average	78.68	10.93
Depression	0.79	0.51
Life Satisfaction	4.19	1.50
Problem Behavior	0.10	0.20
Grade 7		
% Grade Average	89.50	5.60
Depression	0.75	0.47
Life Satisfaction	4.85	1.42
Problem Behavior	0.08	0.17
Grade 9		
% Grade Average	75.38	8.26
Depression	0.77	0.50
Life Satisfaction	4.10	1.39
Problem Behavior	0.21	0.42
Grade 11		
% Grade Average	69.59	15.00
Depression	0.79	0.45
Life Satisfaction	3.96	1,42
Problem Behavior	0.15	0.23

It is important to note that percentage grades in the Jamaican educational system are typically significantly deflated in comparison to grading in the U.S. For example, in this traditional Jamaican high school, passing grades include A (85-100%), B (70-84%), C (50-69%) and D (40-49%), and E (<40%) is a failing grade. There are no grades of F in this grading system. Therefore, the average 7^{th}, 9^{th}, and 11^{th} grade exam percentages for students in this study (89.50, 75.38, and 69.59, respectively) were A, B, and C, respectively.

Intercorrelations among outcome variables were computed as a validity check for the outcome measures. As would be expected, adolescents' reported depression was correlated

significantly and positively with their conduct problems, r = .176, and significantly and negatively with their life satisfaction, r = -.421. Additionally, adolescents' reported life satisfaction was significantly and positively related to their percent grade averages, r = .214. Because all these correlations are significant and in the expected directions, this was viewed as an index of validity of the outcome measures for this sample.

Table 5

Means and Standard Deviations of Select Study Variables Comparing Jamaican and U.S. Adolescents

	Jamaican Adolescents		U.S. Adolescents	
Domain	M	SD	M	SD
Overall				
Eccles Importance				
Schoolwork	5.15	0.34	5.78	1.17
Sports	5.12	1.61	4.96	n/a
Friends	6.28	0.91	6.14	n/a
Depression	0.77	0.48	0.86	0.49
Life Satisfaction	4.24	1.44	4.70	1.29
Conduct Problems	0.16	0.34	0.91	n/a
Grade Average	B	10.77	B	n/a
Males				
Eccles Importance				
Schoolwork	5.74	0.09	5.87	1.09
Sports	5.31	1.72	n/a	n/a
Friends	6.29	0.90	n/a	n/a
Depression	0.74	0.43	n/a	n/a
Life Satisfaction	4.31	0.45	n/a	n/a
Conduct Problems	0.25	0.44	1.22	n/a
Grade Average	B	10.38	B	n/a
Females				
Eccles Importance				
Schoolwork	6.11	0.75	5.70	1.15
Sports	2.82	0.85	n/a	n/a
Dating	3.21	0.74	n/a	n/a
Depression	0.79	0.51	n/a	n/a
Life Satisfaction	4.19	1.50	n/a	n/a
Conduct Problems	0.10	0.20	0.60	n/a
Grade Average	B	10.93	B	n/a

Note. U.S. data reported here is based on: Eccles, Wigfield, Flanagan, Miller, Reuman, and Yee (1989) – Eccles Importance Items for sports and friends domains; Meece, Wigfield, and Eccles (1990) – Eccles Importance Item for schoolwork domain, and Grade Average; Windle (1990) – Conduct Problems Scale; Radloff (1991) – CES-D; and Diener (1985) – SWLS.

Grade and gender differences in domain valuing are discussed in detail under Hypothesis 2, and grade and gender differences in outcomes are discussed under Hypothesis 3.

ii) Assessing for Covariation Among Demographic Variables and Major Study Variables. For the total sample, neither parental occupational prestige nor parental managerial positions was correlated significantly with domain valuing on the Identity Pie. However, there was a main effect for family structure on adolescent valuing in the schoolwork domain, $F(2, 240) = 5.185$, $p < .01$. Adolescents from two-biological parent households ($\underline{M} = 23.72$, $\underline{SD} = 8.53$) assigned significantly larger slices of their pies to schoolwork than adolescents from mother-headed homes ($\underline{M} = 20.58$, $\underline{SD} = 7.16$), or from other types of households ($\underline{M} = 19.79$, $\underline{SD} = 8.25$). Therefore, in order to avoid systematic bias due to this covariation, family structure was controlled in the subsequent analyses examining valuing in the schoolwork domain.

Demographic variables were generally unrelated to the outcome variables (i.e., grades, depression, and life satisfaction) with the single exception that parental occupational prestige was correlated significantly and positively with adolescents' reported conduct problems, $r = .153$. Once again, to avoid systematic bias due to this covariation of demographic variables with major study variables, parental occupational prestige was controlled in the subsequent analyses containing conduct problems as an outcome variable.

Main Results.

Hypothesis 1: Validation of the Identity Pie. First, based on the covariation found between family structure and valuing in the schoolwork domain, bivariate and partial correlations first were computed between the three measures (i.e., Identity Pie, Modified Eccles Scales, Modified Harter Scale) in the schoolwork domain only. A significant discrepancy between the correlations computed before and after applying the control would suggest that

family structure should be included as a covariate in all the correlations. When compared, the correlation coefficients computed before controlling for family structure were very similar to those computed after controlling for family structure. For example, in the schoolwork domain, for students overall, the correlation between domain valuing on the Identity Pie and the Modified Eccles Scale was 0.316, $p < .01$ before controlling for family structure, and 0.372, $p < .01$ after controlling for family structure. Similarly, in the schoolwork domain, the correlation between the Identity Pie and the Modified Harter Scale was in the same direction before and after applying the control for family structure -- 0.149, $p < .05$ to 0.141, $p < .08$.

It is important to note that the Identity Pie correlated less strongly with the Modified Harter scales (in comparison to the Modified Eccles Scales) in general across different domains. Therefore, the weaker correlation found between the schoolwork valuing on these two measures after controlling for family structure is more likely a reflection of the generally lower level of convergence between the two measures across domains rather than a meaningful consequence of controlling for family structure. For these reasons, it was deemed unnecessary to use partial correlations to control for the effects of family structure at this step of the Identity Pie validation. Rather, simple bivariate correlations were computed.

Within-domain correlations were computed between adolescents' pie slices (i.e., the percentage of the pie allocated to each domain) and their ratings on corresponding domains of the modified Eccles and Harter values scales. See Table 6 for correlations among the three measures within each domain. The strength of these correlations served as a test of the content validity of each domain of the Identity Pie by showing whether adolescents would endorse items on all three scales in a similar direction and to a similar degree.

Table 6

Correlations between Domain Valuing on the Identity Pie and the Modified Eccles and Harter Scales

Scale	Overall	Males	Females	Grade 7	Grade 9	Grade 11
Modified Eccles Scales						
Family domain	0.36**	0.40**	0.35**	0.31*	0.33**	0.52**
Sports domain	0.55**	0.60**	0.48**	0.54**	0.52**	0.52**
Religion domain	0.58**	0.55**	0.58**	0.52**	0.53**	0.73**
Dating domain	0.56**	0.56**	0.55**	0.60**	0.56**	0.34**
Schoolwork domain	0.32**	0.36**	0.26**	0.35**	0.26**	0.47**
Friends domain	0.39**	0.47**	0.33**	0.44**	0.37**	0.28*
Modified Harter Scales						
Family domain	0.22**	0.29**	0.18*	-0.27*	0.31**	0.28*
Sports domain	0.46**	0.49**	0.43**	0.49**	0.42**	0.42**
Religion domain	0.40**	0.41**	0.36**	0.32*	0.36**	0.55**
Dating domain	0.19**	0.27**	0.11	0.19	0.27**	-0.11
Schoolwork domain	0.15*	0.01	0.22**	0.22	0.15	0.09
Friends domain	0.28*	0.23**	0.25**	0.41**	0.25**	0.21

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

In general, domain valuing as measured by the Identity Pie correlated significantly and positively with the modified Eccles and Harter Scales. This suggests that these measures tap into the same constructs. Of the two previously existing measures, the modified Eccles Scales appeared to correlate more strongly and consistently with the Identity Pie as compared to the modified Harter Scales. This may be due to the fact that each Eccles subscale comprised four items (i.e., enjoyment, interest, importance, usefulness), whereas each Harter subscale comprised only two items for most scales and one in the case of the schoolwork domain).

To further assess the validity of the Identity Pie, across-domain correlations also were computed among Identity Pie slices and Modified Eccles and Harter scales. This was aimed at testing whether the Identity Pie measured distinct valuing in each domain rather than a set level of valuing across all domains. Table 7 displays these correlations for all students. [2]

[2] Tables 8 – 12 at the end of the manuscript display these correlations for each gender and grade separately.

Table 7

Correlations between Domain Valuing on the Identity Pie and the Modified Harter and Eccles Scales – Full Sample

Domain	Family	Sports	Religion	Dating	Schoolwork	Friends
Modified Eccles Scales						
Family domain	**0.36****	0.03	-0.03	-0.05	-0.18**	-0.17*
Sports domain	-0.05	**0.55****	-0.07	-0.04	-0.06	-0.10
Religion domain	-0.10	-0.08	**0.58****	-0.16*	0.02	-0.33**
Dating domain	-0.06	0.01	-0.01	**0.56****	-0.31**	0.02
Schoolwork domain	-0.07	-0.06	0.16	-0.18**	**0.32****	-0.24**
Friends domain	-0.11	0.01	-0.04	0.14*	-0.14*	**0.39****
Modified Harter Scales						
Family domain	**0.22****	0.01	0.10	-0.08	-0.04	-0.09
Sports domain	-0.11	**0.46****	-0.02	0.04	-0.02	-0.05
Religion domain	-0.19**	-0.06	**0.40****	-0.06	0.12	-0.15*
Dating domain	-0.05	-0.06	-0.02	**0.19****	0.00	-0.01
Schoolwork domain	-0.10	-0.09	0.05	-0.09	**0.15***	0.05
Friends domain	-0.07	-0.02	0.03	0.18**	-0.10	**0.28****

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

The examination of these correlation tables revealed that domain valuing on the Identity Pie was correlated more strongly and positively with corresponding domains of the Modified Eccles Scales than with non-corresponding domains (i.e., within-domain correlations were more strongly positive than across-domain correlations). This demonstrates that the Identity Pie measures unique valuing in distinct domains. Again, the correlations with the Modified Harter items were less consistently positive especially in the dating and schoolwork domains. Overall, although there were some inconsistencies, the consistencies between the three measures were overwhelming.

As a final step in validating the Identity Pie, an attempt was made to isolate the most predictive aspects of the modified Eccles scale for Identity Pie valuing. For this, regression analyses were computed. That is, for each domain, the modified Eccles subscale items were regressed on the percentage of the Identity Pie allocated to that domain. Family structure was

controlled in the regressions predicting Identity Pie valuing for schoolwork domain. See Table 13 for the results of these regression analyses for all students, and by each gender and grade separately.

For the total sample, there were notable differences across domains in the most predictive modified Eccles scale items. The Eccles Enjoyment item was the strongest predictor of Identity Pie valuing in the sports and religion domains, with the Importance item as the second strongest predictor. On the other hand, the Eccles Usefulness item was the strongest predictor of Identity Pie valuing in the Friendship and Dating domains, with Enjoyment and Importance as the second strongest predictors, respectively. Finally, the Eccles Interest item was the strongest predictor of valuing in the two most highly valued Identity Pie domains – School and Family. Interestingly, the Eccles Importance Item did not emerge as the strongest predictor in any of the six domains; this is surprising because "importance" was the only one of these four criteria specifically mentioned in the Identity Pie instructions.

Based on the consistent relationship between the Identity Pie and the modified Eccles Scales, and with the modified Harter Scales to a lesser degree, the Identity Pie will be used in the remaining analyses as the primary measure of domain valuing to assess Hypothesis 2. For comparison, the Modified Eccles Scales will be used in addition to the Identity Pie to assess Hypothesis 3.

Table 13

Beta Weights of Modified Eccles Scale Items Predicting Identity Pie Domain Valuing

Eccles Scale Items	Family	Sports	Religion	Dating	Schoolwork	Friends
All students						
Enjoyment	0.03	**0.36****	**0.23***	0.12+	-0.03	0.19*
Usefulness	-0.07	-0.01	0.12	**0.25****	0.08	**0.34*****
Importance	0.15+	0.22*	0.19*	0.19+	0.12+	-0.08
Interest	**0.31****	0.02	0.11	0.00	**0.24****	0.03
Males						
Enjoyment	-0.02	0.57**	0.28*	0.08	0.20	0.19
Usefulness	-0.21	0.01	0.14	0.19	0.13	0.47**
Importance	0.13	0.27	0.31*	0.33*	0.08	-0.10
Interest	0.55**	-0.20	-0.10	0.03	0.41	0.03
Females						
Enjoyment	0.09*	0.25+	0.18	0.25	-0.19+	0.17
Usefulness	0.00	-0.01	0.09	0.32*	0.07	0.30*
Importance	0.15	0.20	0.09	-0.06	0.14	-0.14
Interest	0.11	0.10	0.29*	0.11	0.32**	0.08
Grade 7						
Enjoyment	-0.32	0.49*	0.23+	0.33	0.05	0.24
Usefulness	0.33+	-0.09	-0.12	0.24	0.02	0.17
Importance	0.31	-0.21	0.26	-0.25	0.11	0.32
Interest	0.07	0.41	0.25	0.31	0.25	-0.21
Grade 9						
Enjoyment	0.05	0.40*	0.22+	0.12	-0.10	0.02
Usefulness	-0.17	0.05	0.21	0.14	0.13	0.37*
Importance	0.01	0.23	0.15	0.27	0.17+	-0.06
Interest	0.47**	-0.11	0.02	0.11	0.17	0.10
Grade 11						
Enjoyment	0.15	0.15	0.24	0.02	0.07	0.30
Usefulness	-0.28	-0.33	0.08	0.34+	0.01	0.24
Importance	0.44**	0.50*	0.28	0.23	0.22	-0.20
Interest	-0.83	0.24	0.20	-0.17	0.31	0.03

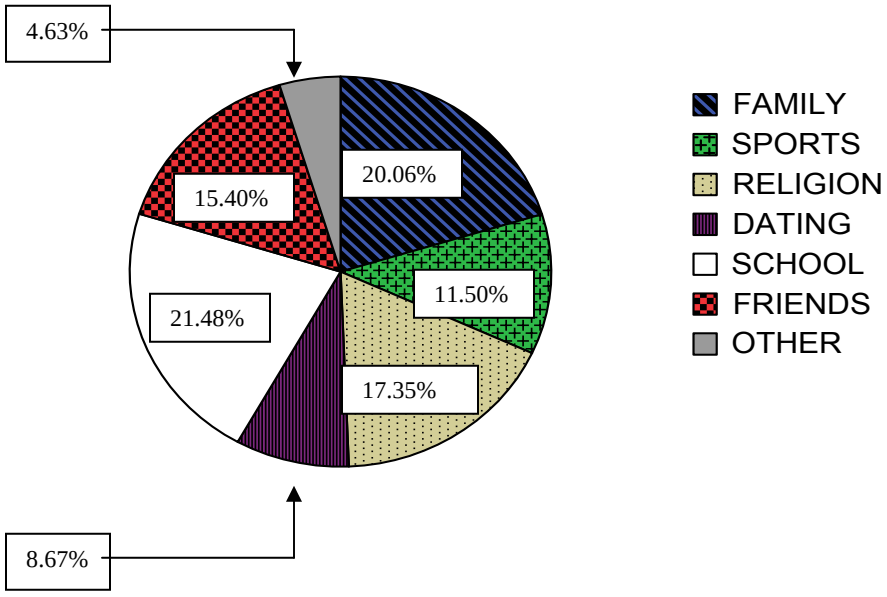
Note. For the total sample, the largest Beta weights in each domain are bolded.

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

Hypothesis 2. To address Hypothesis 2a (i.e., *adolescents will value the 6 life domains differently: specifically, the social domain most highly, and the academic domain second)* a 2 (gender) x 3 (grade) x 6 (domain) repeated-measures ANCOVA was computed with a control added for family structure. Results revealed a significant main effect for the repeated measure, indicating that the participants rated the importance of the 6 domains differently, $F(5,233) = 71.71$, $p < .001$. Follow-up pairwise comparisons among valuing of the five domains were computed to assess where these differences lay. A Bonferroni correction was applied to correct for multiple comparisons. Figure 1 displays adolescents' overall domain valuing in a pie chart and Table 11 shows the means, standard deviations, and minimum and maximum values of the pie percentage allotted to each domain by gender and grade level separately.

The "other" category of the Identity Pie was utilized by many adolescent participants who entered a wide array of other areas of life that they considered important to their identities. These included music, games, pets, personal time, traveling, and having good character qualities such as being caring, among many others. However, there was not enough consistency among these responses to make meaningful sense were this domain included in statistical analyses. Therefore, the "other" domain is included in the pie chart below to show the percentage of the pie *not* allocated to the main 6 domains, but it will not be included in analyses as will the other six domains.

Figure 1. Identity Pie for Adolescents: Overall Sample



The schoolwork and family domains were allocated the largest slices of the Identity Pie in the sample overall, with the schoolwork domain being marginally, though non-significantly, larger. Both domains were larger than all other domains, .001 < *p*s < .05. The religion and friends domains ranked next in size in the Identity Pie, occupying a significantly smaller proportion than schoolwork and family, but a significantly larger proportion than sports and dating, .001 < *p*s < .05. Although they were not significantly different from each other, the religion slice was slightly larger than the friends slice. Next, the sports domain occupied the second to smallest slice, followed by the dating domain, which had the smallest slice of the pie compared to all the other domains, ps < .001. To represent adolescents domain valuing overall in the form of a simple equation: Schoolwork/Family > Religion/Friends > Sports > Dating.

Therefore, Hypotehsis 2a was partially supported in that adolescents differentially valued the six life domains; however, the expectation that the social domains (i.e., friends and sports) would be valued most highly with the academic domain in second place was not fulfilled.

Rather, the academic domain was valued most highly, and the friends and sports domains were valued fourth and fifth, respectively.

A final validity check was done for the Identity Pie by examining the association between the domain assigned the highest percentage of the pie with the domain ranked highest on the single-item ranking question for each adolescent. As expected, chi-squares found the correspondence between adolescents choices on both measures to be statistically significant, $\chi 2$ (30, n = 185) = 352.97, $p < .001$. This means that adolescents tended to rank the same domain as most valued on both measures. For example, of the 63 adolescents who reported family as their highest ranked domain on the single-item ranking question, 46 (73%) also gave this domain the largest portion of their Identity Pies. Across all 6 domains, the median percentage correspondence between students' domain rankings on both measures was 78%. This finding serves to validate, once more, the findings of the Identity Pie.

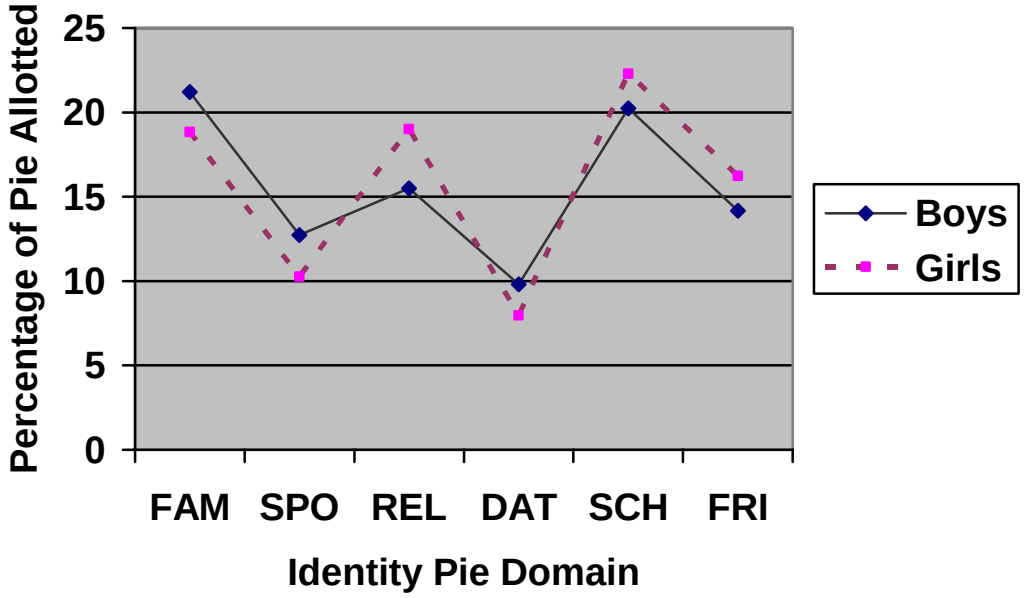
To address Hypothesis 2b *(i.e., Jamaican girls will value the academic, religious, and family domains more highly than boys, whereas boys will value the sports and dating domains more highly than girls)*, the interaction between domain (6) and gender (2) was examined in the previous ANCOVA. As hypothesized, there was a significant gender x domain interaction, $F(5,233) = 7.03$, $p < .001$, showing that males and females had different patterns of domain valuing. These gender differences in domain valuing were examined in two ways: 1) by computing separate repeated measures MANOVAs/MANCOVAs for each gender, and 2) by computing a one-way ANOVA/ANCOVA comparing male and female valuing in each domain.

Similar to the result for students overall, for male students, the schoolwork and family domains were allotted the largest slices as compared with the other 4 domains, ps < .001; however, they were not significantly different from each other in size. Next, boys gave

approximately equal percentage of the pie to sports, friends, and religion. Also similar to students overall, the dating domain occupied the smallest slice in boys' Identity Pie, all *p*s < .001. To represent male students' domain valuing in the form of a simple equation: Schoolwork/Family > Religion/Friends/Sports > Dating.

Unlike adolescents overall or male students, for female students, the schoolwork domain was significantly larger than the family domain, $p < .05$, in addition to the friends, sports ,and dating domains, $p < .001$., and the religion domain, $p < .10$. Although slightly larger, the religion domain was not significantly different from the family or friends domains; however, the family domain was significantly larger than the friends domain, $p < .05$. Next in size was the sports domain, to which girls allotted a significantly smaller slice than the preceding domains, $p < .001$, and a significantly larger slice than the dating domain, $p < .05$. An approximate representation of female students' domain valuing in the form of a simple equation is the following: Schoolwork > Family/Religion > Friends > Sports > Dating. See Figure 2 for a line graph comparing boys' and girls' Identity Pie domain valuing.

Figure 2. Line Graph Comparing the Percentage of the Identity Pie Allotted to Each Domain



Comparing the Identity Pies of males to females, it is apparent that there are some commonalities, as well as some differences. As shown in Figure 2 above, both boys and girls had grossly similar patterns of identity construction. The shape of the line graphs is similar, demonstrating that they tended to distribute their pies across all six domains instead of, for example, utilizing only one or two domains. In addition, both boys and girls differentially valued these six domains such that some were considered more important than others. A further similarity lies in the fact that for both genders, the school and family domains were two of the highest domains valued, whereas the dating domain was the lowest.

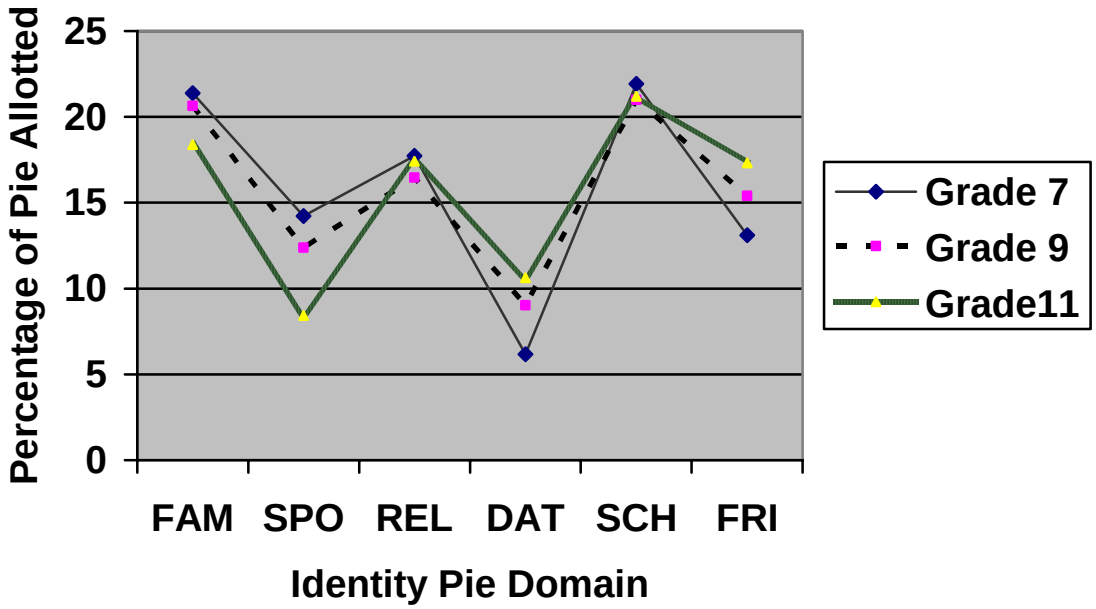
On the other hand, it appears that the differences between boys' and girls' Identity Pies lay in the differential importance they placed on certain domains. For females, religion was one of the largest slices in girls' Pies, and as large as the slices for family and school, whereas sports and dating were allotted the smallest slices in their Pies. In contrast, males allotted religion a significantly smaller Identity Pie slice than schoolwork or family, but a significantly larger slice

than dating. It also appears that girls placed more value on the friends domain in comparison to the other domains than did boys.

To test the significance of these apparent gender differences, a univariate ANOVA with a Bonferroni correction was computed, controlling family structure in the schoolwork domain. As hypothesized, girls gave at least marginally significantly larger slices of their Identity Pies to the religion domain, $F(1,233) = 8.41$, $p < .01$, and the schoolwork domain, $F(1, 236) = 3.11$, $p < .10$; and significantly smaller slices to the sports domain, $F(1, 137) = 8.80$, $p < .01$. The gender difference in the dating domain was non-significant, although it was in the predicted direction of boys allotting larger slices than girls. In addition, there was an unexpected finding which was contrary to an a priori prediction: boys assigned larger slices to the family domain than did girls, $F(1,237) = 5.22$, $p < .05$.

To address Hypothesis 2c *(i.e., younger adolescents will value the family, religious, and friendship domains more highly than the other domains compared to older adolescents; and older adolescents will value the dating domain more highly than younger adolescents),* the domain x grade interaction between from the repeated measures ANCOVA with a control for family structure was examined. As hypothesized, there was a significant 2-way interaction, $F(10,468) = 5.03$, $p < .001$, showing that adolescents across the three grade levels had different patterns of domain valuing. These grade differences in domain valuing were examined by computing a one-way ANOVA/ANCOVA comparing valuing in each domain by grade level of participants. See Figure 3 for a line graph depicting the nature of this interaction.

Figure 3. Line Graph Comparing Identity Pie Construction across Grade Levels



There were significant grade differences in the dating, $F(2,237) = 6.74$, $p < .001$, friends domains, $F(2, 237) = 5.45$, $p < .01$, and sports domains, $F(2, 237) = 10.48$, $p < .001$. As hypothesized, seventh graders allocated a significantly smaller slice of their Identity Pies to dating than did both ninth, $p < .01$, and eleventh graders, $p < .001$. However, contrary to predictions, there were no significant grade differences in the Pie proportion assigned to the religion or family domains domain (i.e., younger adolescents did not value these domain more highly). Further, although no particular predictions were made regarding grade differences in these domains, seventh graders allocated significantly smaller slices of their Identity Pies to friends than did eleventh graders and seventh and ninth graders assigned significantly larger slices of their pies to the sports domain than did eleventh graders .

There were no significant domain x gender x grade interactions.

Hypothesis 3. First, gender and grade differences in the outcome variables were examined in detail. Results revealed a significant main effect of gender on adolescents' problem behavior,

F(1,191) = 6.31, p <.05. Boys reported engaging in significantly higher levels of problem behavior in the past year than did girls. In addition, there was a main effect of grade on adolescents' life satisfaction, F(2,190) = 3.75, p <.05; and on adolescents' percent grade average, F(2,190) = 45.62, p <.001. Seventh graders reported significantly greater life satisfaction and higher percent grade averages than did ninth or eleventh graders. Ninth graders also reported higher percent grade averages than did eleventh graders.

To address Hypothesis 3a (*i.e. domain valuing will be correlated significantly with adolescents' grades, depression, life satisfaction and conduct problems),* bivariate correlations were computed among domain valuing on each domain of the Identity Pie, modified Eccles and Harter Scales and each outcome. See Table 14 for the corresponding correlation matrix.

Table 14

Correlations among Domain Valuing on the Identity Pie and Modified Eccles Scales and Outcomes

	Identity Pie				Modified Eccles Scales			
Domain	G	D	CP	LS	G	D	CP	LS
Family	0.23	-0.07	-0.03	0.07	0.26**	-0.17*	-0.20**	0.41**
Sports	0.10	-0.07	0.07	0.07	0.02	-0.16*	-0.01	-0.13+
Religion	0.02	-0.06	-0.10	-0.02	0.24**	-0.11	-0.15*	0.21**
Dating	-0.31**	0.11+	0.12+	0.05	-0.31**	-0.01	0.16	0.01
Schoolwork	0.13*	0.02	-0.05	-0.06	0.42**	-0.02	-0.18**	0.26**
Friends	-0.11	0.01	-0.05	-0.11+	-0.15*	-0.06	-0.15*	-0.01

Note. G = Grade, D = Depression, CP = Conduct Problems, and LS = Life Satisfaction
+ p < .10 * p < .05 **p = .01

In general, correlational results support Hypothesis 3a, more strongly for the Modified Eccles Scales than for the Identity Pie measure: domain valuing, especially in the schoolwork and religion domains, was correlated significantly with adolescent academic and psychological functioning. As hypothesized, valuing in the Identity Pie schoolwork domain was significantly and positively related to grades. Additionally, a borderline significant to significant trend

emerged in the relationship between valuing dating and life adjustment. Valuing in this Identity Pie dating domain was found to be correlated negatively with adolescents' grades, and positively correlated with depressive symptomatology and frequency of conduct problems. Correlations between dating and life adjustment for the Identity Pie were further examined by each gender and grade separately. Identical patterns of intercorrelations were found between the genders for all outcome variables boys and girls except for life satisfaction. For boys, dating was significantly and *positively* correlated with life satisfaction, whereas for girls the correlation was negative though non-significant. Interesting grade differences also emerged: only for ninth graders was dating significantly and negatively correlated with grades although students in the seventh and ninth grades showed a similar trend. Finally, only for eleventh graders was dating significantly and positively correlated with conduct problems. See Table 15.

Table 15

Correlations among Identity Pie Valuing in the Dating domain and Outcomes for each Gender and Grade Separately

Adolescents	G	D	CP	LS
Males	-0.27**	0.13	0.12	0.22*
Females	-0.32**	0.12	0.05	-0.10
Grade 7	-0.19	0.21	0.19	-0.16
Grade 9	-0.21*	0.06	0.05	0.21*
Grade 11	0.15	0.13	0.36**	0.17

Note. G = Grade, D = Depression, CP = Conduct Problems, and LS = Life Satisfaction
+ $p < .10$ * $p < .05$ ** $p = .01$

For the Modified Eccles Scales, valuing was more strongly and consistently related to outcomes, most notably for the family, religion, and schoolwork domains. As hypothesized, valuing in the religion and schoolwork domains were both strongly related to the outcomes; they were both significantly and positively correlated with grades and life satisfaction, and

significantly and negatively correlated with conduct problems. Valuing in the family domain was significantly correlated with all outcomes: positively with grades and life satisfaction, and negatively with depressive symptomatology and conduct problems. Additionally, valuing in the dating and friends domains was significantly and negatively correlated with grades.

Overall, domain valuing using both measures revealed a significant positive relation between valuing schoolwork and grades, and a significant negative relation between valuing dating and academic achievement. Notwithstanding, the differences between the two measures in terms of their relations with life adjustment are notable. These differences should not be surprising because the two measures tap different aspects of domain valuing. As described earlier, the Modified Eccles Scales measure absolute domain valuing such that adolescents are allowed to value all domains independent of each other (i.e., adolescents have the option of valuing all domains at very high levels or very low levels). On the other hand, the Identity Pie was designed to measure relative domain valuing, providing a ranking of domains according to their priority to the adolescent (e.g., adolescents must value some domains higher than others). Therefore, it is expected that valuing on these two measures would relate to outcomes in some similar ways, but also in some very different ways. It is of interest that, overall, it appears that the life adjustment of adolescents in this sample was related more strongly to their absolute valuing rather than their relative valuing of life domains.

To address Hypothesis 3b *(adolescents will fall into distinct profiles/clusters based on domain valuing, which will be significantly related to life adjustment),* K-means cluster analyses were computed to differentiate distinct patterns of domain valuing as measured by the Identity Pie and the Modified Eccles Scales. This technique clusters cases in such a way as to maximize differences across clusters in the selected variables (in this case, domain valuing in the six major

domains). Five-, four- and three-cluster solutions initially were computed to identify which would identify the largest number of clusters with a relatively even case distribution (i.e., that each cluster would have a large enough number of participants to indicate that it was a meaningful cluster). Based on this criterion, the four-cluster solution was selected for both measures of domain valuing after 10 iterations each, giving clusters with *n*s of 38, 84, 59, and 62 for the Identity Pie, and ns of 35, 34, 118, and 58, for the Modified Eccles Scales. For each domain, ANOVAs confirmed that there were significant differences at the .001 level in domain valuing across clusters using both measures. For the Identity Pie: family, $F(3, 239) = 53.98$; sports, $F(3, 239) = 39.34$; religion, $F(3, 239) = 104.54$; dating, $F(3, 239) = 15.23$; schoolwork, $F(3, 239) = 59.45$; and friends, $F(3, 239) = 8.86$; and for the Modified Eccles Scales: family, $F(3, 233) = 19.76$; sports, $F(3, 231) = 43.59$; religion, $F(3, 221) = 104.75$; dating, $F(3, 223) = 37.20$; schoolwork, $F(3, 216) = 124.20$; and friends, $F(3, 231) = 10.14$. Table 16 shows the participant distribution for each of the three solutions attempted for both measures of domain valuing. Table 11 shows the domain means for each cluster in the four-cluster solution for both measures of domain valuing. Figures 4 and 5 represent domain valuing across clusters for the Identity Pie and the Modified Eccles Sales, respectively.

Table 16

Participant Distribution across Clusters for the Five-, Four-, and Three-Cluster Solutions for the Identity Pie and the Modified Eccles Scales

		Identity Pie	Modified Eccles Scales
Solution	Cluster	Number of cases	Number of cases
Five-cluster	1	61	28
	2	3	115
	3	89	27
	4	21	53
	5	69	22
Four-cluster	1	38	35
	2	84	34
	3	59	118
	4	62	58
Three-cluster	1	99	60
	2	59	122
	3	85	63

Table 17

Mean Domain Valuing in the Four-Cluster Solution for the Identity Pie and the Modified Eccles Scales

	Identity Pie				Modified Eccles Scales			
Domain	C1	C2	C3	C4	C1	C2	C3	C4
Family	17.63	19.46	14.24	27.90	4.34	5.60	6.24	6.29
Sports	10.00	8.27	18.56	10.08	4.27	2.19	5.93	5.44
Religion	12.63	26.31	14.15	11.13	3.95	5.68	6.13	6.18
Dating	6.32	7.02	12.97	8.23	4.71	4.10	5.58	2.40
Schoolwork	33.42	20.42	18.39	18.55	5.09	5.91	6.05	6.31
Friends	13.68	13.21	18.05	16.85	6.32	6.01	6.56	5.83

Figure 4. Graph Showing Domain Valuing Across Identity Pie Clusters

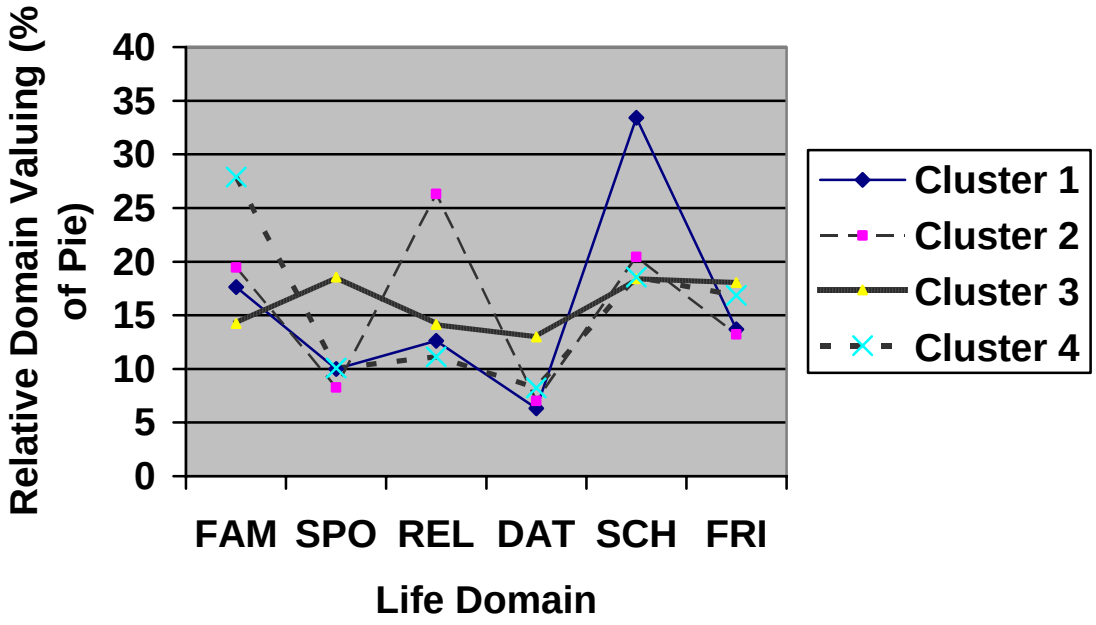
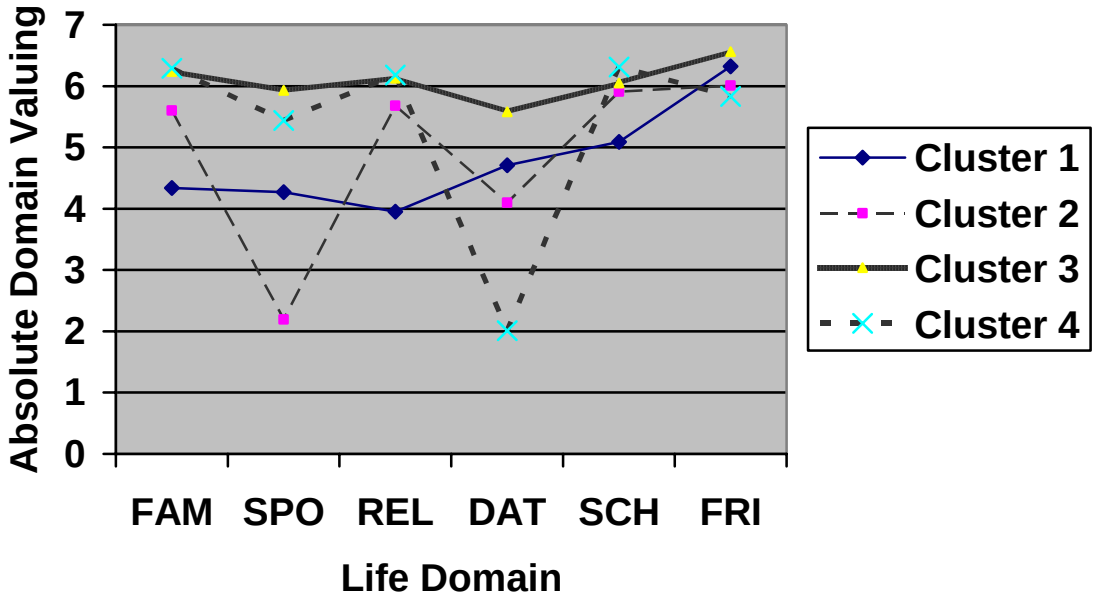


Figure 5. Graph Showing Domain Valuing Across Modified Eccles Scales Clusters



Hypothesis 3b, therefore, received some support in that adolescents fell into distinct clusters based on their valuing across domains. For the Identity Pie, Pie Cluster 1 *(schoolwork-oriented)* comprised adolescents who allotted their largest Pie slice to schoolwork, and small slices to remaining domains with the dating domain occupying the smallest slice. Pie Cluster 2 *(religion-oriented)* comprised adolescents for whom religion occupied the largest Identity Pie slice, followed by medium slices for family and schoolwork, and small slices for friends, sports and dating in that order. Pie Cluster 3 *(universal/peer-oriented)* comprised adolescents who allotted medium to small slices to all domains with the friends domains occupying a marginally larger Identity Pie slice than the others. This is the only cluster in which the friends domain was awarded a larger slice than the family domain. Additionally, the friends domain was valued significantly higher by adolescents in Pie Cluster 3 than by adolescents in Pie Clusters 1 and 2. Finally, Pie Cluster 4 *(family-oriented)* comprised adolescents for whom family occupied the largest Identity Pie slice, followed by schoolwork and friends, which occupied medium slices, and religion, sports, and dating which occupied the smallest slices. Figures 6 and 7 below show the distribution of cases across Pie clusters by gender and grade level.

Figure 6. Distribution of Cases Based on Identity Pie Valuing across Clusters by Gender

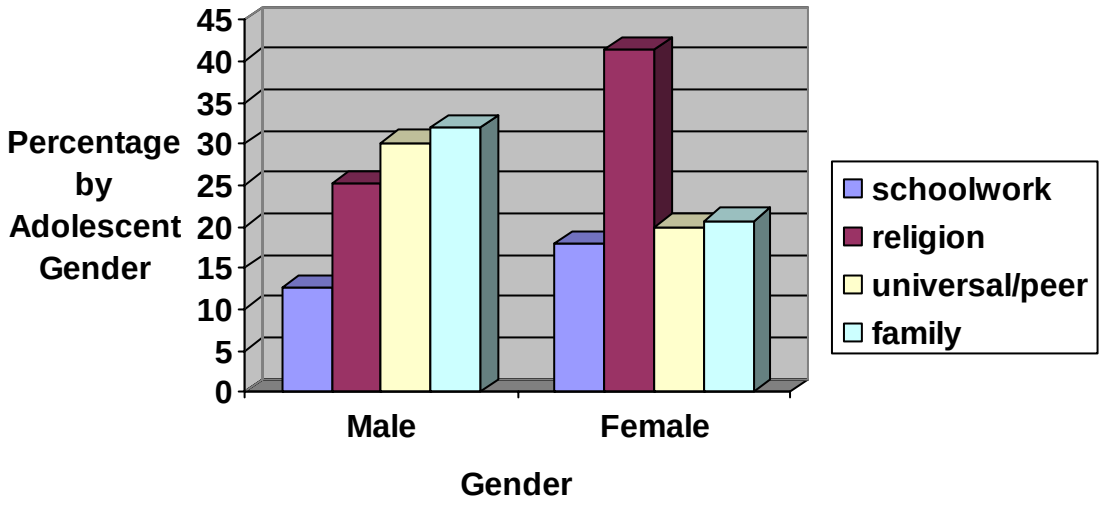
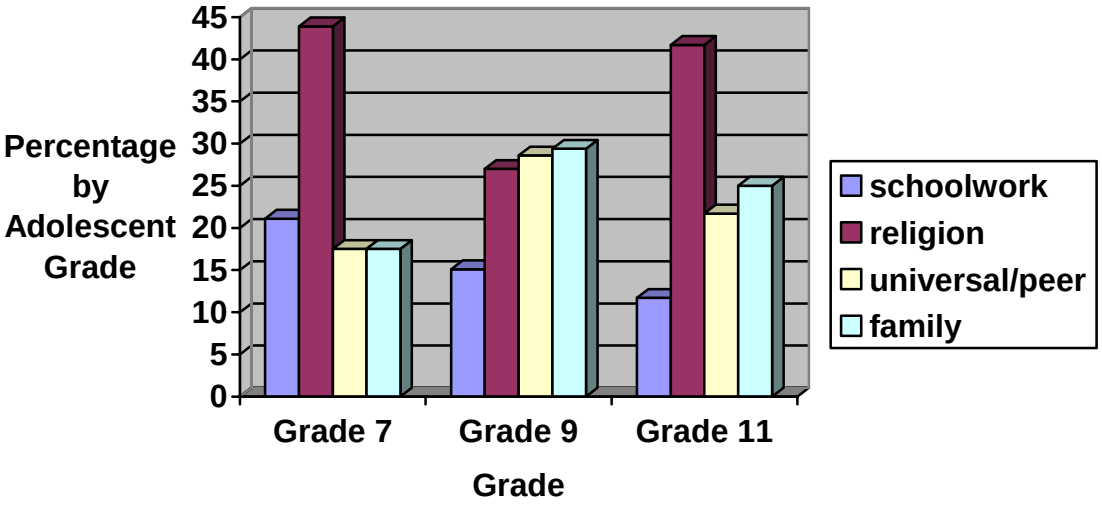


Figure 7. Distribution of Cases Based on Identity Pie Valuing across Clusters by Grade



More girls than boys were grouped in Pie Cluster 2 of religion-oriented adolescents. This supports the domain by gender findings reported earlier in Hypothesis 2a. Additionally, a large number of seventh and eleventh graders fell into Pie Cluster 2 in relation to the other clusters,

whereas for ninth graders, Pie Cluster 2 claimed the same proportion as did Pie Clusters 3 and 4. Chi-square tests found this gender X Cluster and interaction to be statistically significant, $p < .001$; however, the grade X Cluster differences just fell below statistical significance, $p = 0.11$.

Clustering based on domain valuing on the Modified Eccles Scales produced very different results from Identity Pie clustering with the exception of one cluster which was common to both sets. These differences are likely due to the different methodologies of the two instruments (i.e., absolute versus relative valuing), an explanation that is evidenced by the fact that adolescents in the Eccles Clusters tended to place a high value on all domains. Eccles Clusters 1 *(universal/peer orientation)* and 3 *(universal orientation)* were similar in that they comprised adolescents who valued all the domains at a very high level. However, the friends domain of Eccles Cluster 1 adolescents was slightly but non-significantly higher than the other domains, somewhat resembling Pie Cluster 3. The unique feature of Eccles Cluster 3 lay in their relatively high valuing of the sports and dating domains compared with other Eccles Clusters. That is, by valuing all domains at a very high level, these adolescents, by default, valued the sports and dating domains significantly higher than adolescents in other Eccles Clusters. Cluster 2 *(non-sports-oriented)* comprised adolescents who valued all the domains highly except sports. Finally, Cluster 4 *(non-dating-oriented)* comprised adolescents who valued all the domains highly except dating. Figures 8 and 9 below show the distribution of cases across Eccles clusters by gender and grade level.

Figure 8. Distribution of Cases Based on Eccles Valuing across Clusters by Gender

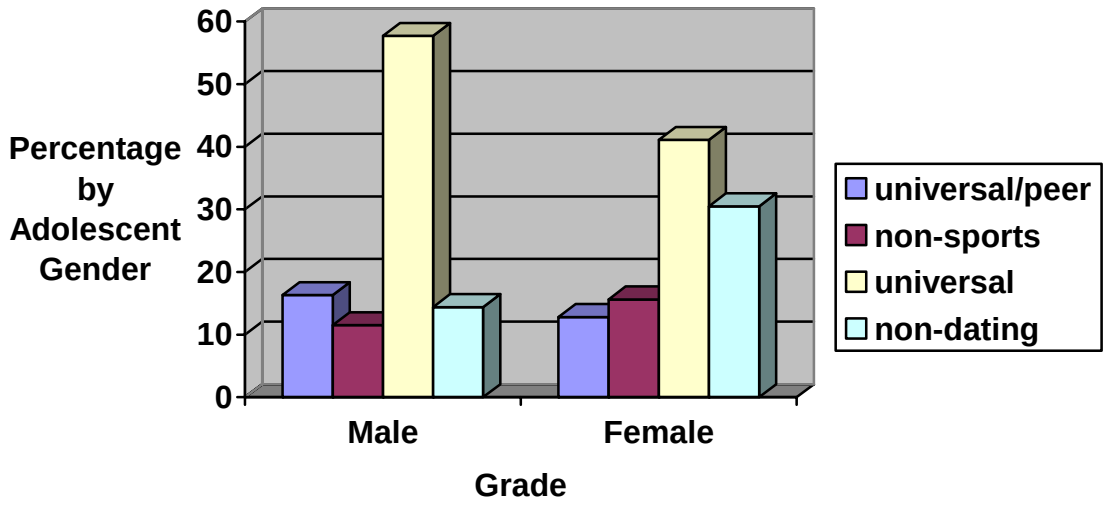
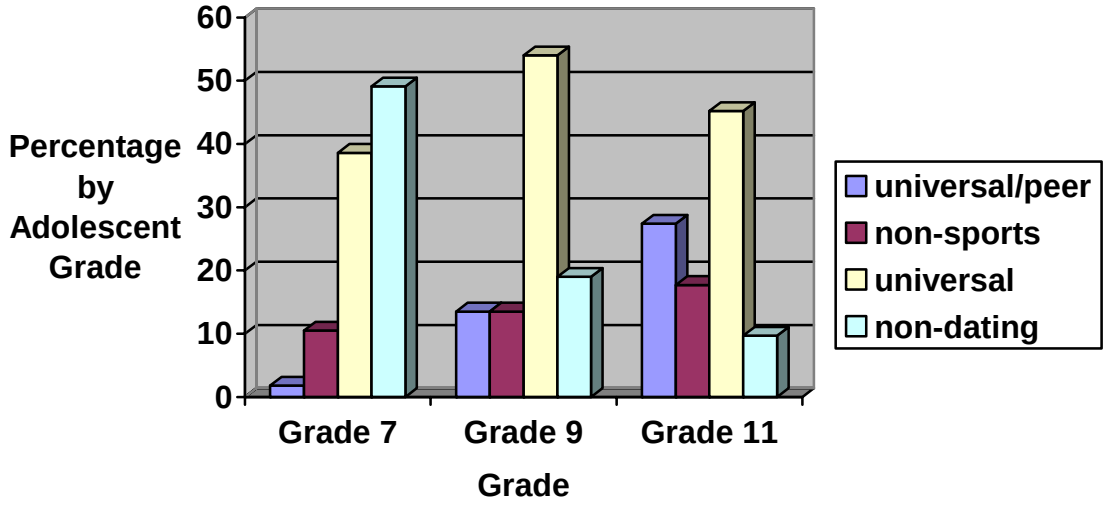


Figure 9. Distribution of Cases Based on Eccles Valuing across Clusters by Grade



More girls and seventh and ninth graders were grouped in Eccles Cluster 4 of non-dating-oriented adolescents than boys or eleventh graders, respectively. Additionally, Eccles Cluster 1 youth *(universal/peer-oriented)* was comprised of eleventh/ninth, and seventh graders in that order of proportion. Chi-square tests found these gender x Cluster and grade x Cluster

differences to be statistically significant, $p < .001$. Both results support domain by gender and domain by grade findings reported earlier in Hypotheses 2a and 2b.

To further assess the relations between clusters and life adjustment, three-way MANOVAs – cluster (4) x gender (2) x grade (3) – and follow-up contrasts were computed to assess for systematic differences among clusters. Table 18 shows the means and standard deviations of the outcome variables across clusters for both the Identity Pie and the Modified Eccles Scales.

Table 18

Means and Standard Deviations of Outcome Variables for Each Cluster for the Total Sample using based on the Identity Pie and the Modified Eccles Scales

	Identity Pie		Modified Eccles Scale	
Outcomes	M	SD	M	SD
Cluster 1				
Grades	81.16	9.79	69.63	10.43
Depression	0.85	0.51	0.91	0.59
Life satisfaction	4.25	1.59	3.28	1.38
Conduct Problems	0.20	0.46	0.30	0.43
Cluster 2				
Grades	77.92	10.74	77.15	9,71
Depression	0.74	0.40	0.85	0.47
Life satisfaction	4.19	1.47	4.29	1.22
Conduct Problems	0.11	0.21	0.22	0.31
Cluster 3				
Grades	75.06	11.13	76.29	10.29
Depression	0.70	0.50	0.71	0.47
Life satisfaction	4.29	1.32	4.35	1.42
Conduct Problems	0.16	0.33	0.15	0.32
Cluster 4				
Grades	77.10	10.65	83.96	9.05
Depression	0.86	0.53	0.75	0.44
Life satisfaction	4.27	1.45	4.56	1.45
Conduct Problems	0.21	0.39	0.08	0.29

For the Identity Pie, there were no significant main effects of Pie Cluster or interactions involving Pie Cluster on outcomes. However, because specific a priori predictions were made, means comparisons were computed with a Bonferroni correction. These comparisons revealed differences in grades between adolescents in Pie Clusters 1 and 3. Adolescents in Pie Cluster 1 (*schoolwork-oriented*) had significantly higher grades than adolescents in Pie Cluster 3 (*universal/peer-oriented*). This supports earlier correlational results and the hypothesis that adolescents who assigned relatively larger slices of their Identity Pies to the schoolwork domain had higher grades.

For the Modified Eccles Scales, there were also no significant main effects of Cluster on outcomes. However, there was a significant interaction between Eccles Cluster and gender on Depression, $F(3,194) = 3.26$, $p<.05$, and Grades, $F(3,194) = 3.26$, $p<.05$. The interactions lie in the fact that there were significant differences between the Eccles Clusters on these two outcomes only for girls. Eccles Cluster 1 girls (*universal/peer-oriented*) reported significantly more depressive symptoms than did Eccles Cluster 3 (*universally-oriented*) or Eccles Cluster 4 (*non-dating-oriented*) girls. Eccles Cluster 4 girls (*non-dating-oriented*) reported significantly higher grades than did girls in the other Eccles Clusters. Finally, Eccles Cluster 3 girls (*universally-oriented*) reported significantly higher grades than did Eccles Cluster 1 girls (*universal/peer-oriented*). This final finding is similar to the finding with the Identity Pie whereby Pie Cluster 3 (*peer-oriented*) adolescents had lower grades.

Overall, although adolescents were readily clustered according to their differential valuing of the six life domains, the clusters were not strongly related to adolescent adjustment. Rather there appeared to be a stronger relation between domain-specific valuing (versus profile-specific valuing) and life outcomes. Further, although there was some correspondence between

results using both domain valuing measures, it appears that absolute domain valuing as measured by the Modified Eccles Scales was more strongly related to life outcomes than relative valuing as measured by the Identity Pie.

DISCUSSION

Prior research and personal experience tell us that adolescence is a unique stage of life characterized by multitudinous changes. Consistent with Erik Erickson's (1968) theory, it is widely believed that identity formation is one of the most important tasks during this life stage embodying the transition into adulthood. Adolescents must decide what things they uniquely value in life and how those pieces fit together into an integrated representation of the self. Thus, the aim of the present study was to describe identity construction in Jamaican youth from their valuing of several major life domains as measured by a novel graphical technique, and to examine the relations between identity construction and their current adjustment.

Compared to U.S. adolescents, Jamaican adolescents reported similar levels of domain valuing, depression, life satisfaction, conduct problems, and grades. However, there was a barely noticeable trend for Jamaican adolescents to report slightly lower levels on these three outcomes. In addition, there was a trend for Jamaican girls to value the schoolwork domain at a higher level than Jamaican boys, whereas this gender difference was not apparent among U.S. adolescents. The overwhelming similarities between adolescents in both countries on these psychological variables hints at the possibility of there being some universals about adolescence across these two cultures. Further, these similarities also suggest that in the absence of empirical data in the Jamaican population, it is reasonable to make initial hypotheses about psychological functioning based on a U.S. sample.

Validation of the Identity Pie

Although there is evidence in the research literature that adolescents identify with different life domains to different degrees, there has not been, to my knowledge, a comparative analysis of identification/valuing in several competing real life domains as a way to understand identity construction in adolescence. Therefore, this study validated a graphical Identity Pie task as a novel way to measure adolescent domain identification/valuing. Adolescents constructed graphical representations of themselves from 6 major life domains -- family, religion, sports, friends, schoolwork and dating -- and reported on academic, psychological, and behavioral outcomes.

The Identity Pie task proved to be a valid measure of adolescent domain valuing among Jamaican adolescents as compared with two traditional previously existing measures, the modified Eccles and Harter Scales. The modified Eccles Scales correlated more strongly and consistently with the Identity Pie as compared with the modified Harter Scales, probably due to the brevity and lack of comprehensiveness of the latter. Notwithstanding, results of validation procedures for the Identity Pie revealed significant and positive within-domain correlations between valuing on the Identity Pie and on corresponding domains of the modified Eccles and Harter Scales, and significantly stronger positive within-domain correlations than across-domain correlations. Further, valuing in each domain of the Identity Pie was predicted by distinct aspects of valuing: interest predicted valuing school and family, enjoyment predicted valuing religion and sports, and usefulness predicted valuing friends and dating. The implications of these specific predictors will be discussed further.

The usefulness of the Identity Pie in this study is exciting because of its simplicity and ease of administration compared with the lengthier (and wordier) previously existing scales. A

large part of the appeal of the Identity Pie for use with adolescents was the graphical component. It was anticipated that drawing and labeling slices might be an effective alternative to traditionally constructed survey scales which can be experienced as a monotonous listing of sentences and numbered response choices. Therefore, it was hoped that the Identity Pie would add some interest and variety to the task, thereby facilitating more investment and accuracy in its completion. Indeed, observations of the students as they completed the survey confirmed that they seemed to enjoy the Identity Pie task. In fact, in most cases, the Identity Pie seemed to be the most interesting part of the survey for them.

Domain Valuing Among Jamaican Adolescents

As hypothesized, Jamaican adolescents valued the six life domains differently in the following order: first, schoolwork and family; second, religion and friends; third, sports; and fourth, dating. Notice that this order of domain valuing has some correspondence to the findings regarding the most predictive aspects of valuing in each domain. Most notably, schoolwork and family were the most highly valued domains and they were also the domains most strongly predicted by interest. Religion occupied a medium number of Identity Pie slices and was most strongly predicted by enjoyment. Dating, on the other hand, which occupied the fewest Identity Pie slices, was most strongly predicted by usefulness. Therefore, interest was the strongest determinant of the life domains these Jamaican adolescents valued most: schoolwork and family. On the other hand, enjoyment was the strongest determinant of the life domains on which adolescents placed moderate value, such as religion. Finally, usefulness was the strongest predictor of the least valued domains, including dating. Stated differently, perceived utility was the weakest predictor of valuing in this sample; domains assigned lowest priority were not

relatively interesting or enjoyable to adolescents, but were merely perceived to be somewhat useful.

It is worth noting that other samples of Jamaican adolescents (e.g, lower class, rural, or non-traditional high school students) might value these six life domains differently based on how interesting, enjoyable and useful they find each to be. For example, it is possible that in a sample of rural Jamaican adolescents, who often begin childbearing at an earlier age, the dating domain might be more interesting than useful; hence, it might occupy a more prominent portion of their Identity Pies. Similarly, it is possible that in a sample of Jamaican adolescents from a non-traditional high school (i.e., generally less academically competitive), schoolwork would be less interesting than useful; hence, it might be less prominent in their Identity Pies.

It is important to bear in mind that the direction of the relations between valuing and perceptions of interest/enjoyment/usefulness is unclear. It might be that perceptions of interest/enjoyment/usefulness drive domain valuing; or it might be that domain valuing drives perceptions of interest/enjoyment/usefulness. A third possibility is that some third variable, such as parental values, might drive both processes. Unfortunately, this is not a question the current study can answer.

The a priori expectations based on North American research (e.g., Brown & Theobald, 1998; Eme et al., 1979; Wigfield et al., 1996) that the social domains would be valued most highly with the academic domain in second place were not met. Rather, as was previously reported, the academic domain ranked first and the social domains (i.e., friends, sports and dating) actually ranked last, in that order. This suggests that there may be some very interesting cultural differences in the life domains that Jamaican adolescents find important as compared to North American adolescents. Alternatively, it is possible that the lack of support for this

hypothesis lies in the constricted nature of the current sample. Perhaps, if the sample had included Jamaican adolescents from lower and upper socioeconomic levels, or from other types of high schools, a different pattern of relative domain valuing would have emerged.

Interestingly, adolescents' current family structure was significantly related to how highly they valued the schoolwork domain. Adolescents from two biological parent homes gave schoolwork a significantly larger portion of their pies than adolescents from other types of homes including mother-headed households and other less common home configurations. This finding suggests that there may be some aspect of Jamaican two biological parent homes which fosters, maintains, or at the very least, is able to co-exist with adolescents' interest in and valuing of schoolwork. It follows, then, that this unnamed quality is absent from, or diminished, in other types of home configurations among these Jamaican youth.

Several plausible mediating variables could be contributing to this group difference such as parental support for academics, parental education, or the general emotional climate/support of the household. Much research in the U.S. has documented similar findings: children and adolescents from two biological parent households perform better than other adolescents (i.e., including those from single parent and cohabiting households) on several measures of adjustment including academic achievement (e.g., Brown, 2002; Manning, 2002; Osborne, McLanahan, & Brooks-Gunn, 2003; Seefeldt, 2004). Further, these and other studies have found financial resources, parental background factors, and current parental physical and psychological health to be mediators of the effect of family structure on child adjustment. It is possible, then, that the same mediators could be at work in the current sample, contributing to higher schoolwork valuing and ultimately, higher grades among adolescents from two biological parent homes.

Finally, although adolescents from two-parent households clearly valued schoolwork more than other adolescents, all adolescents valued schoolwork highest relative to the other domains. Therefore, it is not the case that adolescents who were not from two biological parent households did not value schoolwork; they did, and very highly in fact, but just at a lower level relative to their counterparts from two biological parents households.

Overall, boys and girls had similar patterns of identity construction in several ways: both genders tended to 1) distribute their pies across all six domains, 2) discriminate between valuing of the six domains such that some domains were more important than others, and 3) value the school and family domains highest and the dating domain lowest. The third similarity is especially interesting because although both schoolwork and family were highly valued by both genders, schoolwork was more highly valued by girls and family was more highly valued by boys. These findings will be discussed in more detail.

The majority of the anticipated gender differences in valuing based on prior research/writings on Jamaican adolescents were found: Jamaican girls valued the academic and religious domains more highly than boys, and boys valued the sports domains more highly than girls. This supports prior research which shows that Jamaican female high school students tend to have more positive attitudes towards education and more frequent church attendance than do male students (e.g., Anderson, 2003; Evans, 1999; Samms-Vaughan, 2000). It seems that Jamaican adolescents, too, conform to what can be considered traditional gender roles in the sports domain; the gender difference found in the current sample supports findings in the United States that boys rate sports as more important than do girls (e.g., Wigfield et al., 1996).

However, some gender differences in domain valuing went contrary to predictions: boys valued the family domain more highly than girls and there was no gender difference in valuing of

the dating domain. The counter-intuitive finding in the family domain might suggest that Jamaican girls have been mislabeled in the past as being more invested in their families than are boys. Perhaps this general belief derives from an incorrect assumption that girls necessarily value family more because they typically spend more time with the family due to being assigned more household chores and being allowed less freedom to go out with friends as compared with boys. It is often the case that for the above reasons, girls spend more time with family than do boys by *requirement* rather than by *personal choice* or *investment.* Perhaps it is overlooked that such differential treatment of girls in the home can cause them to value the family domain *less* than do boys, especially if they perceive this treatment to be unfair. In regard to the lack of a significant gender difference in the dating domain, it is possible that a floor effect masked any significant gender differences because both boys and girls assigned the smallest slices of their Identity Pies to this domain.

Overall, in comparison to younger adolescents, older adolescents identified more closely with dating and friends, less closely with the sports, and just as closely with religion and family. This supported a priori predictions in the dating domain only. As hypothesized, seventh graders identified less with the dating domain than did ninth and eleventh graders. This finding among Jamaican adolescents is consistent with prior research findings in the United States that adolescent participation in sexual activities increases with age (Sonenstein et al., 1991).

On the other hand, several findings of grade differences in valuing ran counter to predictions or emerged in domains about which no formal predictions were made. Contrary to expectations based on U.S. findings, younger adolescents did not value the religion or family domains more highly than older adolescents. Unlike U.S. adolescents, amongst whom the importance of religion declines somewhat across adolescence (Gallup & Bezilla, 1992), the

importance of religion was moderately high for Jamaican adolescents across all three developmental levels. It is likely that the maintenance of this high level of importance of the religion domain among Jamaican adolescents reflects a genuine cultural difference. Religion is an integral part of life in the Jamaican society from youth to adulthood and maintains a high priority amongst other life commitments, whereas its relative importance to Americans wanes across the adolescent period. Further, we learn from the results of this study that not only is religion a well-ingrained cultural priority for young Jamaicans, but clearly, it is also an enjoyable investment for them (i.e., as was previously discussed, enjoyment was the strongest predictor of valuing in this domain.) It is quite likely that U.S. adolescents find religion less enjoyable as they age; therefore, perhaps they come to identify with this domain less than other domains over time. Finally, there were unpredicted grade differences in the friends and sports domains: eleventh graders identified more strongly with the friends' domain and less strongly with the sports domain than did adolescents at lower grade levels. It is very interesting that for Jamaican adolescents the importance of friends increases for older adolescents without a commensurate decrease in importance of family, which tends to be the finding among U.S. adolescents. This also likely reflects a cultural priority placed on family such that it is not displaced by other increasingly important life domains across the adolescent period.

Domain Valuing and Jamaican Adolescent Adjustment

Grade and gender differences were apparent in various markers of adolescent adjustment. Boys reported engaging in significantly higher levels of problem behavior in the past year than did girls. This is consistent with U.S. research findings. For example, in a large scale longitudinal study of the development of the multiple domains of child and adolescent self-concept, Cole, Maxwell, Martin, Peeke, Seroczynski, Tram, Hoffam, Ruiz, Jacquez, & Maschan (2001) found

that “consistent with [the] gender stereotype hypothesis, females perceived themselves to be better behaved than did males” during the elementary and middle school years. In addition, Jamaican seventh graders in the current sample reported significantly higher levels of life satisfaction than did ninth or eleventh graders, and both seventh and ninth graders had higher percent grade averages than did eleventh graders. Similar to the findings of Anderson (2003), there was no gender difference in adolescents’ reported academic achievement: boys’ and girls’ grade averages were comparable.

Valuing in individual domains was found to be more strongly related to life adjustment than adolescents’ valuing profiles. Domain valuing on both the Identity Pie and the Modified Eccles Scales supported Hypothesis 3, although the Modified Eccles Scale valuing was more strongly and consistently related to outcomes. Specifically, valuing in the schoolwork and religion domains was related to achieving higher grades and higher levels of life satisfaction, and lower levels of depression and conduct problems.

Surprisingly, valuing in the dating domain emerged as a strong *positive* correlate of poor achievement, greater depression, and higher levels of conduct problems. In conjunction with the finding that the dating domain was allotted the smallest slice of the Identity Pie by both boys and girls, this finding suggests that culture may play a role in these adolescents’ reaction to the dating domain. First, it appears that dating, at least the way in which it was defined in this study, is relatively unimportant to Jamaican adolescents compared with other areas of life. However, adolescents for whom dating takes priority over other life domains tend to have poorer academic, psychological, and behavioral adjustment. Without making predictions about the direction of this effect, it seems probable that there are other aspects of the lives of these adolescents who are more invested in the dating domain that may relate to their poorer adjustment. For example,

considering the fact that formal Jamaican society is fairly restrictive around sexuality, it is likely that most parents of adolescents in this sample *do not allow* their adolescents to date often or at all, which may be related to the low priority the adolescents place on this domain. Therefore, there may be key differences in the home environments of adolescents who place a higher priority on dating, such as more permissive parenting, lower activity monitoring, or lower parental emotional support. Prior research shows that permissive parenting and low home monitoring relate to poorer adolescent adjustment in several areas (e.g., Fuligni & Eccles, 1993).

An alternative explanation to this finding in the dating domain is that the survey may have done a poor job of tapping into the domain of romantic relationships as Jamaican adolescents understand it. It is possible that Jamaican adolescents conceptualize this domain in a less structured manner than do U.S. adolescents, such that they do not consider their romantic interests to be interests in 'dating' per say. Consistent with this explanation, it is possible that Jamaican adolescents use other language besides the term 'dating' to discuss this domain, a subtlety which the current survey would not have captured.

Adolescents in this sample clustered into distinct groups based on their patterns of domain valuing on the Identity Pie and the Modified Eccles Scales. Interestingly, there was little correspondence between the two sets of clusters; only one of the four clusters (universal/peer-oriented) was common to both domain valuing measures. For the Identity Pie, adolescents were grouped into schoolwork-oriented, religion-oriented, universal/peer-oriented, and family-oriented clusters; and for the Modified Eccles Scales, adolescents were grouped into universal/peer-oriented, non-sports-oriented, universally-oriented and non-dating-oriented clusters. It is clear that the main differences in clustering using the two measure of valuing stem from methodological differences in what was measured: the Modified Eccles Scales measured

absolute domain valuing, whereas the Identity Pie measured relative valuing. Therefore, domain valuing in the Eccles clusters was significantly more elevated across domains perhaps causing them to appear less distinct among each other than the Pie clusters. Nevertheless, it was the Eccles clusters that were more predictive of adolescent adjustment, although both set of clusters were only minimally unrelated to adolescent functioning.

The fact that the cluster of universal/peer-oriented adolescents emerged using both methods of domain valuing gives particular credence to recognizing it as a distinct Jamaican adolescent profile. This identity profile was also unique in that it had the most meaningful relations with life adjustment. Across both methods of domain valuing, universal/peer-oriented adolescents had lower grade averages than did adolescents with other profiles (especially for the girls based on the Modified Eccles Scale).

There are a few potential, though not necessarily competing, explanations for this finding. The first possibility stems from Eccles' (1983) expectancy-value theory and explains why schoolwork-oriented adolescents would achieve higher grades than the universal/peer-oriented. The expectancy-value theory postulates that self-competence beliefs lead to task valuing, which in turn leads to achievement outcomes in any particular domain. Much research by Eccles and her colleagues has supported this theory's proposition that children's achievement and choice of achievement tasks is partially predicted by their valuing of that task (see Eccles et al. 1998; Eccles et al. 1999; & Jacobs et al., 2002 for review). Therefore, the finding that valuing the schoolwork domain was related to higher grade averages is consistent with what the expectancy-value theory would predict. In fact, this theory would further suggest that the direction of this relation moves from valuing to achievement; hence, adolescents have higher grades because they value the schoolwork domain more highly. According to this theory, the

reverse would also be true for universal/peer-oriented adolescents: they achieve lower grades because they value the schoolwork domain less highly. Roberts and Petersen's work (1992) support this explanation by suggesting that there are psychological incentives for the pursuit of academic excellence for the academically self-identified.

Although a directional relation between valuing and achievement in the schoolwork domain may account for part of the finding that universal/peer-oriented adolescents have lower grades, it seems to be only a part of the picture. Specifically, the expectancy-value theory does not explain why schoolwork-oriented adolescents' grades were only significantly higher than universal/peer-oriented adolescents' grades, and not also family- or religion-oriented adolescents', although these sets of adolescents also valued schoolwork at a lower level. If the expectancy-value theory were sufficient to explain the current findings, one would expect schoolwork-oriented adolescents to have higher grades than adolescents of all other profiles. This, therefore, suggests that there must be alternate or additional explanations to account fully for this finding.

A second possible explanation comes from an examination of other ways besides schoolwork valuing in which universal/peer-oriented adolescents differed from the other adolescents. An inspection reveals that the other major difference lay in these adolescents' relatively high level of valuing of the friends domain compared to other domains, including family. It seems that having a peer orientation which takes priority over other domains including family/adult-oriented domains was related to lower achievement in this sample. Previous research with U.S. adolescents has shown that adolescents with an extreme peer-orientation can be more poorly adjusted than those with moderate peer-orientations (e.g., Dornbusch, et al., 1985). For example, Fuligni and Eccles (1993) found that an extreme peer-orientation may be

related to an adolescents' sense of powerlessness in the parent-child relationship, which in turn relates to home rule-breaking and poor school performance. The present findings among Jamaican adolescents seem to support this U.S. finding. Although the family structure of universal/peer-oriented adolescents did not differ from that of other adolescent clusters, the presence of a significantly stronger peer than adult/family orientation may indicate that family influence is either lacking or, for whatever reason, not important to these adolescents. For example, as discussed earlier, these adolescents may have significantly different home environments. Specific to the academic domain, they may receive less academic family support, or simply care less about parental wishes regarding their academic performance.

Overall, the finding that more peer-oriented adolescents have poorer outcomes is consistent across analytic techniques in this study: it emerged using correlational and clustering techniques, and across both measures of domain valuing. Future research directions based on this major finding will be discussed in the final section.

Conclusions, Limitations, and Future Research

Overall, the findings of this study painted a picture of how Jamaican adolescents think about themselves. There was more consistency across genders and ages than there were differences among them. The majority of the predictions based on prior research in Jamaica were supported, and some predictions based on U.S. research (made in the absence of relevant Jamaican research) also were supported. There were several unsupported hypotheses, however, some of which seemed to be due to legitimate cultural differences between Jamaican adolescents and U.S. adolescents, and others of which may have been due to methodological issues.

As is often the case with exploratory or pioneering research in a new area or with a new population, the greatest strengths of this study also were its greatest limitations. The sample for

this study was recruited from a traditional high school in St. Andrew, Jamaica, which means that students in the sample tended to be higher achieving and from homes at higher socioeconomic levels than Jamaican adolescents from other types of Jamaican high schools or residential communities. Therefore, the results of this study are, in a strict sense, only applicable to middle class Jamaican adolescents attending traditional high schools. Another limitation of this study is its sole reliance on self-reported data, which can be biased due to social desirability concerns. It is hoped that the negative effects of self-reported data were minimized through the use of anonymous surveys. To build on these findings, future research can include multiple reporters (e.g., parents and teachers) and archival data (e.g., grades can be retrieved from school records).

That said, the major strength of this approach is that the results are directly applicable to this specific demographic of Jamaican adolescents who are particularly worthy of study because they are amongst the most likely to pursue tertiary education and become the future leaders of the country. It is worthwhile to the education system and the country in general to seek to understand this set of adolescents. Therefore, although the restricted sample is the greatest limitation of this study by decreasing generalizability of the results, it does not detract from the value of this first attempt to understand adolescent identity among Jamaicans using a novel measure.

The validation of the Identity Pie in this study now paves the way for future research to examine identity construction in other types of Jamaican adolescents and add to the body of scientific knowledge about Jamaican adolescent development. Future research also is recommended in the U.S. and other countries to validate the Identity Pie cross-culturally and test some of the speculations made in this study regarding cultural differences in valuing, especially dating domain. Finally, future research could further explore the contexts of the lives of strongly

peer-oriented Jamaican adolescents, especially their home environments, including their relationship with parents. The negative implications of this profile on multiple measures of life adjustment also deserves more focused research attention.

In sum, the results of this study can be useful to anyone interested in understanding Jamaican adolescents, especially those belonging to the particular demographic sampled. It will provide some insight into how Jamaican adolescents think about themselves, what areas of life they value, and how their valuing may be related to their adjustment in several areas of life. School administrators and educators, school counselors and psychologists, parents, and the participating adolescents themselves might find the results of this study interesting and useful.

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Table 8

Correlations between domain valuing on the Identity Pie and the Modified Harter and Eccles Scales – Males only

	Family	Sports	Religion	Dating	Schoolwork	Friends
Modified Eccles Scales						
Family domain	**0.40****	0.09	-0.16	-0.00	-0.13	-0.19
Sports domain	0.01	**0.60****	-0.08	0.04	-0.12	-0.03
Religion domain	-0.14	-0.07	**0.55****	-0.09	-0.06	0.18
Dating domain	-0.28**	0.09	0.05	**0.56****	-0.04	-0.02
Schoolwork domain	-0.02	-0.06	0.08	-0.05	**-0.36****	-0.20*
Friends domain	-0.16	-0.03	-0.02	0.10	-0.13	**0.47****
Modified Harter Scales						
Family domain	**0.29****	0.01	0.03	-0.03	-0.09	0.01
Sports domain	-0.17	**0.49****	0.03	0.21*	-0.01	-0.15
Religion domain	-0.29**	-0.04	**0.41****	-0.03	0.05	-0.01
Dating domain	-0.07	-0.15	-0.05	**0.27****	0.08	-0.04
Schoolwork domain	-0.07	-0.03	0.09	-0.01	**0.01**	0.06
Friends domain	-0.16	-0.05	0.10	0.17	-0.08	**0.30****

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

Table 9

Correlations between domain valuing on the Identity Pie and the Modified Harter and Eccles Scales – Females only

	Family	Sports	Religion	Dating	Schoolwork	Friends
Modified Eccles Scales						
Family domain	**0.035****	0.01	0.05	-0.07	-0.23**	-0.67
Sports domain	-0.03	**0.48****	-0.03	-0.18*	0.00	-0.13
Religion domain	-0.01	-0.04	**0.58****	-0.17*	0.04	-0.52**
Dating domain	0.05	-0.11	0.04	**0.55****	-0.43**	0.11
Schoolwork domain	-0.06	0.01	0.18*	-0.27**	**0.26****	-0.36**
Friends domain	-0.06	0.03	-0.06	0.18*	-0.15	**0.33****
Modified Harter Scales						
Family domain	**0.18***	0.05	0.13	-0.10	-0.02	-0.212*
Sports domain	-0.13	**0.43****	-0.05	-0.16	-0.01	0.04
Religion domain	-0.03	-0.02	**0.36****	-0.02	0.13	-0.33**
Dating domain	-0.03	0.01	-0.00	**0.11**	**-0.05**	0.02
Schoolwork domain	-0.11	-0.12	-0.01	-0.14	0.22**	0.04
Friends domain	0.04	0.02	-0.05	0.21*	-0.15	**0.25****

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

Table 10

Correlations between domain valuing on the Identity Pie and the Modified Harter and Eccles Scales –Grade 7

	Family	Sports	Religion	Dating	Schoolwork	Friends
Modified Eccles Scales						
Family domain	**0.31****	0.21	-0.20	-0.06	-0.01	0.06
Sports domain	-0.17	**0.54****	-0.20	0.10	0.11	-0.03
Religion domain	-0.31*	-0.21	**0.52****	-0.20	0.00	-0.26
Dating domain	-0.17	0.21	0.13	**0.60****	-0.37**	0.11
Schoolwork domain	-0.13	-0.31*	0.23	-0.31*	**0.35****	-0.23
Friends domain	-0.12	0.22	-0.141	0.27	-0.10	**0.44****
Modified Harter Scales						
Family domain	**-.27***	-0.20	0.06	0.07	0.13	0.08
Sports domain	-0.18	**0.49****	-0.08	0.20	-0.034	0.02
Religion domain	-0.32*	-0.21	**0.32***	-0.02	0.08	-0.10
Dating domain	-0.08	0.20	0.01	**0.19**	-0.07	-0.08
Schoolwork domain	-0.20	-0.19	0.10	-0.20	**0.22**	-0.02
Friends domain	-0.25	0.06	-0.17	0.41**	-0.01	**0.41****

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

Table 11

Correlations between domain valuing on the Identity Pie and the Modified Harter and Eccles Scales –Grade 9

	Family	Sports	Religion	Dating	Schoolwork	Friends
Modified Eccles Scales						
Family domain	**0.33****	0.05	-0.03	0.10	-0.35**	-0.05
Sports domain	-0.04	**0.52****	-0.10	0.10	-0.17	-0.06
Religion domain	0.01	-0.23*	**0.53****	-0.04	0.02	-0.16
Dating domain	-0.08	0.01	-0.03	**0.56****	-0.30**	-0.05
Schoolwork domain	-0.09	-0.09	0.10	0.01	**0.26****	-0.11
Friends domain	-0.10	-0.067	0.02	0.14	-0.22*	**0.37****
Modified Harter Scales						
Family domain	**0.31****	0.02	0.06	0.02	-0.21*	-0.01
Sports domain	-0.15	**0.42****	-0.03	0.02	0.03	-0.11
Religion domain	-0.18	-0.10	**0.37****	0.05	0.09	-0.09
Dating domain	-0.05	-0.14	0.03	**0.27****	-0.02	-0.06
Schoolwork domain	-0.01	0.01	0.05	-0.06	**0.15**	-0.05
Friends domain	-0.02	-0.06	0.18*	0.12	-0.23**	**0.25****

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

Table 12

Correlations between domain valuing on the Identity Pie and the Modified Harter and Eccles Scales –Grade 11

	Family	Sports	Religion	Dating	Schoolwork	Friends
Modified Eccles Scales						
Family domain	**0.51****	-0.03	-0.09	-0.12	-0.04	-0.29*
Sports domain	-0.08	**0.52****	0.09	-0.31*	-0.04	-0.14
Religion domain	-0.29*	0.09	**0.73****	-0.17	-0.04	-0.52**
Dating domain	0.26	-0.13	0.03	**0.34***	-0.09	-0.27
Schoolwork domain	-0.19	-0.08	0.15	-0.17	**0.47****	-0.23
Friends domain	-0.07	0.07	-0.04	-0.15	0.13	**0.28***
Modified Harter Scales						
Family domain	**0.28***	0.01	0.13	-0.20	0.21	-0.22
Sports domain	-0.06	**0.42****	0.04	0.11	-0.07	0.07
Religion domain	-0.33*	6.00	**0.55****	-0.23	0.28*	-0.22
Dating domain	0.07	0.07	-0.21	**-0.11**	0.17	0.14
Schoolwork domain	-0.15	-0.15	0.03	-0.12	**0.09**	0.27*
Friends domain	-0.01	-0.09	0.03	0.08	0.10	**0.22**

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

Appendix A

Parent consent form

Dear parent/guardian:

I am a past Head Girl of Ardenne High School (‘95-‘96) and I am completing a Ph.D. in clinical psychology at Bowling Green State University in Ohio, U.S.A. This survey is part of a research project that I am conducting for my dissertation. It is designed to find out about what Jamaican teenagers and their parents think are important, and how that affects their relationship with each other. I need your help and your teenager’s help to learn about these things. YOUR OPINIONS ARE VERY IMPORTANT TO ME. I would like you and your teenager to fill out a survey so you can share your thoughts and opinions. Your responses on these surveys will NOT affect your teenager’s grades, or your relationship with the school in any way. The results of this survey may be used to help educators and psychologists better understand the adolescent experience.

This survey should take you no more than 30 minutes to fill out. Your participation in this study is completely voluntary and your answers will be PRIVATE and CONFIDENTIAL. You will not write your name on the survey anywhere. Your choosing to complete the survey will indicate your consent to participate in this study. This sheet is your own permission form; please tear this sheet off and keep it. Instructions for completing the questionnaire are included; however, should you have questions or concerns, you may contact me at (876) 927-0095 during the next two weeks, or your school principal, Mrs. E. Tyson. You can also reach me or my Dissertation advisor, Dr. Eric Dubow, via email at gaila@bgsu.edu or edubow@bgnet.bgsu.edu, respectively, or by phone at the Psychology Department of Bowling Green State University, whose number is listed above. When you have completed the parent survey, please seal it in the enclosed manilla envelope and send it back to me with your teenager. I will personally collect these envelopes from your teenager. As a token of appreciation for your participation, you will receive an entry into a drawing for a prize.

To give your permission for your teenager to participate in this study by completing a similar survey, please sign the enclosed parental consent form and give it to your teenager to return to me as soon as possible.

Thank you very much for your help!

Sincerely,

Gail M. Anderson, M.A.

Appendix B

Student assent form

Dear Student:

I am a past Head Girl of Ardenne High School (‘95-‘96) and I am completing a Ph.D. in clinical psychology at Bowling Green State University in Ohio, U.S.A. This survey is part of a research project that I am conducting for my Dissertation. It is designed to find out about what Jamaican teenagers and their parents think are important. I need your help to learn about these things. YOUR OPINIONS ARE VERY IMPORTANT TO ME. I would like you to fill out a survey so you can share your thoughts and opinions. Your responses on this survey will NOT affect your grades, or your relationship with your school in any way. The results of this survey may be used to help educators and psychologists better understand the adolescent experience.

The survey should take you no more than 45 minutes to fill out. You don’t have to fill it out if you don’t want to. If you start, and then change your mind, you can stop. If you choose to fill it out, your answers will be PRIVATE and CONFIDENTIAL. You will not write your name on the survey anywhere. This sheet is your own permission form for doing the survey; please tear it off and keep it. As a token of appreciation for completing this survey, you will receive an entry into a drawing for a prize.

Please place an X in the space below that shows if you choose to fill out the survey:

After listening to Gail Anderson from Bowling Green State University,

_____ I want to fill out the survey

_____ I *do not* want to fill out the survey

If you have questions or concerns, you may contact me at (876) 927-0095 during the next two weeks, or your school principal, Mrs. E. Tyson. You can also reach me or my Dissertation Advisor, Dr. Eric Dubow, via email at gaila@bgsu.edu or edubow@bgnet.bgsu.edu, respectively, or by phone at the Psychology Department of Bowling Green State University, whose number is listed above. Thank you for your help!

Sincerely,

Gail M. Anderson, M.A.

Appendix C

Adolescent Questionnaire

Please fill in the following background information

Gender (M/F) _____

Grade _____

Date of Birth _____ *(day/month/year)*

Nationality_____

Is either of your parents/guardians the owner or manager of a business? (Y/N)_____

What do your parents/guardians do for a living?_____

_____

Please list all the people that live in your home (i.e., mother, brother, grandmother, etc.)_____

_____

_____

Who is completing your parent survey for this study? (e.g., mother, father) _____

Below are several pairs of sentences describing some teenagers. First decide whether you are more like the teenager on the left side or the teenager on the right side. Then decide whether that sentence is *really true* for you or *only sort of true* for you, and put an X in the corresponding box. For each sentence, only put one X.

Really True For me	Sort of True For me				Sort of True For me	Really True For me
		Some teenagers think it is important to be intelligent	**BUT**	Other teenagers don't think it is important to be intelligent		
		Some teenagers think it's important that the people they are romantically interested in like them back	**BUT**	Other teenagers don't really care whether someone they are interested in likes them that much		
		Some teenagers think it's important to be good at sports	**BUT**	Other teenagers don't care much about being good at sports		
		Some teenagers think it's important to be a religious person	**BUT**	Other teenagers don't care much about being religious		
		Some teenagers think it's important to get along well with their family members	**BUT**	Other teenagers don't really care much whether they get along well with their family members		
		Some teenagers think it's important to have friends	**BUT**	Other teenagers don't care much whether they have friends		
		Some teenagers don't think that doing well in school is really important	**BUT**	Other teenagers think that doing well in school is important		
		Some teenagers don't care that much whether they are dating someone they are romantically interested in	**BUT**	Other teenagers think it's important to be dating someone they are interested in		
		Some teenagers don't think that being athletic is important	**BUT**	Other teenagers think that being athletic is important		
		Some teenagers don't think that spiritual beliefs are important	**BUT**	Other teenagers think that it's important to have spiritual beliefs		
		Some teenagers don't think spending time with their family members is important	**BUT**	Other teenagers think that spending time with their family members is important		
		Some teenagers don't think friendships are important		Other teenagers think that friendships are important		

Below is a list of questions and statements. Answer each question or statement by circling one of the numbers between 1 and 7.

	Not at all			Somewhat			Very much
1. How much do you enjoy schoolwork?	1	2	3	4	5	6	7
2. How much do you enjoy religion, faith or spirituality?	1	2	3	4	5	6	7
3. How much do you enjoy sports?	1	2	3	4	5	6	7
4. How much do you enjoy spending time with your family?	1	2	3	4	5	6	7
5. How much do you enjoy going on dates?	1	2	3	4	5	6	7
6. How much do you enjoy spending time with friends?	1	2	3	4	5	6	7
7. In general, how useful is what you learn in school?	1	2	3	4	5	6	7
8. In general, how useful is what you learn in religion, faith, or spirituality?	1	2	3	4	5	6	7
9. In general, how useful is what you learn in sports?	1	2	3	4	5	6	7
10. In general, how useful is spending time with your family?	1	2	3	4	5	6	7
11. In general, how useful is dating?	1	2	3	4	5	6	7
12. In general, how useful is it to have friends?	1	2	3	4	5	6	7

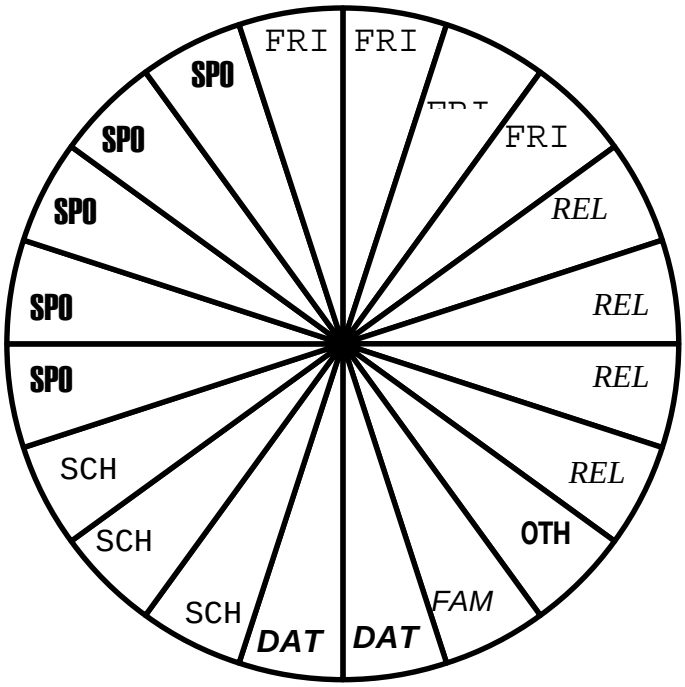
	Not at all important			Somewhat important			Very important
13. For me, being good at schoolwork is…	1	2	3	4	5	6	7
14. For me, being good at religion, faith, or spirituality is…	1	2	3	4	5	6	7
15. For me, being good at sports is…	1	2	3	4	5	6	7
16. For me, being good at getting along with my family members is…	1	2	3	4	5	6	7
17. For me, being successful at dating is…	1	2	3	4	5	6	7
18. For me, having friends is…	1	2	3	4	5	6	7

	Very boring						Very interesting
19. In general, I find doing schoolwork to be…	1	2	3	4	5	6	7
20. In general, I find religion, faith, or spirituality to be…	1	2	3	4	5	6	7
21. In general, I find sports to be…	1	2	3	4	5	6	7
22. In general, I find spending time with my family to be…	1	2	3	4	5	6	7
23. In general, I find going on dates to be…	1	2	3	4	5	6	7
24. In general, I find spending time with friends to be…	1	2	3	4	5	6	7

Think about who you are as a person and the things that make you, you. Below is a "pie" with 20 slices. Pretend that this pie represents you. I want you to make this pie represent *who you are* as a person based on how important these 6 areas of life are to *you*. If there is another aspect of your life besides these 6 categories that is very important to you and you want to include it in your pie, please use the "other" category (#7) and write in the name of the new area on the line beside #7. You should assign more pie slices to areas of life that are more important to you. It is okay to assign several slices to an area that is very important to you, or to choose not to assign any slices to an area that is not important to you at all. **Remember, this pie represents what's important to you, not how much time you spend doing it. For example, dating may be very important to you even if you have never dated anyone.**

1. **family – (FAM)**
2. **sports – (SPO)**
3. **religion or spirituality – (REL)**
4. dating – (DAT)
5. schoolwork – (SCH
6. friendships – (FRI)
7. other – (OTH)_____

For example, a teenager who thinks that playing sports is most important to her (SPO), then going to church (REL) and having friends (FRI), then school grades (SCH), then going out on dates (DAT), then spending time with family (FAM) and singing in the choir (OTH), might make her pie this way:



Please rank these 6 or 7 areas of life (FAM, SPO, REL, DAT, SCH, FRI) according to how important they are to YOU:

#1 (Most important): _____

#2_____

#3_____

#4_____

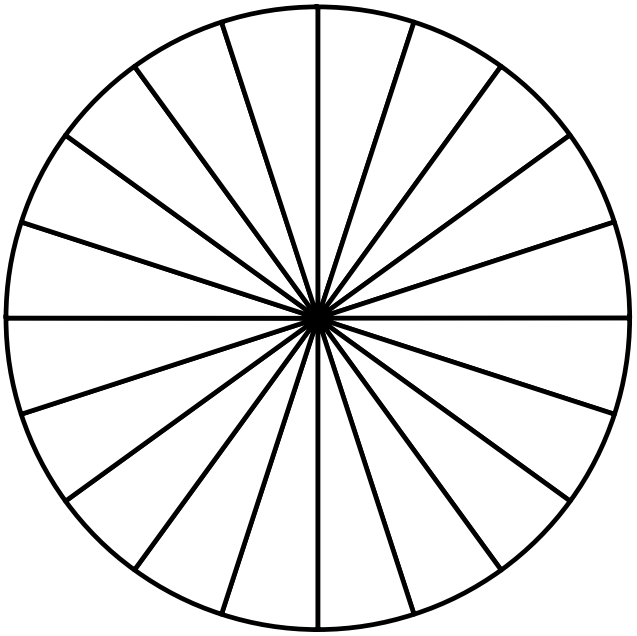
#5_____

#6_____

#7 *OPTIONAL*_____

Now, you make a pie to <u>represent the person you are today</u> using the same 6 areas of life below. If there is another aspect of your life besides these five categories that is very important to you and you want to include it in your pie, please use the "other" category (#7) and write in the name of the new area on the line beside #7.

1. family – (FAM)
2. sports – (SPO)
3. religion or spirituality – (REL)
4. dating – (DAT)
5. schoolwork – (SCH)
6. friendships – (FRI)
7. other – (OTH): _____



Below is a list of some ways you may have felt or behaved. Please use the scale below to indicate how often you have felt this way <u>during the past 7 days</u>:

1 = rarely or none of the time (less than 1 day in the past week)
2 = some of the time or a little of the time (1-2 days in the past week)
3 = occasionally or a moderate amount of the time (3-4 days in the past week)
4 = Most or all of the time (5-7 days in the past week)

1. I was bothered by things that usually don't bother me. ____
2. I did not feel like eating; my appetite was poor. ____
3. I felt that I could not shake off the sad feelings even with help from my family and friends__
4. I felt I was just as good as other people____
5. I had trouble keeping my mind on what I was doing____
6. I felt depressed____
7. I felt everything I did was an effort____
8. I felt hopeful about the future____
9. I thought my life had been a failure____
10. I felt afraid____
11. My sleep was restless____
12. I was happy____
13. I talked less than usual____
14. I felt lonely____
15. People were unfriendly____
16. I enjoyed life____
17. I cried a lot____
18. I felt 'low' or 'blue'____
19. I felt that people disliked me____
20. I could not get "going"____

What was your final exam average on your most recent report? _____%

Below are five statements with which you may agree or disagree. Using the 1-7 scale below, circle a number between 1 (strongly disagree) and 7 (strongly agree) for each statement.

1 = strongly disagree **2** = disagree **3** = slightly disagree **4** = neither agree nor disagree **5** = slightly agree **6** = agree **7** = strongly agree

1. In most ways my life is close to my ideal.	1	2	3	4	5	6	7
2. The conditions of my life are excellent.	1	2	3	4	5	6	7
3. I am satisfied with my life.	1	2	3	4	5	6	7
4. So far, I have gotten the important things I want in life.	1	2	3	4	5	6	7
5. If I could live my life over, I would change almost nothing.	1	2	3	4	5	6	7

How often have you been involved in these behaviors in the last 12 months?

0 = Never
1 = Once
2 = 2-5 times
3 = 6-10 times
4 = 10-50 times
5 = More than 50 times

1. Skipped school _____
2. Traveled by bus, etc., or got into a cinema without paying _____
3. Taken inexpensive objects from a shop without paying _____
4. Stolen something expensive _____
5. Stolen a car or motorcycle _____
6. Broken in to steal _____
7. Deliberately destroyed or broken windowpanes, bus seats, street lamps, post boxes, etc. _____
8. Vandalized or caused damage that was expensive to repair _____
9. Sworn/cursed in front of a teacher _____
10. Had a severe quarrel with a teacher _____
11. Fought with a weapon (e.g., knife) _____

Please answer the following questions about yourself:

1. In the last 4 years, have you had any behavior or discipline problems at school resulting in your receiving a note or your parents/guardians being asked to come in and talk to a teacher or the principal? **Y / N** (circle one)
2. In the last 4 years, have you been suspended or expelled from school? **Y / N** (circle one)
3. What was your final exam average on your most recent report? _____**%**

Thank you very much!

When you have completed all items on this survey, please return it to me (Gail Anderson). Make sure that you tear off the instructions sheet and keep it because it contains your survey #. You will need your survey # to collect any prizes won for doing this survey.