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## Community Violence Exposure and Positive Youth Development in Urban Youth

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## Abstract

Youth in urban environments are exposed to community violence, yet some do well and continue on a positive developmental trajectory. This study investigated the relationships between lifetime community violence exposure (including total, hearing about, witnessing, and victimization), family functioning, and positive youth development (PYD) among 110 urban youth ages 10–16 years (54% female) using a paper and pen self-report survey. This cross-sectional study was part of an interdisciplinary community-based participatory research effort in West/Southwest Philadelphia. Almost 97% of the sample reported some type of community violence exposure. Controlling for presence of mother in the home and presence of father in the home, separate linear regression models for PYD by each type of community violence exposure indicated that gender and family functioning were significantly associated with PYD. None of the types of community violence exposure were significant in the models. Significant interactions between gender and presence of mother in the home and gender and family functioning helped better explain these relationships for some of the types of community violence exposure. Presence of mother was associated with higher PYD for girls, but not for boys. Boys with poor family functioning had lower PYD than girls with poor family functioning. This study helps to better delineate relationships between CVE and PYD by adding new knowledge to the literature on the role of family functioning. Points of intervention should focus on families, with attention to parental figures in the home and overall family functioning.

## Keywords

Community violence; Family functioning; Positive youth development; Urban

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## Introduction

Community violence exposure (CVE) is a public health problem of dire proportions affecting urban youth. CVE includes direct victimization, witnessing, and hearing about violent acts in the community, and can be an extreme stressor that affects the physical and mental health of youth [1, 2]. Over 85% of urban youth report witnessing some form of community violence in their lifetime and almost 70% report direct victimization [3–8]. The physical and cognitive immaturity of youth place them at risk for poor health outcomes such as depression, anxiety, posttraumatic stress, aggression, sleep disturbances, and somatization in response to CVE [5, 9–13]. If young people are the future of society, exposure to violence and its negative ramifications are unacceptable and demand innovative solutions.

Although there are consistent empirical findings for the relationship between CVE and mental health symptoms, not all youth in urban settings who are exposed to community violence develop negative sequelae [14]. Some display signs of positive youth development (PYD), even given these experiences and environment. A PYD perspective expands knowledge beyond the *absence* of problem behaviors or pathology to the *presence* of healthy development [15–17]. PYD encompasses the overarching idea of a strengths-based approach, individual and ecological characteristics involved in development, and an outcome of PYD as a concept to be measured through empirical indicators. Indicators of PYD extend beyond just mental health, to include success in school, caring for others, and overall sense of positive self-worth and self-efficacy [16–20]. In assessing outcomes of PYD, the potential of young people is emphasized, rather than deficits and poor outcomes [16–20]. Understanding CVE and PYD in potentially vulnerable urban youth can help foster improved developmental outcomes.

The role of the family in the proximal context of development is critical [21] and this is true even when youth are exposed to trauma [22]. The processes and interactions among members within a family system are important in assessing the effects of CVE [23]. Family may act as a protective factor to the effects of CVE which ultimately could support PYD [24]. To determine if this is the case, we undertook this study. The purpose of this study was to examine the relationship between CVE, family functioning, and PYD in a sample of community-dwelling urban youth.

## Methods

This study was a component of a larger parent study conducted by the Philadelphia Collaborative Violence Prevention Center (PCVPC) called “Living Healthy in Philadelphia.” The PCVPC is an interdisciplinary community-based participatory research center with a mission to design, implement and evaluate programs that enhance the resiliency of communities affected by violence and to reduce the frequency and impact of youth violence, injury and death in communities of West/Southwest (W/SW) Philadelphia [25]. In “Living Healthy,” a quantitative, cross-sectional design using self-administered surveys sought to examine individual and environmental stressors and assets in a youth living in W/SW Philadelphia. Data were collected between June and August of 2008. The measures for “Living Healthy” were chosen jointly by community and academic partners and based on data from qualitative interviews completed with youth in the community [26].

The sample for this study was a convenience sample of 110 community-dwelling youth ages 10–16 living in W/SW Philadelphia. During data collection for “Living Healthy,” data were monitored as they were collected to achieve a sample of youth with roughly equal distribution by age (10–13 and 14–16 years), gender, and the three neighborhoods in W/SW Philadelphia. Youth were recruited through two possible mechanisms: (a) referral by adult members of the Philadelphia Area Research Community Collaborative (PARCC) and their respective community groups, or (b) recruitment from a variety of community sites where parents and youth congregate (e.g., outside a recreation center, the local library, fast food restaurants) by community liaison Research Assistants (RAs). PARCC members and community liaison RAs (“recruiters”) were trained on eligibility criteria, recruitment and retention protocol, consent, and child safety. Youth assent and parental/guardian consent were obtained. This study was approved by the University of Pennsylvania Institutional Review Board.

## Measurements

The participants were provided with paper and pen surveys. As part of the self-administered survey, the instruments and data pertinent to this analysis included the demographic information, lifetime history of CVE, PYD, and family functioning.

**Demographic Data**—Information on age, gender, ethnicity, race, presence of mother in the home (yes/no) and presence of father in the home (yes/no) was gathered.

**Community Violence Exposure**—The Children’s Report of Exposure to Violence (CREV) [1] was used to gather data on CVE. The CREV is based on the operational definition of community violence, which is “deliberate acts intended to cause physical harm against a person or persons in the community” [9]. The instrument assesses four modes of lifetime exposure to community violence CVE; media, direct victimization, witnessing and hearing about (hearing about other people’s reports of occurrence). The CREV includes three categories of victims: strangers, familiar persons, and self. Items are rated on a 5point Likert scale (no/never, one time, a few times, many times, and every day). The subscales of direct victimization, witnessing, and hearing about community violence, as well as Total CVE (sum of the direct victimization, witnessing, and hearing about community violence subscales) were used for the analyses in this study. Higher scores indicate more exposure. Possible ranges of scores were: Total CVE (0–96), direct victimization (0–16), witnessing (0–40), and hearing about (0–40). In our sample, the Cronbach alpha coefficients were: total CVE  $\alpha = .91$ , direct victimization  $\alpha = .57$ , witnessing  $\alpha = .82$ , and hearing about  $\alpha = .91$ .

**Positive Youth Development**—The measurement of PYD came from the *Measure of the 5 Cs and PYD from the 4-H Study of PYD* [17]. This instrument was originally used in the 4-H Study of PYD, a one-year longitudinal study of predominately European-American 10 and 11 year olds (<10% of sample was African American) [20]. The measurement of PYD is a composite of five subscales representing the five C’s: Confidence, Competence, Character, Caring, and Connection. The items for the *Measure of the 5 Cs and PYD from the 4-H Study of PYD* were empirically selected from the previously validated instruments of the Profiles of Student Life Attitudes and Behaviors Survey [27], the Self-Perception Profile for Children [28], the Teen Assessment Project Survey Questions Bank [29], the Interpersonal Reactivity Scale [30], and the Eisenberg Sympathy Scale [31]. A total score, calculated as the mean of the five C’s, was used for data analysis. Scores for each of the five C’s and PYD have a possible range of 0–100. In this study, the Cronbach alpha for the overall score of PYD was  $\alpha = .86$ . For the five C’s in this study, the reliabilities were: Competence ( $\alpha = .85$ ), Confidence ( $\alpha = .89$ ), Connection ( $\alpha = .93$ ), Character ( $\alpha = .91$ ), and Caring ( $\alpha = .80$ ).

**Family Functioning**—The McMaster Family Assessment Device (FAD) 12-item General Functioning Scale was used to measure family functioning [23]. Family functioning is characterized by the overall health and pathology of the family system, encompassing six dimensions: problem solving, communication, roles, affective responsiveness, affective involvement, and behavior control [23]. In this study, family was conceptualized as “A self-identified group of two or more individuals...who function in a way that they consider themselves to be a family” [32]. Participants self-defined family and were asked to complete this instrument by using *whoever they considered to be family*. Items were on a 4-point Likert scale (strongly agree to strongly disagree) and scores could range from 1 to 4 with lower scores indicate healthier functioning. In this study, the Cronbach alpha in the overall sample was  $\alpha = .85$ .

### Missing Data

There was over 25% missing data on the outcome variable of PYD. In order to address the loss of statistical power from missing data for the regression analysis, Imputation by Chained Equations (ICE) was conducted in Stata 11 [33]. Twenty-five imputations were created. The multiply imputed data sets were used for regression analyses only. Descriptive statistics in the tables, correlations, independent sample *t* tests, Wilcoxon–Mann–Whitney tests, and chi-square tests did not use the imputed data sets.

### Results

The sample was 54% female and 46% male with an average age of 13.1 years (SD 1.97). Over 96% of the sample reported being African American, 1% White, and 2% from multiracial backgrounds; the sample was predominately non-Hispanic (94%). Eighty percent ( $n = 88$ ) reported having a mother in the home, and almost 31% ( $n = 34$ ) reported having a father in the home.

Over 97% of the sample reported some type of CVE. Table 1 describes CVE percentages by type. Greater than half of the youth (54%) had been directly victimized. Of the total sample, almost 40% ( $n = 44$ ) had been beaten up, 33% ( $n = 36$ ) had been chased or seriously threatened, 15% ( $n = 17$ ) robbed or mugged, and 5% ( $n = 6$ ) had been shot or stabbed. A categorical variable for victimization was created, with 38% ( $n = 41$ ) of the youth reporting repeated victimization ( $\geq 2$  times). Eighty three percent ( $n = 91$ ) reported hearing about a stranger being killed and over 70% ( $n = 77$ ) reported hearing about someone they knew being killed. Thirteen youth (12%) reported seeing a stranger killed and five youth (5%) reported seeing someone they knew killed. (See Table 2).

Bivariate relationships are presented in Table 3. Higher levels of total CVE, victimization, and witnessing were significantly associated with lower PYD. Healthier family functioning was significantly associated with higher PYD, higher levels of victimization and witnessing violence.

Table 4 describes the gender differences in the sample. Boys reported significantly higher levels of direct victimization, witnessing, hearing about, and total CVE than girls. Girls had significantly higher scores of PYD than boys. Boys had significantly unhealthier family functioning.

### Regression Modeling

Linear regression was used to model relationships between CVE, family functioning, and PYD and also included gender, mother in the home, and father in the home. Models for PYD were run separately for each CVE type (total CVE, victimization, witnessing, and hearing

about community violence) to examine differences among the different types of exposure. Due to skewness of victimization, a categorical variable of never been victimized, victimized once, and repeated victimization ( $\geq 2$  times) was used. After the main regression analyses, exploratory analysis was conducted with gender interactions, based on the statistical differences by gender in types of CVE, family functioning, and PYD. Table 5 shows the results of the regression models for PYD with and without interactions.

In the models without interactions, girls had higher PYD among all types of CVE and healthier family functioning was associated with higher PYD. No type of CVE, mother in the home, or father in the home was associated with PYD in the regression models. There were significant interactions between gender and mother in the home in all interaction models. As seen in Table 5, across CVE types, girls with a mother in the home had significantly higher PYD than boys with a mother in the home. In the models for Total CVE, hearing about, and witnessing community violence, there was a significant interaction between gender and family functioning. PYD was significantly lower for boys reporting unhealthy family functioning compared to girls having unhealthy family functioning. Other interactions with gender were not significant and none of the types of CVE was significant in these models.

## Discussion

The findings from this study with a sample of community-dwelling youth in an under-resourced urban setting indicate that family matters. Family functioning had the strongest influence on PYD in the context of all the different types of CVE. Healthier family functioning was consistently associated with higher PYD. Our findings confirm the existing literature indicating that parental communication, parental concern, and parental supervision support resilience in youth exposed to violence [13, 34], though are contrary to those showing family support is not protective in youth exposed to CVE [24, 35–37]. Family functioning in our study, however, was assessed not just in reference to parents, but was based on the way that youth self-defined family.

The gender interactions in the models highlight that family is important for both girls and boys but in different ways. First, for girls, having a mother in the home was associated with significantly better outcomes than boys. Other studies also demonstrate that mothers are important for girls in urban environments, as a protective influence in their lives [38]. Mothers can play a role in protection from harm and preparation for independence, which can change over the developmental course of adolescence [39]. The interplay of these two roles illuminates how mothers are important not just in protecting against negative outcomes for girls, but in augmenting healthy development. Second, for boys, unhealthy family functioning was associated with significantly lower PYD than girls with unhealthy family functioning. The findings suggest that for boys, it is not necessarily the presence of a parental figure in the home, but instead the global family dimensions of problem solving, communication, roles, affective responsiveness, affective involvement, and behavior control that influence outcomes. Previous studies investigating family phenomena (e.g., family support) and gender differences associated with CVE and youth outcomes indicates complex relationships [40, 41]. Our study adds a unique examination of the gender differences in the perspective of PYD. Overall, the structural component of parental presence and the functional component of family functioning are both important in different ways for the youth in our sample.

The reports of CVE in this sample youth are consistent with external data indicating high levels of community violence in W/SW Philadelphia, and with previous literature detailing the high proportion of youth exposed to community violence in urban settings [42]. The data

on different types of CVE provide detailed information on proximal and distal exposure to violence in the community. As expected, youth reported hearing about community violence the most, followed by witnessing and more proximally direct victimization. In this sample, youth reported roughly the same proportions of the different types of CVE as other published studies with youth in urban settings [35, 43].

The mean score (69.97) for PYD in this sample of predominately African American youth living in violent, urban environments was similar to scores reported in previous studies. Mean scores for youth in grades 5th-8th (around 10–13 years old) have been reported as 69.1–75.9, with older youth having lower scores [20, 44–46]. In our urban youth, there was no significant relationship between age and PYD. Consistent with previous reports, however, girls in this sample reported higher PYD than boys [46]. Studies using the *Measure of the 5 Cs and PYD from the 4-H Study of PYD* come from youth with geographic and socioeconomic diversity, but with a small percentage of African American youth (<10%). The findings from our study with predominately African American youth suggest the generalizability of PYD across race as well.

Future research in this area should examine better delineated knowledge of parental presence in the home. For parental presence, this study only considered yes/no answers to mother in the home and father in the home. Information specific to the roles that mothers, fathers, and other adult guardians play for youth would help provide a better understanding to parental/guardian roles in the relationship between CVE and PYD. The relationships between parents/guardians who live in the home and youth can be an important domain to target in an intervention. Therefore, more precise data on who and how youth self-define family would provide richer information on the contextual nature of presence of parents or guardians in the home and how youth see these individuals in regards to their self-definition of family and family functioning. This interplay and relationship to PYD would add knowledge to the literature.

## Limitations

Interpreting the findings should take into consideration the limitations. Convenience sampling may have introduced increased threats of bias in our study, but examining a fairly homogenous population and not generalizing beyond that population can reduce the threat [47]. The convenience sample of youth was drawn from places in the community including community centers, libraries, parks, and fast food restaurants. Youth involved in community organizations could have more support structures than those not involved in programs, and recruiting from community organizations could limit the generalizability of the results. This is less likely given our broad attempts to recruit youth from a variety of settings where they are likely to hang out (e.g., basketball courts and fast food restaurants). The cross-sectional nature of this study also leaves the temporal sequence of events unclear. Youth with lower PYD may be at risk for increased likelihood of CVE. Likewise, youth with higher PYD may be more likely to contribute to the overall health of the family.

The strength of the bivariate correlation between family functioning and PYD and variance accounted for in the regression models begs the question: Are family functioning and PYD the same? We thoughtfully examined this by creating a “PYD score without connection to family” by removing items from the measure that related to family, and used it in some exploratory analysis. The mean score of “PYD score without connection to family” was not significantly different than the mean of the original PYD. The results from correlations and regression analyses using “PYD without connection to family” were relatively similar to the results from the original PYD score, with small variations in  $P$ -values across  $P \leq .05$  and  $P \geq .05$  for the interaction term of family functioning and gender in the models. These exploratory analyses supported the use of the original PYD score in the analyses.

## Implications for the Community

This study focused on PYD to expand our understanding beyond negative aspects of youth development to those valued as positive. The findings from this study can contribute to the design and content of a community-based intervention for youth in violent environments. Undoubtedly, it speaks to the importance of positive outcomes in youth. PYD, as measured in this study, encompassed many facets of development, including social conscience, valuing diversity, behavior, self-worth, caring, connection to others, and school achievement. These dimensions are indicators of youth health and development, and are important to community members. It moves beyond using outcomes from a deficit perspective. Parents and community leaders in the neighborhoods where this study took place have spoken to the importance of addressing positive outcomes for youth in their community, such as youth planning for college, kids going to church, increased school attendance, and kids helping around the house [48]. The underlying approach of viewing youth from this positive perspective can set a foundation for healthy development.

Clearly, family is important to PYD in violent environments. Targeting family in an intervention is beneficial in augmenting health outcomes for youth in violence environments. Structural components of family (e.g., who lives in the home) are more difficult or impossible to modify, whereas family functioning can actually be a point of intervention to improve youth outcomes. Involving family as self-defined by the youth, in an intervention could help foster youth development. Community-based programs can capitalize on the importance of family processes by targeting not just youth in prevention programs, but also by building support systems and interventions for the family unit. Building evidenced-based programs for parents/guardians in community based settings has great potential for the future outcomes of youth living in violent environments. For girls, dyads of mothers and daughters can be specifically sought out. In the area of family, education in the community would be a strong arena for health promotion. Communication through community settings, newsletters, websites, and school nurses with information on the importance of family to outcomes in violent environment and tips on how to increase the overall health of the family through dimensions such as communication and problem solving are areas to target.

## Conclusions

In this sample of predominately African American youth ages 10–16, family matters. In urban environments of pervasive violence the family can be protective for youth exposed to community violence. Gender differences indicate that girls and boys may need different modes of intervention to protect from the implications of CVE. Yet for both boys and girls overall, family is important. The environments of continuous community violence that urban youth live in are associated with hindering healthy development. Interrupting the pathway between CVE and poor outcomes requires focus on the family. The violence youth are exposed to in the community is unacceptable. It is a critical public health agenda to augment healthy development in these environments plagued by violence.

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**Table 1**

## Community violence exposure percentages by type

| <b>Type of CVE</b>                       | <b><i>n</i> (%)</b> |
|--|---------------------|
| <i>Total CVE</i>                         | 102 (97%)           |
| Hearing about                            | 103 (95%)           |
| Hearing about stranger                   | 102 (93%)           |
| Hearing about familiar                   | 102 (93%)           |
| Witnessing                               | 95 (87%)            |
| Witnessed stranger                       | 84 (77%)            |
| Witnessed familiar                       | 85 (78%)            |
| Direct victimization                     | 58 (54%)            |
| Never been victimized                    | 50 (46%)            |
| Victimized once                          | 17 (16%)            |
| Repeated victimization ( $\geq 2$ times) | 41 (38%)            |

**Table 2**

## Descriptive statistics of key variables

| <b>Variable (Possible Range)</b> | <b>Mean (SD)</b> | <b>Range</b> |
|----------------------------------|------------------|--------------|
| Total CVE (0–96)                 | 23.10 (12.38)    | 0–57         |
| Hearing about (0–40)             | 16.31 (8.24)     | 0–33         |
| Witnessing (0–40)                | 5.72 (4.88)      | 0–23         |
| Direct victimization (0–16)      | 1.37 (1.81)      | 0–10         |
| PYD (0–100)                      | 69.97 (15.57)    | 28–100       |
| Competence (0–100)               | 64.25 (17.40)    | 27–100       |
| Confidence (0–100)               | 75.69 (20.48)    | 27–100       |
| Connection (0–100)               | 69.66 (20.34)    | 19–100       |
| Character (0–100)                | 65.41 (19.46)    | 18–100       |
| Caring (0–100)                   | 67.26 (20)       | 22–100       |
| Family functioning (1–4)         | 1.95 (.53)       | 1–3.92       |

Table 3

Correlation matrix of key variables

|                      | Total CVE    | Hearing about | Witnessing   | Direct victimization | PYD          | Age  |
|----------------------|--------------|---------------|--------------|----------------------|--------------|------|
| Hearing about        | <b>.93*</b>  |               |              |                      |              |      |
| Witnessing           | <b>.83*</b>  | <b>.62*</b>   |              |                      |              |      |
| Direct victimization | <b>.47*</b>  | <b>.26*</b>   | <b>.54*</b>  |                      |              |      |
| PYD                  | <b>-.28*</b> | -.18          | <b>-.27*</b> | <b>-.31*</b>         |              |      |
| Age                  | .09          | .10           | .03          | -.08                 | .04          |      |
| Family functioning   | .21          | .10           | <b>.28*</b>  | <b>.26*</b>          | <b>-.70*</b> | -.08 |

Pearsons correlation coefficient used for relationships between age, total CVE, hearing about, family functioning, and PYD. Spearman's correlation coefficient used for relationships involving direct victimization and witnessing due to skewed data.

\*  $P \leq .05$

Bold values are  $P \leq .05$

Table 4

Descriptive statistics compared by gender

| Variable             | Boys  |         | Girls |         | Significance test           |
|----------------------|-------|---------|-------|---------|-----------------------------|
|                      | Mean  | (SD)    | Mean  | (SD)    |                             |
| Total CVE            | 26.83 | (15.01) | 20.09 | (8.79)  | $t(103) = 2.87, P = .005^*$ |
| Direct victimization | 1.92  | (2.11)  | .92   | (1.37)  | $z(106) = 3.02, P = .005^*$ |
| Witnessing           | 7.24  | (5.67)  | 4.38  | (3.62)  | $z(107) = 2.66, P = .008^*$ |
| Hearing about        | 18.10 | (9.47)  | 14.83 | (6.79)  | $t(106) = 2.09, P = .04^*$  |
| PYD                  | 62.82 | (15.74) | 76.04 | (12.71) | $t(83) = -4.29, P < .001^*$ |
| Age                  | 12.98 | (1.97)  | 13.20 | (1.97)  | $t(108) = -.59, P = .56$    |
| Family functioning   | 2.12  | (.53)   | 1.80  | (.48)   | $t(101) = 3.20, P = .002^*$ |

Independent  $t$  test used for total CVE, hearing about community violence, PYD, age, and family functioning. Wilcoxon-Mann-Whitney test used for direct victimization and witnessing community violence.

\*  $P \leq .05$

**Table 5**

Regression models for PYD for the different types of CVE

|                | Total CVE |      | Total CVE with interactions |       | Hearing about |      | Hearing about with interactions |       | Witnessing |      | Witnessing with interactions |       | Victimization |      | Victimization with interactions |       |
|----------------|-----------|------|-----------------------------|-------|---------------|------|---------------------------------|-------|------------|------|------------------------------|-------|---------------|------|---------------------------------|-------|
|                | Coeff     | se   | Coeff                       | se    | Coeff         | se   | Coeff                           | se    | Coeff      | se   | Coeff                        | se    | Coeff         | se   | Coeff                           | se    |
| Gender         | 8.03*     | 2.56 | -23.22                      | 12.39 | 8.20*         | 2.53 | -23.55                          | 12.43 | 8.17*      | 2.58 | -23.49                       | 12.25 | 7.97*         | 2.61 | -21.31                          | 12.18 |
| Mom in home    | 2.26      | 3.48 | -4.50                       | 4.38  | 2.31          | 3.48 | -4.48                           | 4.38  | 2.19       | 3.51 | -4.48                        | 4.39  | 2.66          | 3.46 | -4.33                           | 4.38  |
| Dad in home    | 4.06      | 2.68 | 4.38                        | 2.60  | 4.04          | 2.71 | 4.42                            | 2.63  | 4.20       | 2.64 | 4.39                         | 2.55  | 4.51          | 2.60 | 4.74                            | 2.52  |
| Type of CVE    | -.05      | .11  | -.01                        | .12   | -.05          | .17  | .01                             | .17   | -.09       | .31  | .01                          | .32   | No Vic Ref    |      | Ref                             |       |
| FF             | -16.97*   | 2.48 | -20.80*                     | 3.4   | -17.10*       | 2.45 | -20.93*                         | 3.34  | -16.93*    | 2.53 | -20.90*                      | 3.47  | -16.88*       | 2.47 | -20.09*                         | 3.30  |
| FF × gender    |           |      | 9.87*                       | 4.97  |               |      | 10.07*                          | 4.95  |            |      | 10.03*                       | 4.89  |               |      | 8.74                            | 4.82  |
| Mom × gender   |           |      | 15.39*                      | 6.26  |               |      | 15.44*                          | 8.49  |            |      | 15.45*                       | 6.25  |               |      | 15.45*                          | 6.26  |
| R <sup>2</sup> |           | .53  |                             | .57   |               | .53  |                                 | .57   |            | .53  |                              | .57   |               | .54  |                                 | .58   |

\* P ≤ .05.

FF = Family Functioning