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# Predictors of Spiritual Well-Being Among Full-Time Youth for Christ/USA Staff Members

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by

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## Abstract

Due to the vital role spiritual health plays in the job performance of religious youth workers, there is a need to adequately predict this quality in this group of professionals. Spiritual well-being is a construct with support in the literature which can be used to objectively measure the internal, subjective condition of spiritual health. The purpose of this study was to identify one set of specific, commonly occurring variables which in linear combination would adequately predict the spiritual well-being of full-time Youth for Christ/USA staff members.

The target sample consisted of 350 full-time YFC/USA staff members whose names were drawn randomly from the computerized mailing list used by the national office. The final sample size was 298, or 85% of the original sample.

The dependent variable was Spiritual Well-Being (SWB), the summed total score on the Spiritual Well-Being Scale. SWB is the summed total of the Religious Well-Being (RWB) and Existential Well-Being (EWB) subscales. There were 19 predictor variables measuring job-related areas, Christian life, family background, and demographic factors.

The SPSS subprogram Regression, through a stepwise selection procedure, determined how much of the variance of the dependent variable (SWB Scores) was accounted for by the best linear combination of the 19 independent variables. A significant equation was developed with SWB as criterion, but it was a very weak one which accounted for only 7.5% of the variance in SWB. The secondary equations developed with RWB and EWB as criterions were significant, but also very weak in their predictive ability. The major regression assumptions were not violated and the study's results were considered valid.

The failure of the study to construct an adequate predictive model was viewed as a positive step in that it eliminated a number of ineffective predictors of spiritual well-being. It was hoped that the results of this exploratory study would be used by future

researchers in an ongoing effort to construct a set of adequate predictors of the spiritual well-being of religious youth workers.

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# Chapter I

## INTRODUCTION

A set of reliable predictors of spiritual health would be a valuable tool in the assessment of religious youth workers. Experts in the field of religious youth work assert that the spiritual health of full-time Christian youth workers is an essential prerequisite for successful job performance. Goetz (1978) states that "spiritually healthy youth groups, classes, and organizations can be attributed, in large measure, to strong, understanding, spiritual adult leaders" (p. 164). Richards (1972) suggests that the competence and quality of religious youth workers' spiritual lives will determine the degree of their effectiveness. Because the central objective of religious youth workers is the spiritual conversion and development of youth (Pinson & Potts, 1978), the status of their spiritual lives is vital to their work.

This emphasis on the spiritual condition of youth workers is clearly expressed by the leaders of the major parachurch religious organizations working with youth. These evangelical, nondenominational youth

organizations have assumed the prominent role in religious youth work in the past twenty years and employ thousands of full and part-time staff. Bill Bright (1970), Founder and President of Campus Crusade for Christ International, stresses the need for his staff members to be trained in twelve spiritual "transferable concepts" before they can become spiritual guides to others. Dawson Trotman, Founder and late Director of the Navigators, repeatedly urged his staff members to live highly disciplined, spiritually vibrant lives in order to be effective workers (Foster, 1983).

The National Director of Campus Ministries for Inter-Varsity Christian Fellowship, Bob Fryling, stated that "We teach and encourage from our Orientation of New Staff on that spiritual health is of vital importance for the effectiveness of our staff ministry" (personal communication, July 7, 1986). James Galvin, National Training Director of Youth for Christ/USA (YFC/USA), reported that spiritual health is emphasized both in the selection and training of staff in his organization (personal communication, June 27, 1985).

Due to the vital role spiritual health plays in the job performance of religious youth workers, there is a need to adequately predict this quality in this group of professionals. Surprisingly, the four major parachurch youth organizations mentioned above have no objective way of predicting the spiritual health of their staff. Conversations with high-level leaders of Campus Crusade for Christ International, the Navigators, Inter-Varsity Christian Fellowship and Youth for Christ/USA revealed that their central mechanisms for assessing and predicting the spiritual condition of staff were subjective in nature.

Campus Crusade for Christ International has four major approaches to the maintenance and enhancement of staff members' spiritual health: (a) placing staff in jobs suited to their abilities and talents, (b) encouraging staff to be involved in local churches, (c) supervisors who seek to gauge the spiritual condition of staff under them, and (d) providing a list of approved counselors outside the organization in each ministry location (M. Foft, personal communication, July 22, 1986).

George Sanchez, International Ministries Director for the Navigators, detailed two key avenues through

which his organization attempts to keep staff members' spiritual condition at acceptable levels: (a) trained supervisors called shepherd leaders who look after the spiritual needs of staff in their area, and (b) an in-house counseling ministry to address specific needs of an emotional or spiritual nature (personal communication, July 22, 1986).

Inter-Varsity Christian Fellowship uses three main strategies to keep staff spiritually healthy and, therefore, more effective in ministry: (a) encouraging staff to meet their own spiritual needs in local churches, (b) supervisors who are trained to monitor and encourage the spiritual health of staff under them, and (c) the national leaders speaking and teaching about spiritual nurture and health at staff seminars, conferences, and retreats (B. Fryling, personal communication, July 7, 1986).

Youth for Christ/USA utilizes relationships between staff members and their supervisors, a mid-winter annual convention, and one year of internship with an emphasis on spiritual development as the central methods for maintaining and improving staff members' spiritual health (J. Galvin, personal communication, June 27, 1985).

These methods, while certainly logical and perhaps effective, do not allow parachurch youth organization leaders to accurately predict the spiritual health of their workers.

In addition to the absence of any objective method for the prediction of staff members' spiritual health in these parachurch youth organizations, a comprehensive literature review revealed no research on the prediction of spiritual health of religious youth workers. Computer searches were made with ERIC (Educational Resources Information Center), PSYCINFO, Dissertation Abstracts, Social Scisearch, and Sociological Abstracts under the guidance of the Western Conservative Baptist Seminary Library Computer Search Operator.

Perhaps the central reason for the absence of any objective method for the prediction of religious youth workers' spiritual health is the vagueness of the term itself. What is spiritual health and what does it mean to be spiritually healthy? In order to adequately predict spiritual health, it must be defined and measured. The Spiritual Well-Being Scale (SWB Scale) is an instrument with support in the literature which can be used to objectively measure

the internal, subjective condition of spiritual health. In this study, the concept of spiritual health was operationalized by the Spiritual Well-Being Scale.

Parachurch youth organizations are currently the most significant force in religious youth work in the United States (Hutcheson, 1981). For this reason, it was decided to use parachurch youth workers as subjects. Specifically, the subjects for this study were drawn from Youth for Christ/USA, one of the largest parachurch youth organizations in the United States.

## Statement of the Problem

The purpose of the study was to identify a set of variables which in linear combination would predict the spiritual well-being of full-time Youth for Christ/USA staff members. More specifically, the study was designed to answer the research question: Would a linear combination of selected, commonly occurring variables among full-time Youth for Christ staff members in the United States form a linear equation that would adequately predict spiritual well-being?

## Objectives

This study was intended to fill the gap in the research on spiritual health among religious youth workers by identifying a set of predictors of the spiritual well-being of Youth for Christ/USA staff members. It was anticipated that this set of predictors would aid youth ministry leaders (specifically, Youth for Christ leaders) in the assessment of full-time youth workers. If parachurch youth ministry leaders had at their disposal a set of variables which reliably predicted spiritual well-being in full-time youth workers, they would be better able to maintain and even enhance this key quality in their current staff. In answering the research question, these objectives were established:

1. The selection of a group of job-related, Christian life, family background, and demographic variables to serve as predictors of the Youth for Christ/USA staff members' spiritual well-being.

2. The selection of an instrument with acceptable reliability and validity to measure the spiritual well-being of the subjects.

3. The construction of a questionnaire to gather the necessary data on the predictor variables and spiritual well-being.

4. Use of a representative sample of full-time Youth for Christ/USA staff members.

5. Utilization of an appropriate statistical technique to form a linear model of predictor variables which would adequately predict the subjects' spiritual well-being.

6. The interpretation of the study's results provided to Youth for Christ/USA leaders for possible incorporation into their assessment of staff procedures.

## Hypothesis

It was hypothesized that a combination of variables measuring job-related areas, Christian life, family background, and demographic factors, measured via a mailed questionnaire, would form a significant linear model which could be used to adequately predict the spiritual well-being of full-time Youth for Christ/USA staff members.

## Related Literature

In reviewing the literature, five areas will be examined: parachurch organizations, parachurch youth organizations, Youth for Christ, spiritual well-being, and multiple linear regression.

### Parachurch Organizations

A concise definition of parachurch work is offered by Youngren (1981): "not-for-profit, organized Christian ministry to spiritual, mental, and physical needs, working outside denominational control" (p. 38). Beginning in Britain in 1699 with the founding of the Society for the Propagation of Christian Knowledge (Youngren, 1981), the parachurch movement has grown to include between five and ten thousand organizations (White, 1983). In the past three decades, parachurch organizations have experienced tremendous growth and are a significant force in the dissemination of religious teachings in the United States and numerous foreign countries.

What makes parachurch organizations distinctive and successful is their involvement in a wide variety of specialized ministries. Rather than competing with the church, their expressed goal is to "be an

extension into fields where the institution cannot go or has not gone, much as the missionary is an extension of the domestic institutional church" (Glavach & Sholund, 1978). Explaining this specialist role, White (1983) comments:

> Whereas the church is primarily generalist in its ministry, the para-local church societies are narrowly specialist. Their plethora of specializations include personal and small group evangelism, church planting, mass evangelism, literature distribution, broadcasting, theological education, medicine, agriculture, relief, aviation, camping, communications, discipleship, fund-raising, management consulting, orphanages, translation, youth ministries, and a host of others. Some of these ministries can and are being done by denominational structures, but rarely do they do them all (p. 53).

## Parachurch Youth Organizations

Parachurch organizations devoted to the spiritual development and training of youth began to appear in the 1930's. The stagnation, internal conflict over

theological issues, and lack of innovative programming for youth present in the mainline denominations prompted concerned Christian leaders to establish these independent religious youth organizations. A number of parachurch youth organizations founded in this period in the United States are listed by Wilson (1983):

> The Navigators (1933)--in-depth Bible study, Scripture ministry with college age youth and military people; Christian Service Brigade (1937)--for boys, and Pioneer Girls (1939)--for girls with focus on the outdoors similar to the Boy and Girls Scout Programs; Young Life Campaign (1941)--home group meetings for high school youth; Youth for Christ (1944)--crusades, conferences, camps, clubs, literature for youth, as well as programs for troubled youth; Awana Youth Association (1945)--Scripture memory; Campus Crusade for Christ (1951)--aggressive evangelism among college and university students; Fellowship of Christian Athletes (1954)--evangelism of athletes (p. 58).

In the past twenty years, these parachurch youth organizations have grown dramatically in size and

impact upon youth in the United States. Their young, committed full-time staff members, innovative programs, and dynamic approach to youth work have attracted large numbers of young people (Hutcheson, 1981). One youth ministry expert declares that "Collectively, the independent evangelical youth organizations are by far the most significant and influential Christian youth movement in contemporary American society" (Hutcheson, 1981, p. 33).

Even a cursory study of the major parachurch organizations working with youth reveals a clear focus on the spiritual condition of their full-time staff members. Four of the largest and best known parachurch youth organizations (i.e., Youth for Christ, Campus Crusade for Christ, the Navigators, and Inter-Varsity Christian Fellowship) have programs in place which are intended to maintain and enhance the spiritual health of their staff members. It is apparent, however, that parachurch youth organization leaders currently have no objective, empirical method of predicting the spiritual health of their staff members.

## Youth for Christ

Founded in 1944, Youth for Christ International is currently the largest parachurch youth organization at the high school level (Hutcheson, 1981). Youth for Christ/USA, one of sixty-two national programs under the umbrella of the international parent organization (Campus Life, 1984), is active on well over a thousand American high school campuses (Hutcheson, 1981). Youth for Christ/USA, with approximately nine hundred full-time staff members, has three main ministry approaches: Campus Life, the high school ministry based upon evangelistically-oriented teen clubs; Youth Guidance, an outreach program directed at disadvantaged, "troubled teens"; and Literature, including Campus Life magazine, a contemporary paraphrase of the Bible called The Way, and other youth-oriented materials (Barton, 1980). The guiding mission statement for all of Youth for Christ's varied ministries is "to participate in the body of Christ in responsible evangelism of youth, presenting them with the person, work, and teachings of Christ and disciplining them into the church" (Campus Life, 1984, p. 22).

In their effort to successfully carry out Youth for Christ's mission, the top leaders of the national organization clearly express the necessity of having spiritually healthy staff. One of the selection criteria for applicants is spiritual condition (J. Galvin, personal communication, June 27, 1985). The training program for Youth for Christ staff members consists of one year of internship, which includes an emphasis on spiritual development, and a mid-winter annual convention designed for spiritual refreshment and growth (J. Galvin, personal communication, June 27, 1985). In view of the fact that Youth for Christ leaders do not have an objective method of determining the spiritual health of their staff, the National Training Director of Youth for Christ/USA, James Galvin (personal communication, June 27, 1985), expressed interest in the identification of predictors of spiritual well-being among the staff. He communicated that these predictors would be "very helpful and could be built into the present selection and training programs" (personal communication, June 27, 1985).

The literature review thus far has defined parachurch organizations and described their basic

function, detailed the history and significant role in contemporary youth work of parachurch youth organizations, pointed out the need to predict the spiritual health of staff members in these agencies, and established the efficacy of using Youth for Christ/USA staff members as subjects in the study. The following section will examine the history and development of spiritual well-being, the construct used in this study to measure spiritual health.

## Spiritual Well-Being

Researchers working in the field of psychology of religion have achieved little success in developing sound measures of religiosity. Basset et al. (cited in Parker, 1984) reviewed 133 instruments designed to measure religious variables and found that only a small percentage demonstrated some indication of reliability and validity. A major cause of this largely insignificant record is the clear deficiency in the adequate operationalization of religious constructs (Bufford, 1984). For the most part, researchers have avoided efforts to operationalize the inner, spiritual dimension of man and been content to

use simple, superficial indicators of religiosity such as church attendance and belief system.

In recent years, there has been renewed interest in the psychology of religion field and researchers are seeking to "more precisely define and objectively measure the construct of religiosity" (Parker, 1984, p. 15). A review of the literature reveals that spiritual well-being is a promising construct which can be used to measure the internal, spiritual health of individuals. Spiritual well-being has received a considerable amount of concentrated attention from a number of researchers in the past two decades and is supported by a foundational body of theoretical and empirical work.

David Moberg has been a central figure in the growing research interest in spiritual well-being. In a series of works dating back to the early 1970's, Moberg (1971, 1979a, 1979b) has been developing theoretical and empirical approaches to the study of spiritual well-being. In a review of the quality of life research, Moberg and Brusek (1978) discovered that measures of religiosity were virtually ignored as indicators of well-being. Moberg asserts that the spiritual aspect of quality of life needs to be

explored and has played a significant role in stimulating research in this area.

In Spiritual Well-Being: Sociological Perspectives (1979b), Moberg summarizes the history and current status of spiritual well-being and includes a number of theoretical and empirical studies of the construct. In this book, Moberg (1979b) calls for the construction of a valid and reliable index of spiritual well-being and cites numerous reasons why such an instrument would be of value:

> Conditions, programs, and influences which are alleged to contribute to spiritual well-being then could be tested to determine whether or not they actually do. Relationships between physical health, mental health, and spiritual health could be analyzed . . . Comparisons could be made of the relative impact of disengagement versus activity during the later years of the life cycle, and many other theoretical assumptions and constructs could be investigated if we had a valid and reliable index of spiritual well-being (p. 3).

Ellison and Paloutzian have built upon Moberg's foundational work and have further defined and

operationalized the spiritual well-being construct. In his examination of the quality of life research of Campbell (1981), Ellison found that the spiritual dimension of mankind's welfare had been excluded. Campbell (1981) suggests that well-being requires the satisfaction of three basic needs: the need for having, which refers to the mastery of material resources; the need for relating, which refers to social relationships; and the need for being, which refers to a sense of self-satisfaction and competence. Ellison (1982) asserts that Campbell has overlooked a fourth dimension which he labels the need for transcendence:

> The need for transcendence refers to the sense of well-being that we experience when we find purposes to commit ourselves to which involve ultimate meaning for life. It refers to a non-physical dimension of awareness and experience which can best be termed spiritual (p. 3).

Ellison and Paloutzian agree with Moberg and Brusek's (1978) two-faceted conceptualization of the spiritual well-being construct: the vertical and the horizontal. "The vertical dimension refers to one's

sense of well-being in relationship to God. A horizontal dimension connotes one's perception of life's purpose and satisfaction apart from any specifically religious reference" (Ellison & Paloutzian, 1982, p. 231). Ellison and Paloutzian (1982) call the vertical dimension "Religious Well-Being" and the horizontal dimension "Existential Well-Being." Together, these two dimensions make up spiritual well-being.

Ellison (1982) further elaborates the construct of spiritual well-being by describing the unique role of the "spirit" in the human system:

> It is the spirit of human beings which enables and motivates us to search for meaning and purpose in life, to seek the supernatural or some meaning which transcends us, to wonder about our origins and our identities, to require morality and equity. It is the spirit which synthesizes the total personality and provides some sense of energizing direction and order. The spirit is the source of the human need for commitment and love, and the well-spring of creativity. The spiritual dimension does not exist in isolation from our psyche and soma, but provides an

> integrative force. It affects and is affected by our physical state, feelings, thoughts, and relationships. If we are spiritually healthy we will feel generally alive, purposeful, and fulfilled but only to the extent that we are psychologically healthy as well. The relationship goes both ways because of the intricate intertwining of these two parts of the person (p. 6).

Spiritual well-being is a dynamic internal capacity that plays a major part in the ongoing life of each individual. The religious and existential dimensions of the construct are distinct to a degree, but do overlap on a conceptual level.

Ellison is careful to distinguish spiritual well-being from both spiritual health and spiritual maturity. For Ellison (1983), spiritual well-being:

> . . . arises from an underlying state of spiritual health and is an expression of it, much like the color of one's complexion and pulse rate are expressions of good health. Spiritual well-being measures may then be seen more like a stethoscope than like the heart itself (p. 332).

Spiritual maturity differs from spiritual well-being in that it is conceptualized as more of a growth process. "A newborn Christian, for example, may have a very positive sense of spiritual well-being but be very immature spiritually" (Ellison, 1983, p. 332).

A final point in the definition of the construct is that spiritual well-being is a continuous rather than dichotomous variable. Ellison (1983) comments that:

> It is not a matter of whether or not we have it. Rather it is a question of how much, and how we may enhance the degree of spiritual well-being that we have. Conceiving it as continuous stimulates us to consider multiple influences on our health, none of which by itself may move us to the place of total spiritual health or total disease (p. 332).

Based upon their theoretical reasoning, Paloutzian and Ellison (1979a) developed the Spiritual Well-Being Scale. This scale is an empirical measure of the spiritual dimension of quality of life. The scale consists of 20 items in a modified 6-item Likert format. Half of the items measure Religious

Well-Being (RWB) and the other half measure Existential Well-Being (EWB). "The SWB Scale yields three scores: (1) a total SWB score, (2) a summed score for the RWB items, (3) a summed score for the EWB items" (Ellison, 1982, p. 9).

The studies completed to date using the Spiritual Well-Being Scale have been primarily foundational validation studies. Scores on the SWB Scale (including summed scores on the RWB and EWB subscales) have been correlated with a variety of variables. These correlations have been, for the most part, in the expected directions and considerable support for the scale's validity has been gathered.

Scores on the Spiritual Well-Being Scale have been positively correlated with the following developmental and social-psychological variables: self-esteem (Campise, Ellison & Kinsman, 1979; Ellison & Economos, 1981; Marto, 1983; Paloutzian & Ellison, 1979ab), perceived quality of parent-child relationships, family togetherness, peer relations as a child (Campise et al., 1979; Ellison & Paloutzian, 1978; Paloutzian & Ellison, 1979a), social skills (Campise et al., 1979; Ellison & Paloutzian, 1978; Paloutzian & Ellison, 1979b), coping with

hemodialysis, acceptance of disability, assertiveness (Campbell, 1983), marital satisfaction, family income per year, hours of employment per week (Quinn, 1984), and financial condition (Bufford, 1984).

Negative correlations have been found between SWB Scale scores and loneliness (Ellison & Cole, 1982; Ellison & Paloutzian, 1978; Paloutzian & Ellison, 1979abc), living in a large city for women (Ellison & Paloutzian, 1982), mood disturbance (Mitchell, 1984), and depression (Campbell, 1983). Further, SWB Scale scores have correlated negatively with such value orientations as success, personal freedom (Campise et al., 1979), and individualism (Campise et al., 1979; Ellison & Cole, 1982).

A number of religious variables have been positively correlated with scores on the SWB Scale: doctrinal belief, worship orientation, devotional practices (Ellison & Economos, 1981), frequency of church attendance (Bufford, 1984; Mitchell, 1984), frequency of devotions (Bressem, Waller, & Powers, 1985; Bufford, 1984), duration of devotions (Bufford, 1984; Ellison & Economos, 1981), spiritual maturity, frequency of family devotions, importance of religion, religious knowledge (Bufford, 1984), and religious

coping (Campbell, 1983). In addition, Ellison and Paloutzian (1979) found that individuals who identified themselves as "Born Again" Christians had more positive spiritual, religious, and existential well-being than "ethical" Christians or non-Christians.

There are four central reasons for the selection of the Spiritual Well-Being Scale as the instrument used in this study to measure the construct of spiritual well-being. One, it is the only empirical measure of spiritual well-being that has been constructed to date. Two, the scale is supported by a solid body of theoretical literature extending back to the early 1970's. The construct of spiritual well-being has been carefully developed and operationalized by Moberg, Ellison, Paloutzian, and others. Third, the Spiritual Well-Being Scale meets the requirement of new self-report questionnaires set forth by Gorsuch (1984): new scales which are founded upon a unique epistemology or theory should be granted legitimacy. The construct of spiritual well-being which the scale measures has not been tapped by any previous religiosity instrument. Fourth, a number of studies have yielded encouraging results concerning

the scale's reliability and validity. The correlations presented above provide support for the scale's construct validity. A more complete description of the scale, including further validity data and information on reliability, will be presented in the Methods Chapter.

Because spiritual health is a quality religious youth workers must have in order to be successful, it needs to be objectively measured and predicted. SWB, the total score on the SWB Scale, is currently the best measure of the internal state of spiritual health. In this study, subjects' scores on SWB are the quantitative expression of their spiritual health.

## Multiple Linear Regression

The purpose of this study, as mentioned earlier, was to build a linear equation of variables which would adequately predict the spiritual well-being of parachurch religious youth workers. The identification of such a predictive model would provide parachurch youth ministry leaders with a number of specific variables which have a significant impact on the spiritual well-being of their current youth workers. Multiple linear regression is a

multivariate statistical procedure commonly and effectively used in predictive studies. Because of the technique's importance to the study, an explanation of regression analysis and its usefulness in the construction of predictive equations is necessary.

Regression analysis may be broadly defined as a statistical technique to analyze the relationships among variables. It is one of the most widely used statistical tools because it provides an effective method for establishing the relationship between a dependent variable ($\underline{Y}$) and a set of independent variables ($\underline{x}_1 \ldots \underline{x}_k$). Gunst and Mason (1980) make the point that regression analysis is distinguished from other types of statistical techniques in that the goal is to express the dependent or response variable as a function of the independent or predictor variables. Once such an expression is derived, the relationship can be utilized to predict values of the response variable, determine which variable(s) most affect the response variable, or verify causal models hypothesized about the relationship.

The multiple regression equation follows the formula $Y' = a + b_1x_1 + b_2x_2 \ldots + b_kx_k$. Y' is the

predicted score of the dependent variable, x the score of the independent variables, a the intercept constant, and b the regression coefficient. The purpose of this predictive equation is to provide the optimum prediction of the dependent or criterion variable.

A number of underlying assumptions are associated with the use of multiple regression. Lewis-Beck (1980) lists four: (a) no specification error--the relationship between X and Y is in fact linear, there are no relevant independent variables excluded nor irrelevant independent variables included; (b) no measurement error--the dependent and independent variables are accurately measured; (c) the error term conforms to certain conventions--the expected value for each observation of the error term is zero (zero mean), the variance of the error term is constant for all values of X (homoscedasticity), the error terms are uncorrelated (no autocorrelation), the independent variables(s) are uncorrelated with the error term, and the error term is normally distributed; and (d) multicollinearity is absent--none of the predictor variables are perfectly correlated with another predictor variable or linear combination of other

independent variables. Furthermore, Babbie (1983) adds that regression analysis shares with correlation analysis the assumptions of (a) simple random sampling, (b) the absence of nonsampling errors, and (c) continuous interval data.

Finding an appropriate subset of predictor variables is a matter of primary concern when using multiple regression. In most cases the researcher has a pool of independent variables which ideally include all the influential factors, but the final subset of variables that should be used in the model needs to be determined. Montgomery and Peck (1982) suggest that building a regression model that includes only a subset of available predictor variables involves two conflicting goals: (a) to include as many variables as possible so that the "information content" in these factors can influence the predicted value of Y, and (b) to include as few predictors as possible because the variance of the predicted Y increases as the number of variables increases. Finding a model that is a compromise between these two goals is called selecting the "best" regression equation. Regrettably, there is no perfect method to arrive at the best equation or model.

Cohen and Cohen (1975) discuss several variable selection techniques including simultaneous, hierarchical, and stepwise regression. In simultaneous modeling, all predictor variables are considered simultaneously and on an equal basis. They suggest that this is the most appropriate strategy when the researcher has no logical or theoretical basis for considering any variable before another, either in terms of hypothetical causal structure of the data or in terms of its relevance to specific research objectives. The hierarchical method enters the predictor variables into the model in a cumulative manner according to some specified hierarchy which is stipulated in advance by the purpose and logic of the research.

Stepwise regression, actually a family of procedures, is designed to select from a group of predictor variables the one variable at each stage or "step" in building the equation which makes the largest contribution to the multiple correlation. Gunst and Mason (1980) shed light on stepwise regression by explaining the forward selection method, the backward elimination method, and a combination of these first two methods simply referred to as the

stepwise procedure. Each method has its purpose and limitations.

Final or "fitted" regression models are often inappropriately used. Three common misapplications that should be avoided are extrapolation, generalization, and causation. Gunst and Mason (1980) explain that each of these abuses can be directly traced to inherent limitations of the data base. Extrapolation is the error of predicting responses for values of predictor variables that are unrepresentative of the data base. Generalization is the inference from a sample to a population or from one population to another based on the results of a regression analysis when the two bodies of data might not possess identical characteristics. Causation is the mistake of ascribing a cause-effect relationship between the predictor and response variables based solely on the results of a regression analysis.

## Limitations of the Study

1. All respondents were full-time staff members of Youth for Christ/USA. Results were generalized confidently to staff in this organization and with

care to youth workers in other parachurch youth organizations.

2. The predictors of spiritual well-being were limited to 19 variables developed by the author through conversations with Youth for Christ/USA leaders, examination of correlates of spiritual well-being in the literature, and the use of other relevant sources.

3. All data collected were based on self-report.

## Definition of Terms

In order to clarify certain key terms used in this study, the following definitions were included. Where no source is mentioned, the definition was prescribed by the author.

1. Evangelical: a person or organization claiming to adhere to the basic, core fundamental doctrines of Christianity (Gerstner, 1977).

2. Evangelism: the communication of the New Testament Gospel truths concerning Jesus Christ's death and resurrection in an effort to persuade individuals to place their trust in Christ and become Christians.

3. Existential Well-Being: "one's perception of life's purpose and satisfaction apart from any specifically religious reference" (Ellison & Paloutzian, 1982, p. 231). Existential well-being is measured by the Spiritual Well-Being Scale.

4. Multiple Linear Regression: a multivariate statistical technique which provides an equation describing the nature of the relationship between two variables. More specifically, this technique can be used to predict "an object's value on a criterion variable when given its value on each of several predictor variables" (Kachigan, 1982, p. 161).

5. Parachurch religious youth worker: an individual who works with youth for religious purposes as a member of an independent organization not under the control of a church or denomination.

6. Prediction: "the process of using data from a smaller group (sample) of people (or measurable entities of any kind) to make estimates about a large group (population) from which such data has not been gathered" (McNeil, Kelly, & McNeil, 1975, p. 3).

7. Religious Well-Being: "one's sense of well-being in relationship to God" (Ellison &

Paloutzian, 1982, p. 231). Religious Well-Being is measured by the Spiritual Well-Being Scale.

8. Religious youth worker: an individual who works with youth for religious purposes under the control and guidance of a church or a parachurch agency.

9. Spiritual Well-Being: one expression or measurement of spiritual health which is comprised of the two dimensions of Religious and Existential Well-Being. This construct is measured by the summed scores of the Religious and Existential Well-Being subscales of the Spiritual Well-Being Scale (Ellison & Paloutzian, 1982).

10. Youth for Christ International: an international parachurch youth organization which directs 62 national youth ministry programs (Campus Life, 1984).

11. Youth for Christ/USA: a parachurch youth organization under the auspices of Youth for Christ International which operates a variety of ministries designed for high school youth in the United States (Campus Life, 1984).

12. Youth for Christ/USA staff: a full-time employee who works with high school youth in one of

Youth for Christ/USA's ministry programs (Campus Life, 1984).

13. Youth ministry: the organized effort of churches and parachurch organizations to meet the varied needs of youth.

## Summary

While experts and leaders in religious youth work emphasize that spiritual health is critical to the successful job performance of religious youth workers, no objective method for predicting this quality is present in the major parachurch youth organizations or the literature. A key reason for the lack of such a predictive method is the vagueness of the term, spiritual health, and other related terms. Spiritual health was measured by the Spiritual Well-Being Scale in this study. The purpose of the study was to construct a linear equation of specific, commonly occurring variables which would adequately predict the spiritual well-being of Youth for Christ/USA full-time staff members. The statistical technique used to carry out the study's purpose was multiple linear regression. The literature review developed the rationale for such a predictive study through the

presentation of pertinent information on parachurch organizations, parachurch youth organizations, Youth for Christ, spiritual well-being, and multiple linear regression. The final two sections of the chapter covered the limitations of the study and definitions of terms used in the research.

# Chapter II

## METHODS

This study was designed to identify one set of specific, commonly occurring variables which in linear combination would adequately predict full-time Youth for Christ/USA staff members' total scores on the Spiritual Well-Being Scale. The methods used for collecting and statistically analyzing the data needed to test the study's hypotheses are set forth in this chapter. They will be discussed in five sections: (a) Subjects, (b) Variables, (c) Instruments, (d) Data Collection, and (e) Statistical Design.

### Subjects

The subjects used in this study were drawn from the population of full-time Youth for Christ staff members working in the United States. The nearly 900 full-time YFC/USA staff, 600 men and 300 women, fall into three general ministry categories: Campus Life workers, Youth Guidance workers, and administrative personnel. These staff members are from many states and have diverse denominational backgrounds. All YFC/USA staff members have earned at least a bachelors

degree from an accredited college or university. YFC/USA staff were selected as subjects because they are representative of parachurch religious youth workers in the United States.

Lewis-Beck (1980) sets forth several reasons for obtaining a large sample size when regression is the statistical method. One, the larger the number of subjects, the easier it is to identify the relationship between the set of predictor variables and the criterion. Two, a large sample size allows the researcher to meet the key assumption of normal distribution of the error term.

A target sample size of 350 was established for this study. This number of subjects, approximately 39% of the population, fulfills Lewis-Beck's (1980) call for a large sample size in studies using regression. Further, it clearly satisfies the minimum sample size ratio to number of independent variables recommended by Pedhazur (1982) to avoid over-estimation of the statistical values to be used in the study.

The computerized mailing list of all current full-time YFC/USA staff members used by the national office in Wheaton, Illinois, served as the sampling

frame from which 350 subjects were selected through the use of a random numbers table (Kachigan, 1982). A random sample selected in this fashion can be considered representative of the population (Babbie, 1973). Permission to use YFC/USA full-time staff members in this study was obtained from Mr. D. Larry Kreider, National Director/Adult Ministry.

Of the 350 subjects who made up the original sample, a total of 323 (92%) were accounted for. Of the 323, 18 were no longer on staff, 6 were part-time, and 1 was deceased. The status of a number of these 25 subjects who were deleted from the sample was explained by other full-time staff members who contacted the researcher by phone or letter. The final sample size was 298 (85%) usable questionnaires. For more complete descriptive statistics, see the Results section.

## Variables

### Dependent Variable

The dependent variable in the study was Spiritual Well-Being (SWB), the summed total score on Paloutzian and Ellison's (1979a) Spiritual Well-Being Scale. SWB

is the summed total of the Religious Well-Being (RWB) and Existential Well-Being (EWB) subscales. The ten RWB items contain a reference to God and are designed to measure well-being in relation to God. The ten EWB items contain no reference to God and are intended to measure well-being in terms of life purpose and satisfaction.

SWB was the central criterion predicted by the best linear combination of the independent variables. Because the subjects' total scores on the SWB Scale represented their spiritual well-being, SWB was the primary focus of the study. SWB is supported by a foundational body of theoretical and empirical work and is the most reliable and valid measure of spiritual well-being currently available.

RWB and EWB, the two separate scores on the SWB Scale, were also used as criterions in the regression analyses because they represented the two components of spiritual well-being. In addition to the main regression analysis with SWB as criterion, two separate, secondary regression analyses were completed: one with RWB as criterion and the other with EWB as criterion.

In the following pages, SWB will be referred to as the dependent variable because it includes RWB and EWB and is the operationalization of spiritual well-being in the study. SWB, RWB, and EWB will be identified as the three criterion measures because each served as a criterion in three separate regression analyses.

## Independent Variables

Nineteen independent variables served as predictors of spiritual well-being. Each of these independent variables was selected because of its potential ability to account for a portion of the variance in SWB scores. The independent, or predictor, variables were organized into four categories: job-related, Christian life, family background, and demographic. Below is a list of the independent variables with a description, rationale for inclusion, and means of measurement presented for each.

### Job-Related

1. Years on staff (YEARS): The Youth for Christ Campus Life Operations Manual (1984) stresses that each staff member is expected to grow spiritually

while on staff. One researcher found that one of the top ten expectations of YFC/USA staff before becoming full-time was spiritual growth (Epps, 1984). In view of these expectations that time on staff will be connected to the quality of one's spiritual life, it was decided to use this variable as a predictor of spiritual well-being. The variable was measured by asking the staff members to write down, to the nearest full year, the number of years they had served as full-time YFC/USA staff members.

2. Number of full-time staff (STAFF): Youth for Christ/USA places a strong emphasis on the team concept in local ministry chapters (Campus Life, 1984). How well the local staff members work together is regarded as a key factor in the success of their ministry. One local YFC/USA ministry leader shared that, in his experience, a larger local staff with its higher potential for interpersonal conflict was "harder" on one's spiritual health than a smaller staff (D. L. Scherrer, personal communication, May 17, 1985). It appears that a greater number of local staff members may make it more difficult to work effectively as a team and negatively effect spiritual well-being. In order to measure this variable, a

question was developed which asked the respondents to specifically identify the number of full-time staff, including themselves, currently at their local ministry site.

3. Hours per week (HRS): a 55-hour work week is the norm for full-time YFC/USA workers and extensive weekend work is required (Barton, 1980). One YFC/USA full-time staff member commented that the range of hours per week among staff was 40-70 (D. L. Scherrer, personal communication, May 17, 1985). As in any job, these long hours have the potential to be physically and emotionally draining and cause tension at home. This information on the amount and distribution of work hours among YFC/USA full-time staff, added to the fact that hours of employment per week correlated positively with RWB scores in a religious sample (Quinn, 1984), motivated the researcher to include this variable as a predictor. Respondents were asked to write down the number of hours they averaged per week on the job during the 5-month period from September, 1985 through January, 1986.

4. Youth led to Christ (NUM): Evangelism is a central focus of the YFC/USA ministry: "We understand evangelism as our primary task, with discipleship

being limited to what could be called post-evangelism. In other words, our work is pre-evangelism, evangelism, and post-evangelism" (Campus Life, 1984, p. 8). Numerous Christian leaders assert that regular evangelism is an indicator of spiritual health (Aldrich, 1981; Ryrie, 1969). The activity of evangelism, a key ingredient of YFC/USA staff members' ministries and acknowledged indicator of spiritual health in Christians, is an appropriate predictor of spiritual well-being. The variable of evangelism was measured by asking respondents to identify the number of high school youth they had personally led to Christ during the 5-month period from September, 1985 through January, 1986.

5. Percent income personal support (SUP): Conversations with several full-time YFC/USA staff members revealed the raising of personal support to be a potential predictor of spiritual well-being. Personal support raising is the process of personally contacting donors to ask them to support you financially on a regular, typically monthly basis. Raising support from individual donors is a time-consuming, difficult, and stressful activity (M. D. Bury, personal communication, July 18, 1985).

Because donors drop out and occasionally do not send the money, the staff member must keep in regular contact with supporters and spend a percentage of time each month seeking new donors. The nature of personal support raising, coupled with the fact that studies have found positive correlations between SWB and financial variables (Bufford, 1984; Quinn, 1984), led to the inclusion of this variable in the set of predictors. The personal support variable was measured by asking the respondents to specify the percent of their income from YFC/USA coming from personal donors.

6. Percent support received (REC): In addition to the above variable measuring the raising of personal support, it was hypothesized that the actual percent of personal support received would impact spiritual well-being. The YFC/USA staff member has no guarantee that 100% of his raised support will come in each month. When the level of received personal support falls below the raised support figure, as is often the case in parachurch work, stress can result. Respondents were asked to specify the percent of their total raised personal support sent to them by their donors from September, 1985 through January, 1986.

Because a number of full-time YFC/USA staff members do not raise personal support, a "DOES NOT APPLY" response category was included.

Christian Life

7. Years a Christian (XIAN): The self-reported condition of "Born Again" Christian has been positively correlated with SWB, RWB, and EWB (Campise et al., 1979; Ellison & Economos, 1981; Ellison & Paloutzian, 1979). In order to determine if time as a Christian is connected to spiritual well-being, this variable was included in the study as a predictor. The variable was measured by asking respondents to specify the number of years, to the nearest full year, they had been a professing "Born Again" Christian.

8. Devotions per week (DEV): A number of studies have found significant positive correlations between frequency of personal devotions and SWB (Bufford, 1984; Bressem et al., 1985; Clarke et al., 1985). Further, Christian authors (Pentecost, 1971; Wilkinson, 1982) stress that regular time in prayer and personal Bible study is vital to maintaining spiritual health. In light of this information, this variable was deemed an appropriate predictor variable. Respondents were asked to write down the

average number of days per week on which they had personal devotions.

9. Minutes in devotions (MIN): This variable has been found to be positively correlated with SWB in several studies (Ellison & Economos, 1981; Bufford, 1984). These findings indicate that time is also a factor in devotional life's impact upon spiritual well-being. This predictor variable was measured in number of minutes, on the average, spent in personal devotional periods.

10. Services per week (WK): This variable was selected as a predictor of spiritual well-being for two central reasons. One, it has been positively correlated with SWB (Ellison & Economos, 1981; Bufford, 1984; Mitchell, 1984). Second, YFC/USA staff members are expected to join a local church, become participants as much as possible, and gain positive spiritual benefits from the local body of Christians (Campus Life, 1984). Respondents were instructed to record the number of church services attended in an average week.

11. Support groups attended (GRP): This predictor was developed after a conversation with Dave Scherrer, Executive Director of the Portland, Oregon,

YFC/USA Ministry (personal communication, July 15, 1985). Dave commented that a regular support group focused on spiritual encouragement was important for YFC/USA staff because quite often staff do not get the spiritual input from the local church that they need. Staff members, because of their professional skills, are frequently involved in local church ministries and so the usual benefits of interpersonal relationships and worship during regular church meetings are limited for them. This predictor variable was defined as a small group, church-sponsored or independent, whose main purpose was spiritual encouragement and/or enrichment. Respondents were asked to indicate the number of times per month they attended such a support group.

Family Background

12. Birth order (BIR): Birth order was chosen as a predictor of spiritual well-being because it is an easily measured variable which has some support in the literature as being influential in personality development and, in particular, parachurch staff members' functioning. Adler (1930) believed that a child's position in his family has a significant impact upon his development and future adult

personality. Meier (1977) asserts that firstborn children are usually perfectionists who strive for achievement, whereas last-born children tend to be more immature, dependent, and spoiled. Britt (1980) found that birth order was a significant predictor of success for Campus Crusade for Christ parachurch staff members. Respondents were given five choices to describe their birth order: "ONLY CHILD," "FIRSTBORN," "LASTBORN," "BORN SOMEWHERE IN BETWEEN FIRST AND LAST," and "DO NOT KNOW." This last choice was included to insure that adopted individuals could answer.

13. Parents Christian (PAR): Numerous authors stress the importance of Christian parents in the spiritual development of children. Getz (1976) asserts that children will grow spiritually if their parents are examples of Jesus Christ. Meier (1977) instructs parents to create a comprehensive spiritual atmosphere in order to insure that their children's spiritual needs will be met. Meier and Meier (1981) believe that parents who are good spiritual examples and teachers will be able to build a strong faith in their children which will endure.

In view of the firm belief in Christian circles that Christian parents are important to the spiritual lives of children, this variable was chosen as a predictor of spiritual well-being. To assess this variable, the subjects were asked to respond "NO," "YES", or "DO NOT KNOW" to the question of whether at least one of their parents or guardians in the home where they were raised was a Born-Again Christian. The requirement of at least one Christian guardian or parent was used for two main reasons: one, to account for the many single parent and guardian homes; and two, the assumption that one Christian parent would have a spiritual impact upon the children in the home.

14. Father absence (FA): Three lines of evidence support the inclusion of this variable as a predictor of spiritual well-being. First, there is an abundance of literature on the negative impact of father absence on individuals. When divorce causes one of the parents (usually the father) to leave the home, children "experience feelings of insecurity, guilt, anger, and depression" (Swihart & Brigham, 1982). Meier (1977) comments that "the vast majority of neurotics, both children and adults, grew up in homes where there was no father or the father was

absent or weak, and the mother was domineering" (p. 82). Kogelschatz, Adams, and Tucker (cited in Meier, 1977) found that children who had lived two or more years without a father in the home had significantly more psychiatric problems than normal children who had fathers in their homes.

Second, SWB has been positively correlated with perceived quality of parent-child relationships and family togetherness (Campise et al., 1979; Ellison & Paloutzian, 1978; Paloutzian & Ellison, 1979a). Both these variables would, of necessity, be affected by father absence.

Third, Britt (1980) reported that father absence, which he defined as no father in the home for any 5-year period prior to the fifteenth birthday, was a significant predictor of success overseas of Campus Crusade for Christ staff members.

The above data suggested that father absence might be a significant predictor of spiritual well-being in this sample of parachurch staff members. Father absence was defined as in Britt's (1980) study with parachurch workers: absence of the father for any 5-year period prior to the individual's fifteenth birthday. Respondents gave a simple "YES"

or "NO" answer to the question of whether the father in the home where they were raised was absent, as defined above. To clarify the question and make it less objectionable, the qualifying phrase, "due to separation, divorce, death or other circumstances," was included.

Demographic

15. Age (OLD): This variable was included mainly for descriptive purposes. However, age was judged a potential predictor of spiritual well-being because one study (Bressem et al., 1985) found it to be positively correlated with EWB in a sample of church attenders. Subjects were asked to write their age in years as of their last birthday.

16. Marital Status (MAR): Two reasons prompted the inclusion of marital status as a predictor in this study. One, marital status has been shown to have a clear impact on one's physical and mental health. A study by the National Center for Health Statistics (cited in Stuart, 1980) revealed that the physical health of married individuals is superior to that of divorced, separated, and single adults in nearly all the examined categories. Studies by Bachrach, Blumenthal, and Briscoe and Smith (cited in Stuart,

1980) reported that divorced individuals have a significantly higher rate of mental problems than married people. Second, one study (Clarke et al., 1985) found marital status to be a significant predictor of EWB in church attenders.

The variable was measured by providing the respondents with five possible categories to describe their present marital status: "NEVER MARRIED," "MARRIED," "WIDOWED," "SEPARATED," and "DIVORCED."

17. Gender (SEX): Gender was intended to be primarily a descriptive variable. Martin's (1983) study, which found gender to be a significant predictor of burnout in parachurch staff members, suggests that this variable might play a role in the prediction of spiritual well-being in YFC/USA staff members. Male and female were the options offered.

18. Number of children (CHI): It is apparent that the number of children a couple has influences their marital satisfaction and stability (Stuart, 1980). Feldman, Hurley and Palones, Laws, LeMasters, Miller, and Renne (cited in Stuart, 1980) all found family size to be positively correlated to proneness to divorce. Quinn (1984) reported a positive correlation between SWB and marital satisfaction. The

above research indicates that the variable number of children, because of its potential negative impact on marital satisfaction, may be a predictor of spiritual well-being among married YFC/USA staff members.

The variable was measured by asking respondents simply to write down the number of children they had. No reference was made to marital status in the question for two reasons: one, the previous question gathered this data; and two, it was postulated that the number of children a staff member had, regardless of marital status, would be a predictor of spiritual well-being. Single parents, both Christian and non-Christian, face a variety of obstacles and problems in their lives because they do not have a partner to help care for their children (Getz, 1976; Swihart & Brigham, 1982). In view of the unique stresses placed upon single parents, it is quite possible that children will place greater life stress on them than on married parents.

19. Formal religious education (SEM): Bufford (1984) found that religious knowledge was positively correlated with scores on the SWB, RWB, and EWB Scales in a religious sample of community members. Further, the national leadership of YFC/USA considers religious

education to be an important part of the training of their full-time staff members. Each staff member who does not have twenty hours of Bible/Theology in college must complete the School of Theological Studies, a one-week lecture series (Barton, 1980).

The intent of this variable was to accurately measure the number of semester hours in formal Biblical/Theological courses the respondents had completed at a Bible school, Bible college, or seminar. Respondents were instructed to write down in the spaces provided the number of semester and/or quarter hours completed. This variable was placed last in the questionnaire due to its difficulty level. All responses were converted to semester hours through the use of this formula: quarter hours multiplied by .66 (L. J. Majors, personal communication, May 16, 1986).

A summary of the criterion and predictor variables used in this study is presented in Table 1.

Table 1

Criterion and Predictor Variables

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Criterion (dependent) Variables:

SWB, RWB, and EWB - three scores on the SWB Scale.

Predictor (independent) Variables:

YEARS - Years on staff

STAFF - Number of full-time staff at local ministry site

HRS - Hours averaged per week on the job

NUM - Number of youth led to Christ

SUP - Percent of income coming from personal donors

REC - Percent of personal support received from donors

XTAN - Years a Christian

DEV - Number of days per week devotions were held

MIN - Number of minutes in devotional periods

WK - Number of church services attended per week

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Table continued

Table 1 - continued

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|---|---|
| GRP | - Number of support groups attended per month |
| BIR | - Birth order |
| PAR | - Parents Christian |
| FA | - Father absence |
| OLD | - Age in years |
| MAR | - Marital status |
| SEX | - Gender |
| CHI | - Number of children |
| SEM | - Number of semester hours in formal Biblical/Theological courses |

## Instruments

### Spiritual Well-Being Scale

The Spiritual Well-Being Scale (SWB Scale) developed by Paloutzian and Ellison (1979a) was used as the measure of spiritual well-being in this study. This instrument is a general measure of spiritual well-being which conceptualizes the construct of "spiritual well-being" as a continuous variable including both Religious Well-Being (RWB) and Existential Well-Being (EWB).

The SWB Scale consists of 20 self-report items scored in a Likert 6-point scale format ranging from "strongly agree" to "strongly disagree." Responses for each of the items are scored 1 to 6 with a higher number representing greater well-being. Reverse scoring is employed on the negatively worded items. The 10 odd-numbered items assess Religious Well-Being and contain a reference to God. The 10 even-numbered items assess Existential Well-Being and contain no reference to God.

If five or less of the items are left blank by the respondent, the midpoint response of 3.5 is

scored for the blank items. If more than five of the items are left blank, the Scale is considered invalid and not scored (R. K. Bufford, personal communication, May 13, 1986).

Ellison and Paloutzian (1982) found the following test-retest reliability coefficients in a volunteer student sample of 100: .93 SWB, .96 RWB, and .86 EWB. In this same study, internal consistency coefficients were .89 for SWB, .87 for RWB, and .78 for EWB. The magnitude of these coefficients indicates that the SWB Scale and its subscales have acceptable reliability and internal consistency.

The SWB Scale has demonstrated concurrent and construct validity through factor analysis of items and correlations with a variety of constructs and theoretically related scales. Factor analysis of the 20 items revealed that all of the religious items loaded on the RWB factor and the existential items loaded onto two subfactors, one connoting life direction and the other related to life satisfaction (Ellison, 1982). The two subscales, RWB and EWB, appear to be "positively correlated to a moderate degree, ranging from 10-30% of common variance in various studies" (Bufford, 1984, p. 4). Ellison

(1983) reports that relatively high correlations have been found between SWB and RWB ($r$ = .90) and EWB ($r$ = .59). In a study by Bufford (1984), the following positive correlations were reported: .68 ($r$) between SWB and RWB and .41 ($r$) between SWB and EWB.

In addition to the previously reported correlations between SWB Scale scores and a variety of variables (see Introduction), further support for the Scale's validity comes from correlations with other measures. The SWB Scale correlated negatively with the UCLA Loneliness Scale (Ellison & Cole, 1982; Ellison & Paloutzian, 1978; Ellison & Paloutzian, 1979), and positively with the Intrinsic Subscale of Allport and Ross' (1967) Religious Orientation Scale (Bufford, 1984; Paloutzian & Ellison, 1979a), the Hope Index Scale, and internality on the Rotter Locus of Control Scale (Palmer, 1985).

The reliability and validity data detailed above support the use of the SWB Scale as a measure of spiritual well-being in this study. Some final comments on the utility and efficacy of the instrument are taken from Ellison (1982):

1. All of our items deal with transcendent concerns, or those aspects of our experience which involve meaning, ideals, faith, commitment, purpose in life, and relationship to the Divine.

. . .

2. Responses to the items indicate personal experience. Our scale is not a measure of belief, doctrinal correctness, ideology, or values. It is a measure of the tone of one's inner, subjective life.

3. The items referred to satisfaction, positive and negative feelings, purpose and meaning, a sense of being valued. These are commonly accepted indicators of well-being and intrapersonal health.

4. The scale is multidimensional and allows for an overall measure of spiritual well-being while also allowing for differentiated analysis of the religious and existential meanings of spiritual. The importance of this feature may be seen when we consider the influence of various factors on well-being. Certain factors may impact more on existential well-being, others on religious

well-being. A single overall measure would not allow comparison and complete understanding.

5. The scale allows measurement of spiritual well-being as a continuous, quantifiable variable. For each item, six responses are available. Such a quantitative measure allows for systematic comparison with other measures, and also provides the opportunity for a more precise examination of states of well-being in the impact of other variables. . . .

6. The scale, while partly arising out of the Judeo-Christian conception of religious well-being, is non-sectarian and can be utilized across Catholic, Protestant, Jewish, and other religions which conceive of God in personal terms. . . .

7. The scale provides a general measure of spiritual well-being while not getting bogged down in specific theological issues or a priori standards of well-being which may vary from one religious denomination to another. . . .

8. The Scale is short and easy to utilize. . . . (p. 10-11).

## Questionnaire

A 41-item mail questionnaire was developed to measure the 19 predictor variables and spiritual well-being (see Appendix A). In order to achieve clarity of content, accurate results, and a high rate of return, the questionnaire was constructed using Dillman's (1978) Total Design Method. Researchers who used the Total Design Method in complete detail in their mail surveys averaged a 77% response rate, while those who used the method in part averaged 71% (Dillman, 1978).

The five segments of the questionnaire, in the order in which they appear, are: eight job-related items, five Christian life items, the 20-item SWB Scale, three family background items, and five demographic items. The structure, wording, and order of the items and the front and back cover of the questionnaire followed Dillman's (1978) method.

Previous sections have discussed all but the first two items on the questionnaire. These items were not used as predictors of spiritual well-being, but served other purposes. The first item asked the respondents to indicate their level of job satisfaction, with the six choices ranging from "VERY

SATISFIED" to "VERY DISSATISFIED." This item fulfilled Dillman's (1978) requirements for a first question: it fit the study topic, was interesting, and led nicely into the series of job-related questions. The central purpose of this item was to persuade the respondents to complete the questionnaire. The second item asked the respondents to specify their current ministry position and offered six answer categories, including "OTHER", to insure that all staff members could respond. This item was included for descriptive purposes and for future researchers interested in studying the characteristics of specific groups of YFC/USA staff members.

Before the questionnaire was sent to the subjects, procedures for the scoring of unusual or atypical responses were established. If a range was given as a response, the midpoint was scored. Decimals were rounded up if .5 or higher, down if below .5. Questions left blank were considered missing data and coded as x. The "DOES NOT APPLY" response on question eight was also considered missing data and coded as x.

An integral part of the questionnaire was the cover letter which accompanied it (see Appendix B).

The one-page cover letter was constructed according to the Total Design Method (Dillman, 1978), and signed by the researcher and Mr. D. Larry Kreider, National Director/Adult Ministry of Youth for Christ/USA. In addition to the cover letter, three other written letters were developed as part of the Total Design Method: a postcard reminder (see Appendix C), a second follow-up letter (see Appendix D), and a third follow-up letter (see Appendix E).

Several steps were taken to insure the clarity and accuracy of the questionnaire. First, the researcher worked closely with Dave Scherrer, Executive Director of the Portland Area YFC/USA Ministry, in the development of questions that would be accurate and easily understood by full-time YFC/USA staff members.

Second, during the construction phase of the questionnaire, successive forms were pilot-tested on three separate occasions: in August, 1985, with three full-time Portland YFC/USA staff members; in September, 1985, with eight full-time staff at a conference in Allentown, Pennsylvania; and a final administration to eight full-time Portland YFC/USA staff in October, 1985.

## Data Collection

The data for this research were collected by a mail questionnaire during February, March, and April, 1986. The entire data collection process was carried out according to Dillman's (1978) Total Design Method. On February 25, 1986, the cover letter, questionnaire, and return envelope were sent to 350 randomly selected full-time YFC/USA staff members. Each questionnaire was stamped with an individual identification number to insure that follow-up mailings were sent only to nonrespondents.

There were three follow-up mailings conducted during the data collection period. On March 4, 1986, precisely one week after the original mail-out, a postcard follow-up was sent to all recipients of the first mailing. On March 18, 1986, exactly three weeks after the original mail-out, a second follow-up letter accompanied by a replacement questionnaire and return envelope was sent to all nonrespondents. Exactly seven weeks after the original mailing, on April 15, 1986, all remaining nonrespondents were sent by certified mail a third follow-up letter accompanied by a replacement questionnaire and return envelope. The final return rate of 85%, or 298 usable

questionnaires, is called "very good" by Babbie (1973).

## Statistical Design

The central purpose of this study was to develop a set of specific, commonly occurring variables which in linear combination would adequately predict the total scores of full-time YFC/USA staff members on the Spiritual Well-Being Scale. The statistical technique most appropriate for this purpose was multiple linear regression (Kachigan, 1982). The data was analyzed using appropriate programs from the Statistical Package for the Social Sciences (SPSS) developed by Nie, Hull, Jenkins, Steinbrenner, and Bent (1975).

The first step in the analysis of the data was the calculation of a number of descriptive statistics on the 298 subjects: the number of males and females, the number of subjects in each staff position, average age of subjects and range of age of subjects, number married and single, average number of years on full-time staff, and range of years on full-time staff. In order to provide a concise overview of the data, the means and standard deviations of the 19

predictor variables and SWB, RWB, and EWB were calculated.

The SPSS subprogram Regression, through a stepwise selection procedure, used the data from the sample to run three separate regression analyses. The purpose of these three regression analyses was to determine the best linear combination of the 19 predictor variables for each of the criteria: SWB, RWB, and EWB. The primary focus of the study was the predictive equation developed with SWB as criterion.

The stepwise selection procedure is recommended as the best variable selection option by Draper and Smith (1981) because it is more economical for the computer and "avoids working with more X's than are necessary while improving the equation at every stage" (p. 310).

The default entry and removal criterions in SPSS were used in the stepwise regression analyses:

1. Minimum F-to-enter (FIN) was set at 3.84.
2. Minimum F-to-remove (FOUT) was set at 2.71.
3. The minimum tolerance level was set at .01.

There are no hard and fast rules for entry and removal requirements in the stepwise selection procedure (Draper & Smith, 1981; Montgomery & Peck,

1982). Draper and Smith (1981) do recommend that the removal level of significance not be smaller than the entry level of significance because this could result in the rejection of predictors just admitted. Because no clear justification for specific entry and removal settings could be established due to the lack of research in this area, this study used the SPSS default criterions.

The level of significance for the regression equations generated by the stepwise procedure was set at .05. This is a commonly used level of significance for a wide variety of statistical methods. Further, when both theory and previous research suggest that the researcher's independent variables should impact the dependent variables, the .05 level should be used (Lewis-Beck, 1980).

For each of the three predictive equations, these statistics were generated:

1. Multiple R: "The correlation between the weighted sum of the predictor variables and the criterion variable" (Kachigan, 1982. p. 182)

2. Multiple R Square: "what proportion of the variance of the criterion variable is accounted for by

all the predictor variables combined" (Kachigan, 1982, p. 182).

3. Adjusted R Square: a downward adjustment to account for possible overinflation of R Square due to sampling error (Kachigan, 1982).

4. Standard Error of Estimate: the standard deviation of the predictor variable values about the criterion value (Kachigan, 1982).

5. Analysis of Variance: a test of the significance of the predictive equation through an analysis of the proportion of the criterion's variance attributed to the regression and to other error-related sources. The probability level of the resulting F statistic determines whether or not the equation is significant (Norusis, 1984). As mentioned above, the significance level for the overall regression equations was set at .05.

6. Beta Weights or Coefficients: the standardized z score forms of the predictor variables in the regression equation which are used to assess the relative importance of these individual predictor variables (Kachigan, 1982).

A fourth regression analysis, using a forced entry method, placed all 19 predictor variables in an

equation with SWB as criterion. The purpose of this regression analysis was not to construct a viable model, but to determine the total amount of variance which all the predictor variables combined accounted for in SWB.

All 19 independent variables were treated as continuous data in the statistical analyses. A screening of the data prior to the statistical analyses revealed two extremely high responses (250, 300) on the question measuring number of youth led to Christ. Because these high responses would have seriously skewed the data on this predictor and adversely impacted the accuracy of the study's results (Pedhazur, 1982), they were coded as missing data. In the regression analyses, all the missing values were replaced by the mean of the variable.

A correlation matrix including the 19 predictor variables and the three criteria (SWB, RWB, and EWB) was developed for the purpose of checking the size of inter-correlations among the predictor variables. When two or more predictor variables are highly correlated with each other, a condition known as multicollinearity, the Beta coefficients are less reliable (Kachigan, 1982).

An important part of the data analysis was the testing of the regression model assumptions through an examination of the final regression equations, the correlation matrix, and the residuals. The residuals, or prediction errors, "are the differences between what is actually observed, and what is predicted by the regression equation" (Draper & Smith, 1981, p. 141). Residual analysis, by checking the regression assumptions, can help explain why a regression equation was not significant and prevent the misapplication of an equation which appeared to be significant. A histogram of the standardized residuals, a normal probability plot of the standardized residuals against the expected residuals, a summary table of the residuals, and a listing of outliers in the casewise plot of standardized residuals were the basic residual statistics used in this study (Norusis, 1984).

## Summary

This chapter presented the methods used in collecting and statistically analyzing the data necessary to test the study's hypothesis. The sample was comprised of 350 full-time YFC/USA staff members

randomly selected from the computerized mailing list used by the national office. The dependent variable in the study was SWB, the total score yielded by Paloutzian and Ellison's (1979a) Spiritual Well-Being Scale. SWB, the summed total of the RWB and EWB subscales, is the most reliable and valid measure of spiritual well-being currently available. The independent variables were the 19 predictors: years on staff, number of full-time staff, hours per week, youth led to Christ, percent income personal support, percent support received, years a Christian, devotions per week, minutes in devotions, services per week, support groups attended, birth order, parents Christian, father absence, age, marital status, gender, number of children, and formal religious education.

Following Dillman's (1978) Total Design Method, a 41-item questionnaire measuring the dependent variable (SWB) and predictor variables was developed and sent to the 350 subjects. The final sample consisted of 298 subjects (85% return rate). The SPSS subprogram Regression, through a stepwise selection procedure, used the data from the sample to run three separate regression analyses in order to determine the best

linear combination of the 19 predictor variables for each of the criteria: SWB, RWB, and EWB. The central focus of the study was the regression analysis with SWB as criterion, with the analyses involving RWB and EWB being of secondary importance. A fourth regression analysis, using a forced entry method, was completed in order to provide an overall assessment of the predictive power of the 19 predictor variables with SWB as criterion. The final step in the statistical analyses was the testing of the regression model assumptions.

# Chapter III

## RESULTS

The purpose of this study was to identify one set of specific, commonly occurring variables which in linear combination would adequately predict full-time YFC/USA staff members' total scores on the SWB Scale. The results of the statistical analyses performed to fulfill the study's intent are presented in this chapter in three sections: (a) Sample Characteristics, (b) Regression Results, and (c) Tests of Regression Assumptions.

### Sample Characteristics

The sample consisted of 298 full-time YFC/USA staff members. Data was recorded on 19 predictor variables and three criterion variables in order to address the research question. Table 2 presents the means and standard deviations of the predictor and criterion variables for the entire sample.

Of the 298 subjects, 246 (82.6%) were males and 52 (17.4%) were females. They ranged in age from 21 to 63, with an average age of 34. There were 219 (73.5%) married subjects and 79 (26.5%) single

Table 2

Means and Standard Deviations of Criterion and Predictor Variables

| Variable | Mean | S.D. |
|---|---|---|
| SWB | 106.20 | 10.94 |
| RWB | 55.35 | 5.27 |
| EWB | 50.96 | 6.92 |
| YEARS | 7.85 | 7.28 |
| STAFF | 9.06 | 9.56 |
| HRS | 50.73 | 11.94 |
| NUM | 3.45 | 8.45 |
| SUP | .47 | .46 |
| REC | .81 | .29 |
| XIAN | 19.34 | 9.68 |
| DEV | 4.73 | 1.68 |
| MIN | 25.94 | 15.86 |
| WK | 1.90 | .86 |
| GPP | 2.20 | 2.37 |
| OLD | 34.45 | 8.53 |
| CHI | 1.49 | 1.34 |
| SEM | 23.27 | 37.05 |

subjects. In terms of job position, this distribution was produced: 85 executive directors, 74 Campus Life staff, 51 administrative staff, 31 youth guidance staff, 20 interns, and 36 staff workers who served in a variety of miscellaneous positions other than those mentioned above. The average number of years on full-time staff was 7.85, with the range being one to 38 years. The average number of years as a born-again Christian was 19.34. The subjects had devotions an average of 4.73 days per week, spent an average of 25.94 minutes in their devotional periods, and attended an average of 1.9 church services per week. The subjects appeared to be a very homogeneous group in terms of their religious experience and practices.

## Regression Results

A stepwise multiple regression analysis was performed to determine what combination of the 19 predictor variables accounted for the most variance in each of the three criteria: SWB, the main focus, plus RWB and EWB. A fourth regression analysis, using a forced entry method, was performed in order to determine the amount of variance accounted for in SWB by all the predictor variables combined.

In the stepwise regression analysis with SWB as criterion, three of the 19 predictors were selected: DEV(number of days per week devotions were held), CHI(number of children), and GRP(number of support groups attended per month). The resulting equation was Y' = 96.77 + 1.39(DEV) + 1.08(CHI) + .58(GRP). The regression equation had an overall F of 7.946, which was significant at p <.01. The stepwise regression results and accompanying analysis of variance summary are shown in Table 3. These three predictors combined accounted for only 7.5% of the variance in SWB. DEV was the predictor which accounted for most of the variance (4.4%), followed by CHI (1.6%) and GRP (1.5%).

In the stepwise regression analysis with RWB as criterion, DEV and GRP were the two predictors selected. The regression equation took the form of Y' = 51.29 + .73(DEV) + .27(GRP). The equation had an overall F of 11.546, which was significant at p<.01. Table 4 presents the summary statistics for the equation. The two predictors together only accounted for 7.3% of the variance in RWB. DEV accounted for 5.8% of the variance in RWB, while GRP accounted for 1.5%.

Table 3

Stepwise Regression with SWB as Criterion

| Step | Variable | Multiple R | R Square | Beta | F | Sig F |
|---|---|---|---|---|---|---|
| 1 | DEV | .209 | .044 | .212 | 14.123 | .000 |
| 2 | CHI | .244 | .060 | .132 | 5.515 | .020 |
| 3 | GRP | .274 | .075 | .124 | 4.878 | .030 |

Multiple R = .274

R Square = .075

Adjusted R Square = .066

Standard Error = 10.58

Analysis of Variance

| | Degrees of Freedom | Sum of Squares | Mean Square |
|---|---|---|---|
| Regression | 3 | 2668.031 | 889.344 |
| Residual | 294 | 32906.839 | 111.928 |

F = 7.946

Sig F = .000

Table 4

Stepwise Regression with RWB as Criterion

| Step | Variable | Multiple R | R Square | Beta | F | Sig F |
|---|---|---|---|---|---|---|
| 1 | DEV | .241 | .058 | .232 | 17.094 | .000 |
| 2 | GRP | .269 | .073 | .122 | 4.694 | .031 |

Multiple R = .269

R Square = .073

Adjusted R Square = .066

Standard Error = 5.095

Analysis of Variance

| | Degrees of Freedom | Sum of Squares | Mean Square |
|---|---|---|---|
| Regression | 2 | 599.465 | 299.732 |
| Residual | 295 | 7657.935 | 25.959 |

F = 11.546

Sig F = .000

In the final stepwise regression run, with EWB as the criterion, DEV and CHI were selected to be in the equation. The equation produced was $Y' = 47.07 + .61(DEV) + .68(CHI)$. The summary statistics for the equation are displayed in Table 5. The overall F was 5.444, which was significant at $p<.01$. When combined, the two predictors accounted for only 3.6% of the variance in EWB. DEV and CHI each accounted for 1.8% of the variance in the criterion.

A fourth regression analysis was performed in which all 19 predictor variables were forced into an equation with SWB as the criterion. Table 6 presents the summary statistics of this equation. The combined predictive power of all 19 independent variables only accounted for 9.6% of the variance in SWB. The overall F of the equation was 1.547, which did not reach the .05 level of significance.

Appendix F shows the correlations between the predictors and the three criterions. Overall, taking into consideration all of the predictors, the correlations are quite low. The three predictors which were selected to be in the stepwise regression equations had these correlations with the criterions: DEV and SWB (.21), CHI and SWB (.11), GRP and SWB

Table 5

Stepwise Regression with EWB as Criterion

| Step | Variable | Multiple R | R Square | Beta | F | Sig F |
|---|---|---|---|---|---|---|
| 1 | DEV | .136 | .018 | .147 | 6.555 | .011 |
| 2 | CHI | .189 | .036 | .132 | 5.264 | .023 |

Multiple R = .189

R Square = .036

Adjusted R Square = .029

Standard Error = 6.821

Analysis of Variance

| | Degrees of Freedom | Sum of Squares | Mean Square |
|---|---|---|---|
| Regression | 2 | 506.608 | 253.304 |
| Residual | 295 | 13724.909 | 46.525 |

F = 5.444

Sig F = .005

Table 6

Forced Entry of all Predictors with SWB as Criterion

| | |
|---|---|
| Multiple R | = .309 |
| R Square | = .096 |
| Adjusted R Square | = .034 |
| Standard Error | = 10.758 |

Analysis of Variance

| | Degrees of Freedom | Sum of Squares | Mean Square |
|---|---|---|---|
| Regression | 19 | 3401.918 | 179.048 |
| Residual | 278 | 32172.952 | 115.730 |

F = 1.547

Sig F = .069

(.13), DEV and RWB (.24), GRP and RWB (.14), DEV and EWB (.14), and CHI and EWB (.12).

## Tests of Regression Assumptions

The four central assumptions of multiple regression analysis, explained in detail in an earlier section, are: (a) the absence of specification error, (b) the absence of multicollinearity, (c) the absence of measurement error, and (d) the conformation of the error term to certain conventions. The first two of these assumptions were tested through an examination of the results of the regression analyses. The latter two assumptions were tested through a study of the residuals.

The assumption of absence of specification error was a difficult one to assess due to the nature of the data. The fact that three significant regression equations were developed indicates that linearity was present, but the low amount of variance the equations accounted for argues that the linear relationship was a weak one. It is probable that a number of potentially relevant predictors were omitted that could have added more predictive power to the equations. The inability of a number of predictors to

enter the equations could indicate that they were irrelevant and should not have been included in the study.

An examination of the intercorrelations between the 19 independent variables (See Appendix F) revealed low correlations for most of the independent variables. It is critical that independent variables not be highly correlated because when this is so, the Beta weights become less reliable. The correlations between DEV, CHI, and GRP, the three predictors which were involved in the stepwise regression equations, were low and did not reach the .05 level of significance. CHI correlated negatively with both DEV (-.086) and GRP (-.049), while DEV had a very low positive correlation with GRP (.067). The three highest correlations, all significant at the .01 level, were between predictor variables not selected for the stepwise regression equations: YEARS and XIAN (.67), YEARS and OLD (.65), and XIAN and OLD (.71). These high correlations were no surprise because these variables should logically impact one another. With the exception of these three high correlations, the majority of the correlations between the independent

variables were low and multicollinearity did not appear to be present.

The assumption of the absence of measurement error in the independent and dependent variables was, for the most part, met. The residual analysis revealed that the majority of the standardized residuals for the three regression equations fell between +3 and -3, the acceptable range (Younger, 1979). A total of nine outliers were detected for the three regression equations, a comparatively small number which would not have seriously skewed the data or violated this assumption. One of these outliers, a score of 82 on EWB in case number 128, was determined to be a miscoded entry. The score should have been 52. This error in coding was easily detected as an outlier and did not appear to seriously impact the regression analysis with EWB as criterion. The variable REC (percent of personal support received from donors) had a high missing data count (129). To control for this potential problem, the regression analyses were run both with and without this variable.

The final assumption, which involved the conformation of the error term to certain conventions, was addressed by two residual statistics completed for

each of the regression equations: a histogram of the standardized residuals and a normal probability plot of the standardized residuals against the expected residuals from a normal distribution. The output from these statistics indicated that the residuals of each regression equation were approximately normally distributed.

## Summary

This chapter presented the results of the statistical analyses used to address the study's stated purpose. The sample consisted of 298 full-time YFC/USA staff members in a variety of ministry positions. The mean age of the subjects was 34 and the majority were married and male. The subjects appeared to be very similar in their religious experience and practices. Three regression equations were developed with the stepwise method, each significant at the .01 level. The regression equation with SWB as criterion included the predictors DEV, CHI, and GRP and accounted for 7.5% of the criterion's variance. With RWB as criterion, the second equation was comprised of DEV and GRP and accounted for 7.3% of the variance in RWB. The third equation, consisting of DEV and CHI, had EWB as criterion and accounted for

3.6% of EWB's variance. A fourth regression equation, constructed with a forced entry method, revealed that all 19 predictors combined accounted for only 9.6% of the variance in SWB. The majority of the correlations between the predictor variables and the criterions were low. An examination of the regression equations, the correlation matrix, and the residuals was completed in order to test the central regression assumptions. The assumptions involving the measurement error, the error term, and multicollinearity did not appear to be violated, but the absence of specification error could not be ruled out with certainty.

# Chapter IV

## DISCUSSION

This chapter presents a discussion of the study's results in three sections: (a) Summary and Discussion of Results, (b) Conclusions, and (c) Recommendations for Future Research.

### Summary and Discussion of Results

The purpose of the study was to address this research question: Would a set of specific, commonly occurring variables, when in linear combination, adequately predict full-time Youth for Christ/USA staff members' total scores on the Spiritual Well-Being Scale? In an attempt to answer this question, stepwise multiple linear regression analysis was the statistical technique used to construct the prediction equation. A series of carefully planned steps were taken to insure that the study's purpose was carried out in an accurate, comprehensive manner.

The computerized mailing list of all current full-time YFC/USA staff members used by the national office in Wheaton, Illinois, served as the sampling frame from which 350 subjects were randomly selected.

A total of 298 subjects (85%) returned completed and usable questionnaires. This return rate was excellent and provided substantial support for the representativeness and generalizability of the study.

A total of 19 commonly occurring variables (see Table 1) were selected to be predictor, or independent variables, in the stepwise multiple linear regression analysis. Of the 19 predictors, 8 were job-related, 5 focused on Christian life practices, 3 tapped the area of family background, and 5 were demographic in nature. Each predictor variable was selected because of its potential ability to account for a portion of the variance in SWB scores. A complete description, including rationale for inclusion and means of measurement, was presented for each predictor.

Paloutzian and Ellison's (1979a) Spiritual Well-Being Scale was the instrument used to measure spiritual well-being. SWB, the total summed score of the RWB and EWB subscales, was the dependent variable. SWB is the most reliable and valid measure of spiritual well-being currently available. Because it represented the subjects' spiritual well-being, SWB was the central criterion predicted by the best linear combination of the 19 predictor variables. RWB and

EWB served as criteria in two separate, secondary regression analyses with the 19 predictors.

A 41-item mail questionnaire was developed to measure the 19 predictor variables and the dependent variable (SWB scores). In order to achieve clarity of content, accurate data, and a high return rate, the questionnaire was constructed using the Total Design Method of Dillman (1978). Three separate pilot tests on full-time YFC/USA staff members were conducted before the questionnaire reached its final form. Question 8, which measured the percent of personal support received from donors, proved difficult for subjects to answer. The high number of blank responses (129) may have effectively invalidated this variable.

The data collection process was carried out during February, March, and April, 1986 and followed the Total Design Method (Dillman, 1978). Four mailings were conducted. On February 25, 1986, the cover letter, questionnaire, and return envelope were sent to the 350 subjects. On March 4, 1986, precisely one week after the original mail-out, a postcard follow-up was sent to all recipients of the first mailing. On March 18, 1986, exactly three weeks after

the original mail-out, a second follow-up letter accompanied by a replacement questionnaire and return envelope was sent to all nonrespondents. Exactly seven weeks after the original mailing, on April 15, 1986, all remaining nonrespondents were sent by certified mail a third follow-up letter accompanied by a replacement questionnaire and return envelope. The final return rate was 85%, or 298 usable questionnaires.

The SPSS subprogram Regression, through a stepwise selection procedure, used the data from the sample to run three separate regression analyses: one with SWB as criterion, one with RWB as criterion, and one with EWB as criterion. A fourth regression analysis, using a forced entry method, was performed in order to determine the amount of variance accounted for in SWB by all the predictor variables combined.

In the stepwise regression analysis with SWB as criterion, 3 of the 19 predictors were selected: DEV (number of days per week devotions were held), CHI (number of children), and GRP (number of support groups attended per month). The equation was significant at $p<.01$, but only accounted for 7.5% of the variance in SWB. There was a linear relationship

between these predictor variables and SWB, but it was a very weak one. The equation, while statistically significant, cannot be used in a practical way to reliably predict the total scores of full-time YFC/USA staff members on the SWB Scale.

DEV was clearly the most effective predictor of SWB, accounting for 4.4% of the variance. This performance was expected, based on previous studies which reported significant positive correlations between frequency of personal devotions and SWB (Bufford, 1984; Bressem et al., 1985; Clarke et al., 1985). Its predictive ability in this study, coupled with the findings of these previous studies, clearly indicated that frequency of personal devotions is a variable with a significant impact on SWB. In future studies on the prediction of spiritual well-being, DEV should certainly be included.

CHI and GRP were the second and third predictor variables, respectively, to enter the equation with SWB as criterion. CHI accounted for 1.6% of SWB's variance, while GRP accounted for 1.5%. Despite their relatively low contributions to the variance of the criterion, the fact that these variables were able to enter the equation indicated that they had some impact

on SWB. Number of children and number of support groups attended per month bear further study as potential predictors of spiritual well-being.

It was surprising that the equation with SWB as criterion included so few predictors and accounted for so little variance. The majority of the variance in SWB (92.5%) was not accounted for by the 19 predictors. Indeed, when all 19 predictors were forced into an equation with SWB as criterion, the resulting equation accounted for only 9.6% of the variance in SWB. The 19 predictors were carefully developed through conversations with YFC/USA leaders, examination of correlates of SWB in the literature, and use of other relevant research. Both logically and empirically speaking, they should have been able to account for a larger portion of the variance in SWB. When a regression equation accounts for a small amount of the variance in a criterion, as in this study, a number of explanations are possible.

The first, and most obvious, explanation is multicollinearity. The intercorrelations between the independent or predictor variables must be low or each variable will add substantially less to the

prediction. This explanation is not appropriate for this study because multicollinearity was not present.

A second possible explanation is that there was not enough variance in the dependent variable. The subjects appeared to be a rather homogeneous group in terms of their spiritual well-being. The standard deviation of their scores on SWB (10.94), RWB (5.27), and EWB (6.92) seemed to be low, a finding consistent with previous research involving the SWB Scale and specific, homogeneous Christian samples. Samples drawn from specific Christian groups had lower standard deviations on SWB Scale scores than more general, heterogeneous samples (Bufford, Bentley, Newenhouse, & Papania, 1986). It is possible, therefore, that there was a relatively small amount of variance for the predictor variables to account for in SWB Scale scores. A more definitive statement regarding the issue of variance cannot be made until research on the SWB Scale has established standardized means and standard deviations for a variety of age and population groups.

The third explanation follows logically from the second and concerns the SWB Scale itself. If there was a small amount of variance in SWB Scale scores,

then there is a distinct possibility that the SWB Scale is too crude and general a measuring device for this type of population. The study by Bufford et al. (1986) seems to indicate that the SWB Scale produces less variance in the scores of subjects drawn from homogeneous Christian populations. The SWB Scale may be able to measure large differences in more heterogeneous samples, but not the fine, distinct differences present in homogeneous samples of Christians such as the YFC/USA staff members used in this study.

Finally, the source of the inadequate regression equation could have been the predictor variables selected for this study. Three separate explanations are possible. First, the independent variables selected simply did not prove to be adequate predictors of the dependent variable. Second, the predictor variables were not sensitive enough to detect the small differences present in this homogeneous sample of religious youth workers. Third, the predictor variables may have been appropriate and potentially effective, but could not perform effectively due to the small amount of variance in SWB Scale scores.

The two predictive equations developed with RWB and EWB as criterions were also ineffective in terms of variance accounted for. In the stepwise regression analysis with RWB as criterion, DEV and GRP were the predictors selected. The equation was significant at $p<.01$, but accounted for only 7.3% of the variance in RWB. The equation with EWB as criterion included DEV and CHI and was significant at $p<.01$, but accounted for only 3.6% of the variance in EWB.

A number of interpretive points can be made concerning these two secondary regression equations. First, the fact that both equations were unable to account for much variance in their criterions follows logically from the results of the main regression analysis with SWB as criterion. If the 19 predictors accounted for only 7.5% of the variance in the total scores on the SWB Scale, then it makes sense that these same predictors could not account for more variance in the two subscales.

Second, DEV was the only predictor variable to be included in all three stepwise regression analyses. This unique position further confirmed its value as a predictor of spiritual well-being.

Third, the ability of GRP and CHI to each enter a secondary equation (GRP with RWB as criterion and CHI with EWB as criterion) provided additional support for the inclusion of these variables in future predictive studies with spiritual well-being as a dependent variable.

The final step in the study consisted of the tests of regression assumptions. These tests were completed through an examination of the regression equations, the correlation matrix, and the residuals. The assumptions involving the measurement error, the error term, and multicollinearity did not appear to be violated, but the absence of specification error could not be ruled out with certainty.

All the stepwise equations were significant at the .01 level, a finding which satisfied the requirement of the specification error assumption that a linear relationship be present. The other two requirements of this assumption are: no relevant predictors have been excluded and no irrelevant predictors have been included. This study did not appear to meet these stringent requirements, but few regression studies do. Based on the low amount of variance accounted for in the criterions, it is almost

certain that relevant predictors were excluded and irrelevant predictors included. These two requirements or assumptions concerning predictor variables are rarely, if ever, met in one regression study. Rather, they are met over time as the original regression equation is improved with the elimination of ineffective predictors and the addition of effective ones.

## Conclusions

Would a set of specific, commonly occurring variables, when in linear combination, adequately predict full-time Youth for Christ/USA staff members' total scores on the Spiritual Well-Being Scale? The examination of this research question resulted in four central conclusions:

1. Three of the 19 predictor variables (DEV, CHI, and GRP) formed a significant equation with SWB as criterion through stepwise multiple linear regression analysis. The relationship between the predictor variables and SWB was linear but very weak, in that this equation only accounted for 7.5% of the variance in SWB. The 19 predictor variables did not form a linear equation that adequately predicted the

spiritual well-being (as measured by SWB) of full-time YFC/USA staff members.

2. The two secondary equations developed with RWB and EWB as criterions were significant, but very weak in their predictive ability. The equation with RWB as criterion included DEV and GRP and accounted for only 7.3% of the variance in RWB. DEV and CHI entered the equation with EWB as criterion and accounted for only 3.6% of EWB's variance. The 19 predictors were not able to form linear equations that adequately predicted these two components of SWB.

3. The three predictors that entered the equations (DEV, CHI, and GRP) demonstrated a certain degree of predictive ability with SWB. The variable DEV earned the distinction of being the most effective predictor in the study because it accounted for the most variance in SWB and entered all three stepwise equations.

4. The results of the regression analyses did not violate the major regression assumptions. Although the assumption of the absence of specification error may have been violated, it was concluded that not meeting the stringent requirements of this assumption did not affect the study's

validity. This assumption will only be completely satisfied over time, as the predictive equation is gradually improved.

## Recommendations for Future Research

In light of this study's conclusions, these recommendations for future research are made:

1. Because so little work has been done in the area of the prediction of spiritual well-being in religious youth workers, more research is necessary to build on the results of this exploratory study. This study was the first attempt to determine if a linear combination of commonly occurring variables could adequately predict the spiritual well-being of a group of religious youth workers. Because spiritual well-being is a vital part of success in youth work, more work needs to be done on the prediction of this quality.

2. The predictor variables used in this study did not form an equation which adequately predicted SWB. More research is necessary to provide a clearer explanation of why these predictor variables were not successful. Future predictive studies in this area should utilize these same predictors and develop new

ones in an attempt to produce an equation which more adequately predicts the spiritual well-being of religious youth workers. Based on personal comments provided by the YFC/USA subjects, here are some possible areas to tap for new predictors: time spent with immediate supervisor, recognition for accomplishments in ministry, interests/hobbies outside of work, financial variables, and previous work experience.

3. This study was limited to full-time YFC/USA staff members and can only be cautiously generalized to parachurch youth workers in general. Other specific parachurch youth organizations need to be studied in order to build a body of literature in the area of the prediction of spiritual well-being in this population.

4. It would be interesting and beneficial to use a more varied sample in studies of this type. Utilizing a random sample of full-time staff members from several parachurch youth organizations or youth ministers from several denominations would possibly produce more variance in SWB scores and make it easier to form an adequate predictive model. Generalizability would also be enhanced, provided the

sample was drawn in such a way as to be representative.

5. The SWB Scale is currently the best measure of the construct of spiritual well-being available. However, more research on the SWB Scale is needed in specific, homogeneous Christian groups such as full-time religious youth workers, in order to determine if it is too crude and general a measure for these types of populations. Depending on the outcome of studies such as these, it may be necessary to develop a scale which can more effectively measure the spiritual well-being of homogeneous Christian populations.

## Summary

The purpose of this study was to identify one set of specific, commonly occurring variables which in linear combination would adequately predict full-time YFC/USA staff members' total scores on the SWB Scale. The results of the statistical analyses clearly revealed that such a set of variables was not constructed.

A significant equation was developed with SWB as criterion, but it was a very weak one which only accounted for 7.5% of the variance in SWB. Two

secondary equations developed with RWB and EWB as criterions were significant, but also very weak in their predictive ability. The three independent variables that entered the equations (DEV, CHI, and GRP) demonstrated at least some predictive power with SWB. DEV, which accounted for the most variance in SWB and was the only variable to enter all three equations, was the best predictor in the study. The major regression assumptions were not violated and the study's results were considered valid.

A number of possible explanations for the study's failure to construct an adequate predictive model were set forth: (a) multicollinearity, an explanation rejected based on an examination of the correlation matrix, (b) lack of variance in the dependent variable, (c) the possibility that the SWB Scale is too crude and general a measure for homogeneous Christian populations, (d) the independent variables chosen were not adequate predictors of the dependent variable, (e) the predictor variables were not sensitive enough to be effective in this homogeneous sample, and (f) the ability of the predictor variables to operate effectively may have been limited due to the small amount of variance in SWB Scale scores.

Based on the study's results, five recommendations for future research were made. First, more research in the area of the prediction of spiritual well-being in religious youth workers is necessary to build on the work of this exploratory study. Second, future studies should experiment with the 19 predictors in this study and develop new ones in an attempt to predict spiritual well-being more effectively. Third, staff members from other parachurch youth organizations should be used as subjects in order to broaden the scope of the literature in the area of prediction of spiritual well-being. Fourth, the use of more varied samples could potentially create more variance in SWB scores and lead to better predictive models. Finally, it was recommended that the SWB Scale be used in future studies with specific, homogeneous Christian groups in order to determine if it is too crude and general a measure for these types of populations.

This study was the first research effort in the area of the prediction of spiritual well-being of religious youth workers. It was a small step toward the construction of a set of variables which can adequately predict this critical quality in this

population. Perhaps the most valuable contribution of this exploratory study was the development of a foundation in this area upon which future researchers can build. It is hoped that the results of this research effort will expedite the process of constructing an effective predictive model which will help youth ministry leaders maintain and enhance the spiritual well-being of their youth workers.

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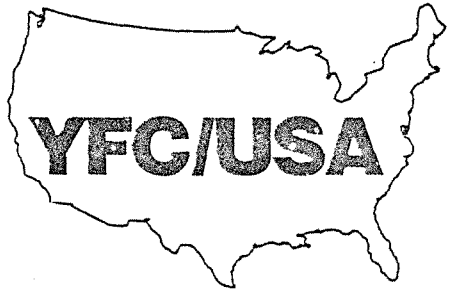
# APPENDIX A

# QUESTIONNAIRE

APPENDIX A

QUESTIONNAIRE




QUALITY OF LIFE AMONG FULL-TIME YOUTH FOR CHRIST/USA STAFF MEMBERS

Our desire is to help staff members become the most healthy, effective persons and servants of God they can be. This survey is designed to improve our understanding of the satisfaction YFC/USA staff members have concerning their personal lives. Please answer all of the questions. If you wish to comment on any questions or qualify your answers, please feel free to use the space in the margins. Your comments will be read and taken into account.

Thank you for your help.

Please return this questionnaire to:
YFC/USA Staff Questionnaire
P.O. Box 1332
Lebanon, Pennsylvania 17042

ESTIMATED COMPLETION TIME: 8 - 10 MINUTES

1. How satisfied are you with your job? (Circle Number)

   1. VERY SATISFIED
   2. MODERATELY SATISFIED
   3. SLIGHTLY SATISFIED
   4. SLIGHTLY DISSATISFIED
   5. MODERATELY DISSATISFIED
   6. VERY DISSATISFIED

2. Which of these categories best describes your current job position? (Circle Number)

   1. EXECUTIVE DIRECTOR
   2. ADMINISTRATIVE STAFF
   3. INTERN
   4. CAMPUS LIFE STAFF
   5. YOUTH GUIDANCE STAFF
   6. OTHER (PLEASE SPECIFY)

   _____

3. To the nearest full year, how long have you been a full-time YFC/USA staff member?

   _____ YEARS

4. How many full-time staff members, including yourself, are currently working in your local YFC/USA organization?

   _____ FULL - TIME STAFF MEMBERS

5. Looking at the five month period from September 1985 through January 1986, how many hours did you average per week on your job?

   _____ HOURS PER WEEK

6. How many high school age young people did you personally lead to Christ from September 1985 through January 1986 (if none, enter 0)?

   _____ YOUNG PEOPLE

7. What percent of your income from YFC/USA comes from personal donors who support you specifically (if none, enter 0)?

   _____ PERCENT

8. What percent of your total raised personal support was sent to you by your donors from September 1985 through January 1986 (if you have no personal support, check DOES NOT APPLY)?

   _____ DOES NOT APPLY
   _____ PERCENT OF PERSONAL SUPPORT SENT TO YOU

Another important part of understanding the personal sense of satisfaction people experience has to do with their individual Christian lives. So, next we would like to ask some questions about your Christian life and several activities connected to it.

9. To the nearest full year, how long have you been a "saved" or "born-again" Christian?

_____ YEARS

10. On the average, how many days per week do you have personal devotions?

_____ DAYS PER WEEK

11. How many minutes, on the average, do you spend in your personal devotional periods?

_____ MINUTES

12. In an average week, how many church services (Sunday morning, Sunday evening, Wednesday evening, other services) do you attend?

_____ SERVICES PER WEEK

13. How often do you attend a small support group, church-sponsored or independent, whose main purpose is spiritual encouragement and/or enrichment (if you do not attend such a group, enter 0)?

_____ TIMES PER MONTH

Next, we would like to ask you about your relationship with God and feelings about life. For each of the following statements, circle the choice that best indicates the extent of your agreement or disagreement as it describes your personal experience:

SA = STRONGLY AGREE
MA = MODERATELY AGREE
A = AGREE
D = DISAGREE
MD = MODERATELY DISAGREE
SD = STRONGLY DISAGREE

14. I don't find much satisfaction in private prayer with God ..... SA MA A D MD SD

15. I don't know who I am, where I came from, or where I'm going ..... SA MA A D MD SD

16. I believe that God loves me and cares about me ..... SA MA A D MD SD

17. I feel that life is a positive experience .... SA MA A D MD SD

18. I believe that God is impersonal and not interested in my daily situations ..... SA MA A D MD SD

19. I feel unsettled about my future ..... SA MA A D MD SD

20. I have a personally meaningful relationship with God ..... SA MA A D MD SD

21. I feel very fulfilled and satisfied with life .. SA MA A D MD SD

22. I don't get much personal strength and support from my God ..... SA MA A D MD SD

23. I feel a sense of well-being about the direction my life is headed in ..... SA MA A D MD SD

24. I believe that God is concerned about my problems ..... SA MA A D MD SD

25. I don't enjoy much about life ..... SA MA A D MD SD

26. I don't have a personally satisfying relationship with God ..... SA MA A D MD SD

27. I feel good about my future ..... SA MA A D MD SD

28. My relationship with God helps me not to feel lonely ..... SA MA A D MD SD

29. I feel that life is full of conflict and unhappiness ..... SA MA A D MD SD

30. I feel most fulfilled when I'm in close communion with God ..... SA MA A D MD SD

31. Life doesn't have much meaning ..... SA MA A D MD SD

32. My relation with God contributes to my sense of well-being ..... SA MA A D MD SD

33. I believe there is some real purpose for my life ..... SA MA A D MD SD

Our next area of interest is your family background.

34. Which of the following categories best describes your birth order? (Circle Number)

1. ONLY CHILD
2. FIRSTBORN
3. LAST-BORN
4. BORN SOMEWHERE IN BETWEEN FIRST AND LAST
5. DO NOT KNOW

35. In the home where you were raised, was at least one of your parents or guardians a born-again Christian?

1. NO
2. YES
3. DO NOT KNOW

36. In the home where you were raised, was your father absent (due to separation, divorce, death, or other circumstances) for any five-year period prior to your fifteenth birthday?

1. NO
2. YES

Finally, a few questions about you personally.

37. What is your age as of your last birthday?

_____ YEARS

38. As of today, what is your present marital status?

1. NEVER MARRIED
2. MARRIED
3. WIDOWED
4. SEPARATED
5. DIVORCED

39. What is your gender?

1. MALE
2. FEMALE

40. How many children do you currently have as a natural parent, adoptive parent, and/or legal guardian (if none, enter 0)?

_____ CHILDREN

41. Using whole numbers, how many semester and/or quarter hours in formal Biblical/Theological courses have you completed at a Bible School, Bible College, or Seminary (if none, enter 0 in both categories)?

_____ SEMESTER HOURS COMPLETED

_____ QUARTER HOURS COMPLETED

Is there anything else you would like to tell us about the satisfaction and fulfillment you experience in your personal life? If so, please use this space for that purpose.

Also, any comments you wish to make that you think might help the leadership of YFC/USA better meet the needs of staff will be appreciated, either here or in a separate letter.

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Your contribution to this effort is greatly appreciated. If you would like a summary of results, please print your name and address on the back of the return envelope (NOT on this questionnaire). We will see that you get it.

# APPENDIX B

## COVER LETTER

# APPENDIX B

## COVER LETTER

February 25, 1986

One of the central concerns of the national leadership of Youth for Christ/USA is the personal sense of satisfaction and fulfillment experienced by full-time staff members. Because the success of the YFC/USA ministry depends on the contributions of individual staff members, it is important to assess and, if possible, enhance the quality of their lives. The purpose of this study is to find out how satisfied YFC/USA staff members are and identify areas in their lives which appear to influence this internal expression of well-being.

You are among a number of YFC/USA staff members who are being asked to give their input in this area. Your name was selected in a random sample of all full-time YFC/USA staff members. In order that the results be truly representative of YFC staff members in the United States, it is important that each questionnaire be completed and returned. The questionnaire can be completed in about eight to ten minutes.

You may be assured of complete confidentiality. The questionnaire has an identification number for mailing purposes only. This is so that we may check your name off of the mailing list when your questionnaire is returned. Your name will never be placed on the questionnaire.

The results of this research will be made available to the national leadership of YFC/USA and all interested staff members. You may receive a summary of results by writing "copy of results requested" on the back of the return envelope, and printing your name and address below it. Please do not put this information on the questionnaire itself..

I would be most happy to answer any questions you might have. Please write or call. The telephone number is (717) 273-4435.

Thank you for your assistance.

Sincerely,

David Clarke
Project Director

Larry Kreider
National Director/Adult Ministry

# APPENDIX C

## POSTCARD REMINDER

## APPENDIX C

## POSTCARD REMINDER

March 4, 1986

Last week a questionnaire seeking your input about the personal sense of satisfaction experienced by YFC/USA staff members was mailed to you. Your name was drawn in a random sample of all full-time YFC/USA staff members.

If you have already completed and returned it to us, please accept our sincere thanks. If not, please do so today. Because it has been sent to only a small, but representative, sample of YFC/USA staff members, it is extremely important that yours also be included in the study if the results are to accurately represent the opinions of YFC/USA staff members.

If by some chance you did not receive the questionnaire, or it got misplaced, please call me right now, collect (717-273-4435) and I will get another one in the mail to you today.

Sincerely,

David Clarke
Project Director

# APPENDIX D

## SECOND FOLLOW UP

## APPENDIX D

March 18, 1986 SECOND FOLLOW-UP LETTER

About three weeks ago I wrote to you seeking your input on the personal sense of satisfaction you, as a YFC/USA staff member, are experiencing. As of today we have not yet received your completed questionnaire.

We have undertaken this study because of the belief that staff members' input should be taken into account in the formation of national training programs for the enhancement of the quality of life in YFC/USA staff.

I am writing to you again because of the significance each questionnaire has to the usefulness of this study. Your name was drawn through a scientific sampling process in which every full-time YFC staff member in the United States had an equal chance of being selected. This means that only about one out of every three YFC/USA staff members are being asked to complete this questionnaire. In order for the results of this study to be truly representative of all YFC/USA staff members, it is essential that each person in the sample return their questionnaire.

In the event that your questionnaire has been misplaced, a replacement is enclosed.

Your cooperation is greatly appreciated.

Cordially,

David Clarke
Project Director

# APPENDIX E

## THIRD FOLLOW-UP

# APPENDIX E

## THIRD FOLLOW-UP LETTER

April 15, 1986

I am writing to you about our study of the personal satisfaction and fulfillment being experienced by full-time YFC/USA staff members. We have not yet received your completed questionnaire.

The large number of questionnaires returned is very encouraging. But, whether we will be able to describe accurately how YFC/USA staff members are doing in these important areas depends upon you and the others who have not yet responded. This is because it is quite likely that those of you who have not yet sent in your questionnaire may feel very differently in the area of personal satisfaction than those who have.

This is the first national study of this type that has ever been done. Therefore, the results are of particular importance to the national YFC/USA leadership staff who are responsible for creating programs which meet the needs of persons like yourself. The usefulness of our results depends on how accurately we are able to describe the level and quality of personal satisfaction in the lives of full-time staff members.

It is for these reasons that I am sending this by certified mail to insure delivery. In case our other correspondence did not reach the person in your household whose response is needed, a replacement questionnaire is enclosed. May I urge you to complete and return it as quickly as possible.

I'll be happy to send you a copy of the results if you want one. Simply put your name, address, and "copy of results requested" on the back of the return envelope.

Your contribution to the success of this study will be appreciated greatly.

Most sincerely,

David Clarke

David Clarke
Project Director

# APPENDIX F

## CORRELATION MATRIX

## CORRELATION MATRIX

| | YEARS | STAFF | HRS | RUM | SUP | REC | XIAN | DEV | MIN | WK | ORP | BIR | PAR | FA | OLD | MAR | SEX | CHI | SEH | SWB | RWB | EWB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEARS | -- | .13* | .05 | .09 | -.14** | .00 | .67** | -.02 | -.01 | .06 | -.02 | -.12* | .09 | .00 | .65** | .23** | -.10* | .32** | .16** | .04 | .01 | .06 |
| STAFF | | -- | .01 | -.00 | -.12* | .08 | .13* | .10* | -.05 | .02 | -.00 | .06 | -.05 | -.02 | .18** | .02 | .09 | .07 | -.04 | .01 | .03 | .07 |
| HRS | | | -- | .17** | -.01 | -.03 | -.02 | -.01 | .05 | .14** | .02 | -.10* | -.05 | .00 | -.05 | .00 | -.26** | .04 | .06 | -.02 | -.02 | -.01 |
| RUM | | | | -- | .02 | -.05 | -.00 | -.05 | .08 | .00 | -.11* | -.11* | -.12* | -.03 | .01 | .00 | -.16** | -.04 | .02 | -.00 | -.06 | .04 |
| SUP | | | | | -- | -.02 | -.23** | .09 | .13* | .01 | .12* | .07 | -.14** | .03 | -.25** | -.14** | -.15** | -.16** | .06 | .06 | .06 | .05 |
| REC | | | | | | -- | .01 | .01 | .08 | .01 | .10* | -.02 | -.07 | -.01 | .07 | -.08 | .13* | -.03 | .01 | .07 | .10* | .02 |
| XIAN | | | | | | | -- | .01 | -.16** | .16** | -.06 | -.10* | .40** | -.01 | .71** | .22** | .10* | .38** | .18** | .10 | .07 | .09 |
| DEV | | | | | | | | -- | .11* | .11* | .07 | -.11* | .02 | -.03 | .14** | -.18** | .06 | -.09 | -.17** | .21** | .24** | .14** |
| MIN | | | | | | | | | -- | .07 | .12* | .01 | -.17** | .16** | -.10* | -.09 | -.06 | -.07 | -.01 | .07 | .09 | .01 |
| WK | | | | | | | | | | -- | -.00 | -.06 | .08 | -.06 | .13* | .01 | -.01 | .13* | .09 | .07 | .06 | .09 |
| ORP | | | | | | | | | | | -- | -.01 | -.15** | .08 | -.06 | -.02 | -.03 | -.05 | -.01 | .13* | .14** | .10 |
| BIR | | | | | | | | | | | | -- | .02 | -.06 | -.14** | -.07 | .08 | -.10* | -.01 | -.01 | -.02 | .01 |
| PAR | | | | | | | | | | | | | -- | -.13* | .08 | .07 | .10* | .05 | .15** | .01 | -.01 | -.01 |
| FA | | | | | | | | | | | | | | -- | -.00 | -.07 | -.03 | -.01 | .02 | .00 | .02 | -.00 |
| OLD | | | | | | | | | | | | | | | -- | .24** | .06 | .47** | .07 | .13* | .09 | .13* |
| MAR | | | | | | | | | | | | | | | | -- | -.37** | .56** | .19** | .01 | -.03 | .10* |
| SEX | | | | | | | | | | | | | | | | | — | -.19** | -.19** | -.03 | .01 | -.08 |
| CHI | | | | | | | | | | | | | | | | | | -- | .20** | .11* | .08 | .12* |
| SEH | | | | | | | | | | | | | | | | | | | -- | -.01 | -.04 | .01 |

*p < .05. **p < .01.

# APPENDIX G

## RAW DATA

# APPENDIX G

## RAW DATA

Key of Raw Data by Columns

1 = Subject

2 = Job position

3 = Years on staff

4 = Number of full-time staff at local ministry site

5 = Hours averaged per week on the job

6 = Number of youth led to Christ

7 = Percent of income coming from personal donors

8 = Percent of personal support received from donors

9 = Years a Christian

10 = Number of days per week devotions were held

11 = Number of minutes in devotional periods

12 = Number of church services attended per week

13 = Number of support groups attended per month

14 = RWB

15 = EWB

16 = SWB

17 = Birth order

18 = Parents Christian

19 = Father absence

20 = Age in years

21 = Marital status

Key of Raw Data by Columns (continued)

22 = Gender

23 = Number of Children

24 = Number of semester hours in formal Biblical/Theological courses

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6 | 7 | 45 | 55 | 99 | 99 | 99 | 12 | 6 | 30 | 3 | 2 | 60 | 53 | 113 | 4 | 1 | 1 | 44 | 2 | 1 | 5 | 0 |
| 2 | 5 | 3 | 10 | 60 | 4 | 5 | 5 | 23 | 7 | 5 | 2 | 4 | 57 | 47 | 104 | 3 | 2 | 1 | 46 | 2 | 1 | 3 | 10 |
| 3 | 1 | 5 | 1 | 43 | 2 | 25 | 33 | 15 | 6 | 60 | 1 | 3 | 56 | 50 | 106 | 3 | 2 | 1 | 27 | 2 | 1 | 2 | 12 |
| 4 | 4 | 1 | 7 | 50 | 3 | 100 | 20 | 9 | 7 | 30 | 3 | 4 | 56 | 49 | 105 | 3 | 2 | 1 | 26 | 2 | 1 | 0 | 32 |
| 5 | 2 | 9 | 9 | 45 | 0 | 0 | 99 | 12 | 3 | 15 | 2 | 0 | 57 | 52 | 109 | 4 | 1 | 1 | 33 | 2 | 1 | 2 | 30 |
| 6 | 4 | 2 | 1 | 45 | 0 | 100 | 100 | 4 | 5 | 40 | 4 | 12 | 60 | 60 | 120 | 3 | 1 | 1 | 32 | 2 | 1 | 2 | 0 |
| 7 | 6 | 10 | 1 | 25 | 8 | 400 | 100 | 14 | 5 | 45 | 2 | 4 | 52 | 58 | 110 | 4 | 1 | 1 | 31 | 2 | 1 | 1 | 99 |
| 8 | 2 | 2 | 17 | 40 | 0 | 0 | 99 | 30 | 5 | 10 | 3 | 4 | 55 | 44 | 99 | 3 | 2 | 1 | 47 | 1 | 2 | 3 | 0 |
| 9 | 3 | 1 | 8 | 30 | 4 | 99 | 99 | 16 | 4 | 20 | 1 | 2 | 55 | 53 | 108 | 4 | 2 | 1 | 21 | 1 | 1 | 0 | 99 |
| 10 | 4 | 8 | 6 | 65 | 5 | 25 | 25 | 15 | 4 | 9 | 1 | 0 | 58 | 60 | 118 | 3 | 2 | 1 | 30 | 2 | 1 | 1 | 20 |
| 11 | 1 | 18 | 4 | 50 | 0 | 100 | 100 | 42 | 4 | 15 | 2 | 0 | 55 | 60 | 115 | 2 | 2 | 1 | 61 | 2 | 1 | 3 | 16 |
| 12 | 5 | 3 | 45 | 40 | 7 | 0 | 99 | 8 | 6 | 45 | 1 | 6 | 50 | 49 | 99 | 4 | 1 | 1 | 28 | 1 | 1 | 0 | 0 |
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| 19 | 4 | 6 | 12 | 50 | 3 | 30 | 50 | 17 | 3 | 20 | 1 | 1 | 56 | 51 | 107 | 4 | 2 | 1 | 33 | 2 | 1 | 2 | 30 |
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| 22 | 1 | 3 | 1 | 55 | 7 | 0 | 99 | 19 | 3 | 45 | 2 | 2 | 57 | 56 | 113 | 4 | 2 | 1 | 24 | 1 | 1 | 0 | 45 |
| 23 | 1 | 8 | 1 | 48 | 1 | 55 | 99 | 28 | 6 | 45 | 1 | 3 | 58 | 55 | 113 | 2 | 2 | 1 | 34 | 2 | 1 | 3 | 110 |
| 24 | 4 | 4 | 3 | 65 | 2 | 50 | 60 | 15 | 2 | 30 | 2 | 3 | 53 | 34 | 87 | 2 | 2 | 1 | 30 | 2 | 1 | 3 | 15 |
| 25 | 4 | 3 | 8 | 50 | 0 | 100 | 80 | 12 | 4 | 30 | 3 | 4 | 53 | 50 | 103 | 2 | 1 | 1 | 27 | 2 | 1 | 2 | 0 |
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| 29 | 5 | 8 | 5 | 64 | 99 | 99 | 99 | 12 | 4 | 20 | 1 | 0 | 45 | 42 | 87 | 4 | 1 | 1 | 38 | 1 | 1 | 0 | 0 |
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| 35 | 2 | 27 | 99 | 55 | 1 | 100 | 100 | 41 | 7 | 20 | 2 | 12 | 57 | 59 | 116 | 2 | 2 | 1 | 46 | 2 | 1 | 2 | 56 |
| 36 | 4 | 2 | 8 | 58 | 2 | 10 | 10 | 25 | 7 | 20 | 1 | 2 | 55 | 46 | 101 | 2 | 2 | 1 | 25 | 1 | 1 | 0 | 6 |
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| 40 | 5 | 2 | 20 | 70 | 99 | 100 | 60 | 32 | 3 | 15 | 0 | 1 | 58 | 57 | 115 | 1 | 2 | 1 | 38 | 2 | 1 | 2 | 24 |
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| 44 | 6 | 5 | 35 | 30 | 0 | 0 | 99 | 28 | 7 | 5 | 1 | 0 | 41 | 38 | 79 | 3 | 2 | 1 | 28 | 2 | 2 | 3 | 0 |
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| 51 | 2 | 7 | 31 | 48 | 0 | 0 | 99 | 26 | 5 | 30 | 2 | 2 | 60 | 56 | 116 | 3 | 2 | 1 | 36 | 2 | 2 | 0 | 0 |
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| 54 | 4 | 3 | 15 | 40 | 0 | 98 | 100 | 6 | 6 | 38 | 3 | 1 | 59 | 58 | 117 | 4 | 1 | 2 | 32 | 1 | 1 | 0 | 0 |
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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 56 | 1 | 13 | 7 | 50 | 2 | 60 | 60 | 22 | 4 | 25 | 2 | 1 | 57 | 58 | 115 | 1 | 2 | 1 | 34 | 2 | 1 | 3 | 0 |
| 57 | 4 | 3 | 7 | 45 | 4 | 95 | 50 | 14 | 5 | 15 | 1 | 6 | 55 | 52 | 107 | 3 | 1 | 1 | 29 | 2 | 1 | 3 | 0 |
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| 64 | 2 | 6 | 5 | 35 | 0 | 0 | 99 | 23 | 7 | 30 | 3 | 0 | 47 | 46 | 93 | 4 | 2 | 1 | 26 | 1 | 2 | 0 | 0 |
| 65 | 4 | 3 | 3 | 45 | 0 | 41 | 43 | 18 | 0 | 0 | 1 | 2 | 59 | 52 | 111 | 3 | 2 | 1 | 26 | 2 | 1 | 0 | 55 |
| 66 | 6 | 8 | 5 | 52 | 0 | 0 | 50 | 16 | 4 | 15 | 1 | 4 | 51 | 52 | 103 | 2 | 2 | 1 | 28 | 2 | 1 | 1 | 0 |
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| 73 | 1 | 22 | 8 | 50 | 4 | 0 | 99 | 37 | 5 | 20 | 4 | 0 | 60 | 51 | 111 | 2 | 2 | 1 | 49 | 2 | 1 | 3 | 99 |
| 74 | 4 | 2 | 6 | 50 | 0 | 100 | 99 | 30 | 7 | 75 | 3 | 5 | 59 | 55 | 114 | 2 | 2 | 2 | 39 | 1 | 2 | 2 | 0 |
| 75 | 2 | 22 | 5 | 55 | 15 | 0 | 99 | 35 | 2 | 30 | 1 | 1 | 60 | 51 | 111 | 3 | 2 | 1 | 47 | 2 | 1 | 2 | 0 |
| 76 | 4 | 2 | 8 | 40 | 3 | 100 | 75 | 15 | 5 | 45 | 3 | 0 | 53 | 42 | 95 | 4 | 2 | 1 | 25 | 2 | 1 | 1 | 42 |
| 77 | 1 | 20 | 14 | 55 | 0 | 0 | 99 | 26 | 7 | 25 | 2 | 2 | 58 | 52 | 110 | 3 | 2 | 1 | 42 | 2 | 1 | 2 | 45 |
| 78 | 4 | 3 | 2 | 45 | 2 | 80 | 70 | 8 | 5 | 15 | 2 | 0 | 50 | 44 | 94 | 3 | 2 | 1 | 25 | 2 | 1 | 0 | 0 |
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| 83 | 2 | 6 | 5 | 50 | 0 | 0 | 99 | 17 | 7 | 15 | 2 | 4 | 59 | 51 | 110 | 3 | 2 | 1 | 30 | 1 | 2 | 0 | 0 |
| 84 | 1 | 8 | 1 | 65 | 75 | 0 | 99 | 15 | 3 | 15 | 3 | 0 | 41 | 42 | 83 | 2 | 1 | 1 | 31 | 2 | 1 | 0 | 15 |
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| 87 | 1 | 21 | 1 | 50 | 2 | 60 | 99 | 28 | 7 | 60 | 3 | 1 | 60 | 58 | 118 | 2 | 2 | 1 | 46 | 2 | 1 | 1 | 56 |
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| 89 | 4 | 2 | 5 | 55 | 8 | 100 | 80 | 12 | 4 | 30 | 1 | 0 | 60 | 55 | 115 | 2 | 2 | 1 | 30 | 2 | 1 | 0 | 4 |
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| 94 | 1 | 2 | 1 | 58 | 1 | 0 | 99 | 16 | 7 | 23 | 3 | 4 | 57 | 51 | 108 | 3 | 2 | 1 | 27 | 1 | 1 | 0 | 12 |
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| 97 | 2 | 7 | 99 | 40 | 1 | 0 | 99 | 20 | 7 | 20 | 2 | 1 | 50 | 44 | 99 | 2 | 2 | 1 | 55 | 1 | 1 | 0 | 0 |
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| 113 | 4 | 5 | 5 | 45 | 23 | 0 | 99 | 10 | 3 | 60 | 1 | 0 | 53 | 50 | 103 | 2 | 2 | 1 | 34 | 2 | 1 | 2 | 0 |
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| 116 | 4 | 8 | 5 | 45 | 3 | 100 | 100 | 14 | 7 | 50 | 3 | 4 | 59 | 48 | 107 | 2 | 1 | 1 | 33 | 2 | 1 | 3 | 0 |
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| 119 | 3 | 1 | 3 | 40 | 0 | 100 | 80 | 7 | 3 | 15 | 2 | 0 | 51 | 34 | 85 | 4 | 1 | 2 | 24 | 1 | 2 | 0 | 0 |
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| 121 | 5 | 37 | 18 | 80 | 56 | 100 | 150 | 33 | 7 | 20 | 1 | 1 | 58 | 50 | 108 | 1 | 1 | 1 | 51 | 1 | 1 | 0 | 0 |
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| 130 | 1 | 4 | 3 | 50 | 0 | 50 | 100 | 7 | 7 | 53 | 3 | 8 | 54 | 54 | 108 | 1 | 1 | 1 | 32 | 2 | 1 | 2 | 0 |
| 131 | 1 | 2 | 3 | 60 | 0 | 0 | 99 | 22 | 7 | 3 | 2 | 1 | 60 | 57 | 117 | 2 | 2 | 2 | 40 | 2 | 1 | 2 | 60 |
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| 139 | 2 | 17 | 5 | 34 | 0 | 0 | 99 | 39 | 4 | 20 | 1 | 0 | 59 | 47 | 106 | 2 | 2 | 1 | 44 | 2 | 2 | 3 | 0 |
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| 147 | 2 | 31 | 40 | 50 | 0 | 0 | 99 | 34 | 6 | 15 | 1 | 4 | 47 | 41 | 88 | 4 | 2 | 1 | 51 | 1 | 2 | 0 | 0 |
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| 149 | 1 | 15 | 5 | 55 | 1 | 60 | 99 | 30 | 4 | 15 | 3 | 4 | 52 | 46 | 89 | 2 | 1 | 2 | 44 | 2 | 1 | 4 | 30 |
| 150 | 5 | 22 | 11 | 55 | 0 | 0 | 99 | 38 | 7 | 10 | 3 | 4 | 57 | 58 | 115 | 2 | 2 | 1 | 50 | 2 | 1 | 0 | 0 |
| 151 | 1 | 11 | 2 | 50 | 73 | 30 | 30 | 32 | 2 | 45 | 3 | 0 | 55 | 58 | 113 | 3 | 2 | 1 | 37 | 2 | 1 | 2 | 0 |
| 152 | 5 | 3 | 8 | 30 | 0 | 100 | 99 | 17 | 5 | 13 | 3 | 0 | 55 | 44 | 99 | 3 | 2 | 1 | 24 | 2 | 1 | 0 | 99 |
| 153 | 1 | 4 | 2 | 58 | 6 | 1 | 99 | 13 | 6 | 20 | 3 | 4 | 59 | 59 | 118 | 2 | 2 | 1 | 33 | 2 | 1 | 2 | 96 |
| 154 | 4 | 3 | 11 | 55 | 9 | 80 | 0 | 20 | 5 | 30 | 3 | 0 | 59 | 57 | 116 | 4 | 2 | 1 | 28 | 2 | 1 | 1 | 33 |
| 155 | 1 | 18 | 4 | 50 | 3 | 20 | 99 | 20 | 5 | 39 | 3 | 4 | 60 | 60 | 120 | 2 | 2 | 1 | 37 | 2 | 1 | 2 | 99 |
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| 158 | 1 | 4 | 1 | 45 | 5 | 0 | 99 | 16 | 3 | 20 | 2 | 0 | 58 | 57 | 115 | 4 | 2 | 1 | 34 | 2 | 1 | 3 | 210 |
| 159 | 6 | 3 | 18 | 48 | 0 | 33 | 99 | 24 | 5 | 15 | 2 | 1 | 58 | 48 | 106 | 2 | 2 | 1 | 32 | 2 | 1 | 2 | 60 |
| 160 | 1 | 3 | 12 | 55 | 2 | 0 | 99 | 23 | 5 | 20 | 1 | 4 | 60 | 58 | 118 | 3 | 2 | 1 | 31 | 2 | 1 | 1 | 11 |
| 161 | 4 | 3 | 4 | 70 | 0 | 0 | 99 | 8 | 7 | 35 | 1 | 3 | 59 | 48 | 107 | 4 | 2 | 1 | 25 | 1 | 1 | 0 | 0 |
| 162 | 6 | 13 | 6 | 40 | 0 | 0 | 99 | 13 | 4 | 15 | 2 | 3 | 55 | 51 | 106 | 2 | 1 | 1 | 32 | 1 | 2 | 0 | 0 |
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| 164 | 1 | 10 | 1 | 60 | 13 | 0 | 99 | 18 | 5 | 10 | 3 | 4 | 53 | 59 | 112 | 2 | 1 | 1 | 33 | 2 | 1 | 2 | 203 |
| 165 | 5 | 3 | 11 | 43 | 5 | 0 | 99 | 25 | 6 | 99 | 1 | 4 | 58 | 54 | 112 | 4 | 2 | 1 | 41 | 2 | 1 | 3 | 5 |

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| 166 | 2 | 6 | 15 | 45 | 0 | 0 | 99 | 19 | 7 | 30 | 3 | 0 | 60 | 59 | 119 | 3 | 2 | 1 | 31 | 1 | 2 | 0 | 7 |
| 167 | 1 | 6 | 7 | 55 | 12 | 90 | 99 | 15 | 6 | 18 | 1 | 4 | 52 | 38 | 90 | 4 | 1 | 1 | 50 | 1 | 1 | 0 | 1 |
| 168 | 4 | 3 | 6 | 45 | 2 | 20 | 20 | 22 | 6 | 15 | 1 | 0 | 56 | 44 | 100 | 2 | 2 | 1 | 27 | 1 | 1 | 0 | 18 |
| 169 | 4 | 2 | 8 | 48 | 1 | 100 | 100 | 14 | 4 | 30 | 2 | 4 | 58 | 45 | 103 | 3 | 2 | 1 | 26 | 1 | 2 | 0 | 3 |
| 170 | 1 | 2 | 5 | 63 | 8 | 25 | 99 | 10 | 7 | 30 | 1 | 4 | 58 | 51 | 109 | 4 | 1 | 2 | 30 | 2 | 1 | 0 | 0 |
| 171 | 2 | 4 | 9 | 50 | 25 | 0 | 60 | 15 | 2 | 15 | 1 | 0 | 55 | 55 | 110 | 2 | 1 | 1 | 33 | 2 | 1 | 2 | 66 |
| 172 | 4 | 5 | 11 | 53 | 2 | 100 | 100 | 10 | 4 | 19 | 1 | 4 | 47 | 35 | 82 | 4 | 2 | 1 | 28 | 2 | 1 | 1 | 23 |
| 173 | 2 | 10 | 99 | 40 | 0 | 0 | 99 | 25 | 7 | 30 | 1 | 6 | 60 | 51 | 111 | 4 | 1 | 1 | 43 | 2 | 2 | 0 | 26 |
| 174 | 1 | 8 | 2 | 59 | 9 | 5 | 100 | 26 | 5 | 45 | 1 | 4 | 60 | 55 | 115 | 2 | 2 | 1 | 34 | 2 | 1 | 5 | 83 |
| 175 | 6 | 5 | 20 | 40 | 2 | 55 | 99 | 10 | 4 | 20 | 2 | 2 | 60 | 55 | 115 | 3 | 1 | 2 | 26 | 2 | 1 | 3 | 36 |
| 176 | 4 | 5 | 8 | 50 | 5 | 0 | 99 | 10 | 4 | 40 | 1 | 2 | 60 | 55 | 115 | 4 | 2 | 1 | 25 | 1 | 1 | 0 | 3 |
| 177 | 2 | 2 | 15 | 48 | 0 | 0 | 99 | 8 | 5 | 30 | 2 | 3 | 60 | 48 | 108 | 4 | 1 | 1 | 36 | 2 | 2 | 1 | 7 |
| 178 | 1 | 12 | 3 | 55 | 21 | 25 | 25 | 15 | 4 | 30 | 2 | 1 | 60 | 50 | 110 | 4 | 2 | 1 | 38 | 2 | 1 | 0 | 90 |
| 179 | 6 | 21 | 1 | 60 | 0 | 16 | 99 | 31 | 3 | 20 | 2 | 2 | 51 | 49 | 100 | 4 | 2 | 1 | 42 | 2 | 1 | 2 | 20 |
| 180 | 4 | 6 | 8 | 50 | 2 | 50 | 50 | 16 | 3 | 30 | 2 | 0 | 58 | 55 | 113 | 1 | 1 | 1 | 32 | 2 | 1 | 1 | 9 |
| 181 | 6 | 1 | 4 | 40 | 0 | 0 | 99 | 3 | 7 | 23 | 1 | 0 | 60 | 60 | 120 | 1 | 2 | 1 | 48 | 2 | 1 | 2 | 0 |
| 182 | 2 | 3 | 14 | 40 | 0 | 0 | 99 | 16 | 3 | 30 | 1 | 0 | 57 | 39 | 96 | 4 | 2 | 1 | 31 | 2 | 2 | 2 | 0 |
| 183 | 1 | 14 | 9 | 60 | 6 | 25 | 99 | 21 | 4 | 45 | 2 | 4 | 60 | 55 | 115 | 1 | 2 | 1 | 36 | 2 | 1 | 2 | 0 |
| 184 | 3 | 1 | 18 | 60 | 1 | 100 | 55 | 15 | 5 | 30 | 3 | 0 | 56 | 48 | 104 | 2 | 2 | 1 | 24 | 1 | 1 | 0 | 31 |
| 185 | 1 | 11 | 7 | 55 | 0 | 65 | 60 | 24 | 1 | 10 | 1 | 1 | 50 | 44 | 94 | 2 | 1 | 2 | 36 | 2 | 1 | 2 | 125 |
| 186 | 1 | 10 | 2 | 45 | 0 | 70 | 46 | 27 | 2 | 30 | 2 | 8 | 40 | 49 | 89 | 2 | 2 | 1 | 35 | 2 | 1 | 1 | 17 |
| 187 | 1 | 21 | 7 | 43 | 0 | 5 | 99 | 28 | 3 | 20 | 2 | 4 | 56 | 50 | 106 | 3 | 2 | 2 | 42 | 2 | 1 | 1 | 99 |
| 188 | 4 | 1 | 9 | 70 | 7 | 100 | 100 | 6 | 5 | 90 | 3 | 0 | 39.5 | 40 | 79.5 | 4 | 2 | 1 | 27 | 2 | 1 | 0 | 0 |
| 189 | 5 | 2 | 11 | 30 | 0 | 100 | 100 | 5 | 5 | 30 | 2 | 4 | 58 | 52 | 110 | 2 | 1 | 1 | 33 | 2 | 1 | 0 | 0 |
| 190 | 6 | 2 | 10 | 50 | 0 | 100 | 100 | 9 | 6 | 30 | 2 | 2 | 60 | 53 | 113 | 2 | 1 | 1 | 55 | 1 | 1 | 5 | 36 |
| 191 | 3 | 1 | 4 | 65 | 4 | 50 | 80 | 6 | 7 | 40 | 3 | 1 | 45 | 42 | 87 | 2 | 1 | 1 | 22 | 1 | 1 | 0 | 8 |
| 192 | 1 | 2 | 8 | 50 | 0 | 20 | 20 | 37 | 5 | 15 | 4 | 99 | 56 | 54 | 110 | 4 | 2 | 1 | 45 | 2 | 1 | 3 | 99 |
| 193 | 6 | 6 | 28 | 50 | 0 | 125 | 125 | 15 | 6 | 40 | 2 | 0 | 58 | 55 | 113 | 2 | 2 | 1 | 28 | 1 | 2 | 0 | 0 |
| 194 | 2 | 5 | 9 | 52 | 3 | 65 | 65 | 18 | 6 | 20 | 1 | 5 | 57 | 54 | 111 | 4 | 2 | 1 | 26 | 2 | 1 | 0 | 8 |
| 195 | 1 | 28 | 7 | 46 | 0 | 100 | 100 | 33 | 4 | 45 | 2 | 4 | 41 | 26 | 67 | 4 | 2 | 1 | 48 | 2 | 1 | 1 | 128 |
| 196 | 4 | 7 | 7 | 45 | 1 | 100 | 70 | 12 | 7 | 20 | 1 | 3 | 53 | 54 | 107 | 3 | 2 | 2 | 29 | 2 | 1 | 2 | 60 |
| 197 | 2 | 6 | 5 | 45 | 0 | 0 | 99 | 28 | 1 | 5 | 3 | 0 | 51 | 39 | 90 | 2 | 2 | 1 | 36 | 1 | 2 | 0 | 0 |
| 198 | 1 | 15 | 3 | 50 | 2 | 33 | 100 | 17 | 3 | 20 | 2 | 4 | 55 | 55 | 110 | 3 | 1 | 1 | 39 | 2 | 1 | 2 | 0 |
| 199 | 4 | 4 | 15 | 50 | 0 | 75 | 75 | 12 | 2 | 15 | 1 | 2 | 49 | 49 | 98 | 4 | 1 | 1 | 27 | 2 | 1 | 2 | 90 |
| 200 | 3 | 1 | 2 | 55 | 3 | 100 | 99 | 2 | 7 | 20 | 2 | 0 | 60 | 51 | 111 | 2 | 2 | 1 | 25 | 2 | 1 | 0 | 6 |
| 201 | 1 | 24 | 38 | 70 | 10 | 10 | 10 | 30 | 6 | 25 | 2 | 0 | 59 | 58 | 117 | 1 | 2 | 1 | 46 | 2 | 1 | 2 | 20 |
| 202 | 1 | 4 | 1 | 48 | 0 | 45 | 40 | 13 | 2 | 20 | 2 | 2 | 55 | 52 | 107 | 4 | 2 | 1 | 33 | 2 | 1 | 4 | 0 |
| 203 | 4 | 3 | 11 | 50 | 0 | 45 | 45 | 19 | 6 | 15 | 2 | 0 | 59 | 48 | 107 | 4 | 2 | 1 | 25 | 2 | 1 | 1 | 3 |
| 204 | 1 | 20 | 11 | 45 | 0 | 0 | 99 | 30 | 4 | 30 | 1 | 3 | 59 | 52 | 111 | 3 | 2 | 1 | 41 | 2 | 1 | 1 | 20 |
| 205 | 6 | 7 | 5 | 60 | 0 | 85 | 85 | 27 | 6 | 30 | 2 | 4 | 59 | 50 | 109 | 4 | 2 | 1 | 34 | 2 | 1 | 2 | 53 |
| 206 | 2 | 2 | 13 | 40 | 0 | 0 | 99 | 10 | 7 | 20 | 3 | 4 | 59 | 52 | 111 | 2 | 1 | 1 | 45 | 1 | 2 | 3 | 0 |
| 207 | 1 | 15 | 4 | 45 | 0 | 0 | 99 | 25 | 0 | 0 | 1 | 4 | 59 | 47 | 106 | 4 | 2 | 1 | 35 | 2 | 1 | 3 | 63 |
| 208 | 5 | 9 | 8 | 45 | 0 | 0 | 80 | 20 | 5 | 30 | 2 | 2 | 45 | 38 | 83 | 4 | 2 | 1 | 33 | 2 | 1 | 3 | 6 |
| 209 | 4 | 7 | 3 | 50 | 5 | 65 | 65 | 12 | 6 | 20 | 1 | 4 | 57.5 | 53 | 110.5 | 2 | 2 | 2 | 28 | 2 | 1 | 1 | 0 |
| 210 | 4 | 4 | 12 | 48 | 0 | 97 | 97 | 7 | 4 | 75 | 1 | 2 | 57.5 | 60 | 117.5 | 2 | 1 | 2 | 31 | 2 | 1 | 2 | 15 |
| 211 | 2 | 11 | 8 | 50 | 0 | 23 | 35 | 15 | 5 | 20 | 3 | 1 | 53 | 51.5 | 104.5 | 2 | 2 | 2 | 34 | 2 | 1 | 2 | 24 |
| 212 | 3 | 1 | 10 | 60 | 1 | 88 | 100 | 6 | 6 | 60 | 1 | 4 | 60 | 60 | 120 | 4 | 1 | 1 | 26 | 1 | 1 | 0 | 11 |
| 213 | 6 | 25 | 99 | 5 | 99 | 25 | 100 | 28 | 3 | 60 | 1 | 6 | 59 | 55 | 114 | 4 | 1 | 1 | 46 | 2 | 1 | 3 | 5 |
| 214 | 1 | 10 | 7 | 68 | 5 | 25 | 99 | 25 | 5 | 30 | 1 | 4 | 60 | 43 | 103 | 2 | 2 | 1 | 33 | 2 | 1 | 2 | 48 |
| 215 | 4 | 3 | 6 | 55 | 4 | 80 | 70 | 12 | 4 | 55 | 1 | 12 | 59 | 55 | 114 | 3 | 1 | 2 | 25 | 2 | 1 | 0 | 0 |
| 216 | 1 | 5 | 1 | 55 | 0 | 50 | 100 | 20 | 5 | 40 | 3 | 0 | 60 | 59 | 119 | 4 | 2 | 1 | 29 | 2 | 1 | 2 | 24 |
| 217 | 1 | 17 | 6 | 48 | 0 | 0 | 99 | 30 | 1 | 30 | 1 | 1 | 52 | 41 | 93 | 4 | 2 | 1 | 39 | 2 | 1 | 3 | 40 |
| 218 | 5 | 7 | 10 | 55 | 0 | 50 | 40 | 10 | 5 | 30 | 1 | 2 | 58 | 47 | 105 | 4 | 1 | 1 | 31 | 2 | 1 | 1 | 8 |
| 219 | 1 | 6 | 1 | 55 | 0 | 80 | 99 | 22 | 3 | 30 | 1 | 4 | 56 | 59 | 115 | 4 | 2 | 1 | 34 | 1 | 1 | 0 | 30 |
| 220 | 1 | 6 | 1 | 43 | 1 | 25 | 50 | 15 | 6 | 45 | 1 | 0 | 52 | 46 | 98 | 3 | 2 | 1 | 27 | 2 | 1 | 2 | 12 |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 221 | 4 | 3 | 5 | 50 | 0 | 100 | 99 | 7 | 6 | 13 | 1 | 0 | 60 | 52 | 112 | 1 | 1 | 1 | 25 | 1 | 1 | 0 | 6 |
| 222 | 4 | 5 | 4 | 25 | 3 | 90 | 90 | 1099 | | 99 | 1 | 0 | 58 | 47 | 105 | 3 | 1 | 1 | 29 | 2 | 1 | 2 | 40 |
| 223 | 5 | 3 | 12 | 50 | 12 | 50 | 50 | 9 | 5 | 45 | 3 | 99 | 52 | 50 | 102 | 4 | 2 | 1 | 36 | 2 | 1 | 3 | 30 |
| 224 | 4 | 3 | 3 | 45 | 0 | 0 | 99 | 11 | 3 | 15 | 1 | 4 | 42 | 40 | 82 | 2 | 1 | 1 | 29 | 2 | 1 | 2 | 0 |
| 225 | 4 | 1 | 4 | 45 | 3 | 99 | 99 | 3 | 3 | 20 | 1 | 0 | 50 | 47 | 97 | 2 | 1 | 1 | 23 | 2 | 1 | 0 | 0 |
| 226 | 2 | 4 | 18 | 55 | 0 | 66 | 61 | 8 | 6 | 45 | 1 | 6 | 52 | 54 | 106 | 4 | 1 | 1 | 26 | 2 | 1 | 2 | 0 |
| 227 | 5 | 99 | 4 | 40 | 10 | 0 | 80 | 30 | 3 | 15 | 2 | 2 | 59 | 49 | 108 | 2 | 2 | 1 | 35 | 2 | 1 | 2 | 11 |
| 228 | 3 | 1 | 7 | 35 | 0 | 75 | 99 | 14 | 5 | 23 | 3 | 2 | 54 | 49 | 103 | 4 | 2 | 1 | 24 | 1 | 1 | 0 | 16 |
| 229 | 5 | 3 | 7 | 40 | 0 | 0 | 99 | 14 | 5 | 30 | 2 | 0 | 58 | 56 | 114 | 3 | 2 | 1 | 31 | 2 | 2 | 0 | 99 |
| 230 | 5 | 3 | 12 | 55 | 0 | 100 | 100 | 15 | 6 | 20 | 2 | 0 | 57 | 42 | 99 | 4 | 2 | 1 | 24 | 1 | 2 | 0 | 5 |
| 231 | 1 | 3 | 7 | 50 | 0 | 0 | 99 | 29 | 3 | 15 | 3 | 0 | 56 | 56 | 112 | 4 | 2 | 1 | 37 | 2 | 1 | 2 | 32 |
| 232 | 2 | 1 | 37 | 40 | 0 | 0 | 99 | 7 | 3 | 20 | 2 | 0 | 49 | 51 | 100 | 4 | 2 | 1 | 25 | 2 | 2 | 0 | 0 |
| 233 | 4 | 4 | 11 | 65 | 2 | 80 | 50 | 21 | 4 | 15 | 1 | 0 | 50 | 41 | 91 | 3 | 2 | 1 | 25 | 2 | 1 | 2 | 8 |
| 234 | 1 | 22 | 12 | 54 | 0 | 0 | 99 | 40 | 5 | 10 | 1 | 0 | 54 | 55 | 109 | 3 | 2 | 1 | 52 | 2 | 1 | 4 | 100 |
| 235 | 4 | 16 | 5 | 60 | 6 | 0 | 99 | 20 | 5 | 30 | 3 | 6 | 58 | 48 | 106 | 2 | 1 | 1 | 38 | 2 | 1 | 4 | 4 |
| 236 | 1 | 8 | 30 | 60 | 99 | 0 | 99 | 19 | 3 | 60 | 2 | 2 | 58 | 60 | 118 | 3 | 2 | 2 | 34 | 2 | 1 | 3 | 90 |
| 237 | 4 | 1 | 5 | 45 | 7 | 50 | 50 | 8 | 6 | 23 | 3 | 2 | 59 | 54 | 113 | 4 | 2 | 1 | 28 | 1 | 1 | 0 | 0 |
| 238 | 1 | 9 | 2 | 50 | 6 | 50 | 0 | 32 | 4 | 15 | 3 | 0 | 53 | 51 | 104 | 2 | 1 | 1 | 39 | 2 | 1 | 3 | 0 |
| 239 | 5 | 2 | 2 | 55 | 99 | 55 | 100 | 11 | 4 | 60 | 1 | 3 | 60 | 55 | 115 | 2 | 1 | 1 | 30 | 2 | 1 | 2 | 0 |
| 240 | 5 | 10 | 9 | 40 | 0 | 100 | 100 | 35 | 2 | 10 | 1 | 0 | 52 | 52 | 104 | 4 | 2 | 1 | 32 | 1 | 2 | 0 | 8 |
| 241 | 1 | 8 | 8 | 45 | 0 | 0 | 99 | 20 | 5 | 25 | 2 | 0 | 54 | 50 | 104 | 4 | 2 | 1 | 29 | 2 | 1 | 2 | 25 |
| 242 | 4 | 14 | 10 | 50 | 0 | 0 | 99 | 25 | 4 | 15 | 2 | 1 | 48 | 52 | 100 | 2 | 2 | 1 | 34 | 2 | 1 | 2 | 22 |
| 243 | 1 | 5 | 6 | 58 | 99 | 9 | 99 | 33 | 7 | 30 | 2 | 4 | 60 | 57.5 | 117.5 | 1 | 2 | 1 | 41 | 2 | 1 | 2 | 21 |
| 244 | 1 | 17 | 2 | 50 | 99 | 50 | 50 | 26 | 2 | 15 | 1 | 4 | 54 | 52 | 106 | 4 | 2 | 1 | 37 | 2 | 1 | 4 | 99 |
| 245 | 2 | 19 | 5 | 50 | 2 | 0 | 5 | 45 | 4 | 20 | 1 | 4 | 45 | 45 | 90 | 2 | 2 | 2 | 56 | 2 | 2 | 0 | 0 |
| 246 | 2 | 2 | 9 | 42 | 0 | 0 | 99 | 15 | 6 | 20 | 2 | 3 | 57 | 53 | 110 | 2 | 2 | 1 | 26 | 1 | 2 | 0 | 0 |
| 247 | 1 | 3 | 2 | 50 | 0 | 0 | 99 | 22 | 2 | 30 | 2 | 0 | 58 | 52 | 110 | 2 | 2 | 1 | 28 | 2 | 1 | 2 | 35 |
| 248 | 6 | 22 | 1 | 55 | 0 | 50 | 75 | 27 | 5 | 15 | 2 | 1 | 56 | 59 | 115 | 4 | 2 | 1 | 45 | 2 | 1 | 2 | 95 |
| 249 | 1 | 10 | 1 | 60 | 1 | 30 | 99 | 15 | 5 | 15 | 2 | 0 | 58 | 41 | 99 | 2 | 1 | 1 | 41 | 2 | 1 | 3 | 0 |
| 250 | 3 | 2 | 10 | 50 | 0 | 70 | 100 | 12 | 5 | 20 | 1 | 0 | 56 | 48 | 104 | 2 | 2 | 1 | 39 | 2 | 1 | 2 | 6 |
| 251 | 6 | 3 | 7 | 30 | 0 | 100 | 40 | 30 | 7 | 30 | 1 | 0 | 60 | 55 | 115 | 4 | 2 | 1 | 40 | 2 | 2 | 1 | 0 |
| 252 | 1 | 14 | 9 | 50 | 0 | 40 | 20 | 15 | 5 | 30 | 1 | 10 | 60 | 55 | 115 | 4 | 1 | 1 | 38 | 2 | 1 | 2 | 0 |
| 253 | 1 | 13 | 5 | 55 | 0 | 35 | 95 | 30 | 4 | 20 | 3 | 1 | 59 | 59 | 118 | 4 | 2 | 1 | 36 | 2 | 1 | 3 | 10 |
| 254 | 5 | 10 | 10 | 50 | 0 | 120 | 120 | 23 | 1 | 45 | 1 | 8 | 40 | 47 | 96 | 5 | 2 | 1 | 31 | 1 | 2 | 0 | 130 |
| 255 | 1 | 2 | 1 | 55 | 2 | 50 | 35 | 11 | 5 | 30 | 3 | 5 | 59 | 52 | 111 | 4 | 2 | 1 | 42 | 2 | 1 | 2 | 0 |
| 256 | 1 | 3 | 5 | 48 | 0 | 100 | 100 | 10 | 5 | 20 | 1 | 4 | 55 | 56 | 111 | 3 | 2 | 1 | 22 | 1 | 1 | 0 | 0 |
| 257 | 4 | 4 | 1 | 50 | 3 | 20 | 90 | 9 | 4 | 35 | 1 | 2 | 43 | 39 | 82 | 2 | 2 | 1 | 30 | 2 | 1 | 0 | 0 |
| 258 | 1 | 16 | 3 | 99 | 0 | 75 | 72 | 28 | 5 | 45 | 2 | 2 | 57 | 53 | 110 | 4 | 2 | 1 | 34 | 2 | 1 | 2 | 0 |
| 259 | 6 | 9 | 7 | 48 | 10 | 70 | 40 | 12 | 7 | 35 | 2 | 3 | 57 | 44 | 101 | 2 | 1 | 1 | 35 | 2 | 1 | 1 | 11 |
| 260 | 1 | 17 | 13 | 60 | 0 | 1 | 99 | 25 | 3 | 10 | 2 | 1 | 56 | 59 | 115 | 2 | 2 | 1 | 36 | 2 | 1 | 3 | 6 |
| 261 | 4 | 3 | 8 | 55 | 3 | 120 | 120 | 12 | 7 | 60 | 1 | 7 | 60 | 53 | 113 | 3 | 1 | 1 | 28 | 1 | 1 | 0 | 6 |
| 262 | 4 | 4 | 4 | 53 | 0 | 100 | 100 | 17 | 7 | 8 | 3 | 4 | 57 | 52 | 109 | 1 | 2 | 1 | 26 | 1 | 1 | 0 | 99 |
| 263 | 5 | 3 | 5 | 65 | 4 | 100 | 77 | 4 | 7 | 90 | 3 | 4 | 59 | 49 | 108 | 4 | 1 | 1 | 25 | 1 | 1 | 0 | 0 |
| 264 | 5 | 2 | 5 | 55 | 1 | 95 | 99 | 16 | 5 | 30 | 2 | 6 | 58 | 55 | 113 | 2 | 2 | 1 | 27 | 1 | 2 | 0 | 99 |
| 265 | 2 | 3 | 2 | 45 | 0 | 0 | 99 | 25 | 6 | 20 | 2 | 2 | 58 | 50 | 108 | 2 | 2 | 2 | 37 | 1 | 2 | 4 | 0 |
| 266 | 1 | 2 | 1 | 51 | 0 | 17 | 66 | 14 | 2 | 23 | 2 | 0 | 45 | 52 | 97 | 4 | 2 | 1 | 34 | 2 | 1 | 3 | 60 |
| 267 | 5 | 7 | 12 | 45 | 11 | 70 | 70 | 10 | 6 | 30 | 2 | 0 | 60 | 55 | 115 | 2 | 2 | 2 | 31 | 2 | 1 | 1 | 80 |
| 268 | 4 | 11 | 5 | 45 | 1 | 75 | 100 | 25 | 6 | 13 | 1 | 4 | 57 | 41 | 98 | 2 | 2 | 1 | 35 | 2 | 1 | 3 | 99 |
| 269 | 4 | 7 | 16 | 55 | 4 | 80 | 50 | 14 | 2 | 60 | 2 | 0 | 60 | 56 | 116 | 2 | 1 | 1 | 36 | 2 | 1 | 2 | 0 |
| 270 | 4 | 7 | 3 | 55 | 3 | 90 | 90 | 23 | 4 | 30 | 2 | 8 | 56 | 49 | 105 | 1 | 2 | 1 | 30 | 1 | 2 | 0 | 30 |
| 271 | 2 | 2 | 3 | 60 | 0 | 0 | 99 | 11 | 7 | 15 | 3 | 0 | 60 | 50 | 110 | 2 | 2 | 1 | 34 | 1 | 2 | 0 | 0 |
| 272 | 2 | 27 | 1 | 58 | 0 | 0 | 99 | 33 | 7 | 45 | 2 | 0 | 60 | 53 | 113 | 3 | 2 | 1 | 49 | 2 | 1 | 3 | 6 |
| 273 | 4 | 4 | 10 | 40 | 3 | 0 | 99 | 19 | 6 | 20 | 2 | 4 | 58 | 46 | 104 | 2 | 2 | 1 | 25 | 2 | 1 | 0 | 0 |
| 274 | 6 | 7 | 5 | 55 | 2 | 33 | 99 | 15 | 3 | 38 | 2 | 0 | 60 | 59 | 119 | 3 | 2 | 1 | 31 | 2 | 1 | 2 | 40 |
| 275 | 1 | 4 | 4 | 50 | 6 | 50 | 40 | 15 | 5 | 10 | 1 | 0 | 37 | 42 | 79 | 3 | 2 | 1 | 35 | 2 | 1 | 2 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 276 | 3 | 1 | 12 | 55 | 0 | 65 | 65 | 20 | 7 | 53 | 3 | 1 | 60 | 60 | 120 | 4 | 2 | 1 | 35 | 1 | 1 | 0 | 6 |
| 277 | 2 | 10 | 12 | 65 | 8 | 99 | 99 | 35 | 6 | 20 | 4 | 3 | 58 | 55 | 113 | 2 | 2 | 1 | 40 | 2 | 1 | 4 | 25 |
| 278 | 6 | 2 | 6 | 48 | 0 | 25 | 25 | 13 | 6 | 18 | 3 | 1 | 58 | 55 | 113 | 4 | 2 | 1 | 32 | 2 | 1 | 2 | 8 |
| 279 | 4 | 2 | 7 | 40 | 0 | 100 | 70 | 19 | 7 | 45 | 2 | 8 | 60 | 45 | 105 | 2 | 2 | 1 | 24 | 1 | 1 | 0 | 13 |
| 280 | 2 | 14 | 12 | 40 | 0 | 0 | 99 | 16 | 5 | 30 | 1 | 0 | 48 | 30 | 78 | 1 | 1 | 1 | 36 | 1 | 1 | 0 | 0 |
| 281 | 4 | 6 | 5 | 43 | 0 | 90 | 50 | 20 | 4 | 15 | 2 | 2 | 53 | 52 | 105 | 3 | 2 | 1 | 27 | 2 | 1 | 2 | 20 |
| 282 | 3 | 2 | 12 | 35 | 2 | 50 | 20 | 7 | 1 | 20 | 1 | 0 | 44 | 43.5 | 87.5 | 4 | 1 | 1 | 25 | 2 | 1 | 2 | 20 |
| 283 | 2 | 7 | 7 | 41 | 1 | 30 | 40 | 20 | 5 | 15 | 2 | 4 | 60 | 60 | 120 | 4 | 1 | 1 | 52 | 2 | 2 | 2 | 0 |
| 284 | 2 | 10 | 43 | 20 | 0 | 0 | 99 | 49 | 7 | 10 | 2 | 0 | 60 | 60 | 120 | 4 | 2 | 1 | 63 | 2 | 1 | 0 | 0 |
| 285 | 6 | 18 | 38 | 60 | 2 | 0 | 99 | 33 | 7 | 25 | 3 | 4 | 60 | 60 | 120 | 4 | 1 | 1 | 47 | 2 | 1 | 2 | 0 |
| 286 | 5 | 3 | 38 | 50 | 1 | 0 | 99 | 20 | 1 | 20 | 3 | 4 | 51 | 50 | 101 | 4 | 2 | 1 | 27 | 2 | 1 | 1 | 28 |
| 287 | 1 | 17 | 2 | 55 | 2 | 50 | 99 | 32 | 6 | 20 | 4 | 1 | 57 | 46.5 | 103.5 | 4 | 2 | 1 | 42 | 2 | 1 | 2 | 30 |
| 288 | 4 | 3 | 8 | 65 | 0 | 35 | 30 | 18 | 4 | 20 | 2 | 2 | 58 | 51 | 109 | 2 | 1 | 2 | 30 | 1 | 1 | 0 | 0 |
| 289 | 5 | 1 | 8 | 44 | 10 | 50 | 100 | 22 | 3 | 30 | 2 | 0 | 60 | 57 | 117 | 2 | 2 | 1 | 30 | 2 | 1 | 2 | 0 |
| 290 | 2 | 5 | 13 | 45 | 0 | 0 | 99 | 18 | 4 | 10 | 1 | 5 | 58 | 56 | 114 | 3 | 2 | 1 | 33 | 2 | 1 | 2 | 0 |
| 291 | 2 | 15 | 30 | 48 | 0 | 17 | 4 | 26 | 7 | 10 | 1 | 1 | 51 | 53 | 109 | 2 | 2 | 1 | 38 | 2 | 1 | 2 | 30 |
| 292 | 1 | 6 | 1 | 57 | 1 | 100 | 5 | 11 | 6 | 25 | 1 | 1 | 58 | 46 | 104 | 4 | 2 | 1 | 30 | 2 | 1 | 3 | 0 |
| 293 | 2 | 8 | 99 | 45 | 0 | 3 | 19 | 23 | 5 | 5 | 1 | 0 | 56 | 40 | 96 | 4 | 2 | 1 | 33 | 1 | 2 | 0 | 60 |
| 294 | 3 | 1 | 5 | 45 | 2 | 100 | 99 | 19 | 3 | 15 | 1 | 5 | 60 | 55 | 115 | 3 | 1 | 1 | 39 | 2 | 1 | 2 | 0 |
| 295 | 3 | 1 | 7 | 65 | 3 | 100 | 2 | 14 | 4 | 15 | 2 | 4 | 60 | 56 | 116 | 4 | 2 | 1 | 23 | 1 | 1 | 0 | 60 |
| 296 | 1 | 8 | 20 | 63 | 1 | 100 | 99 | 21 | 4 | 15 | 3 | 7 | 59 | 58 | 117 | 2 | 2 | 1 | 31 | 2 | 1 | 1 | 14 |
| 297 | 1 | 13 | 13 | 68 | 0 | 0 | 99 | 26 | 4 | 15 | 1 | 0 | 53 | 48 | 101 | 2 | 2 | 1 | 41 | 2 | 1 | 4 | 18 |
| 298 | 2 | 21 | 20 | 55 | 0 | 60 | 0 | 42 | 5 | 20 | 4 | 4 | 55 | 53 | 108 | 1 | 2 | 1 | 50 | 2 | 1 | 3 | 130 |

# APPENDIX H

## VITA

# VITA

David Clarke
7607 Egypt Lake Drive
Tampa, Florida 33614
(813) 932-5867

## Personal Information

Born: October 14, 1959 in Pasadena, California
Parents: Mr. and Mrs. William Clarke
Raised in Tampa, Florida
Height and Weight: 5 ft. 10 in., 150 lbs.

Health limitations: None

Marital Status: Married July 10, 1982
Saundra Roxanne Martin
Wife's birthdate and place: December 18, 1960
in Palm Springs, California

Children: Emily Amanda Clarke; born November 7, 1985

College: Point Loma College, B.A. in Sociology, 1978-1982

## Education

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|---|---|
| High School: | Berkeley Preparatory School<br>Tampa, Florida |
| College: | Point Loma College<br>B.A. in Psychology, 1977-1981 |
| Seminary: | Dallas Theological Seminary<br>M.A. in Biblical Studies, 1981-1983 |
| Graduate School: | Western Conservative Baptist Seminary<br>M.A. in Psychology: August, 1984;<br>Ph.D. Candidate in Psychology: expected graduation date, December, 1986 |

Training Experience

During college, I spent a period of six months (October, 1980 - March 1981) as a volunteer aide at Genessee East Health Center in San Diego, CA. Working 4-6 hours a week, I served 3 months in the Developmentally Disabled Unit as a recreation therapy aide and 3 months in the Geriatric Unit as a teacher's assistant.

During my stay at Dallas Seminary, I completed a 3-month practicum (September 1982 - December 1982) at the Psychiatric Unit of Garland Memorial Hospital in Garland, TX. I spent a total of 100 hours at this inpatient setting, attending group therapy sessions, engaging in discussions with the staff, and interacting with the patients.

While attending Western Seminary, I was involved in the following practicum sites:

Portland Adventist Convalescent Center, where I gained some understanding of the Geriatric field through working with 3 elderly ladies approximately 6 hours a week (October - November 1983).

Delaunay Mental Health Center, where I spent 8 months in the Chronically Mentally Ill and Adult Outpatient programs. In the initial 3 months (January - March 1984), I worked with the chronic population 10-15 hours per week. I planned activities, did case management, and had 1:1 contact with these chronic clients. In late March, 1984 I cut back my hours in the chronic program and began seeing clients at the Center. From late March to early June, 1984 I did a number of initial assessment interviews and saw one regular client on a weekly basis. From early June, 1984 through August, 1984 I saw 4-5 outpatients each week and was involved in both individual and group supervision at the Center.

Alder Elementary School, where I did therapy with 3 male students (2nd grader, 5th grader, and 6th grade) on a weekly basis during late March and early June, 1984. With the guidance of the school counselor, I was able to experiment with various clinical approaches to these kids and their problems.

Beginning in early September, 1984, I began a 10-month, 15-20 hour per week practicum program at the Milwaukee Clinic of the Clackamas County Mental Health System. My weekly schedule included 5-6 therapy sessions, 2 outpatient groups, psychological testing, and individual supervision.

Lake Baptist Church, where I conducted 1-2 therapy sessions a week (primarily doing marriage, family work) from June, 1984 to June, 1985.

I recently completed a 12-month full-time internship at Philhaven Hospital, a private psychiatric hospital in Mount Gretna, PA. I spent 6 months on the Adolescent Inpatient Treatment Team and 6 months on an Adult Inpatient Treatment Team. I saw 3-4 patients a minimum of 3 times per week in 1:1 therapy, performed at least one full psychological test battery every 2 weeks, served as co-therapist in two groups (one outpatient, one inpatient), saw 8-10 outpatients per week, and conducted inpatient admissions to the hospital. In my work with both inpatients and outpatients, I used a broad range of treatment modalities: individual, marital, family, and group.

References

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