Structural equation model of psychological well-being, a Georgian Exploration

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Abstract

The aim of the study was to estimate the model of psychological well-being in Georgian Students. The objectives of the study was to test hypothesis is that within Ryff’s six dimensions model of Psychological wellbeing, there are certain coping strategies and low depression as predictors of general Psychological well-being. The research was conducted in Georgia among 252 students (mean age 21). The study methods were: Ryff’s Well-being Inventory, Coping Inventory for Stressful Situation (CISS) from Endler & Parker and, Kutcher’s Adolescent Depression Scale (KADS-6). In this study a model of psychological well-being was estimated. In this model, coping strategies and depression are independent and the psychological well-being is the dependent variable. To test hypotheses, Structural equation modeling (SEM) was used. The results of the study show, that coping strategies and low Depression are the predictors of psychological well-being. The value of $X^2$ of Estimated Model is very high, and the result of the study, which was researched with the above mentioned model of psychological well-being, strictly conveys the situation in the Georgian population (students) today.

Keywords: depression; coping; psychological well-being; student

1. Main text

Psychological well-being (Mayers, 1993), subjective well-being, and emotional well-being Diener, 2000 are used in empirical and theoretical scientific literature with regard to numerous aspects of psychological development of teenagers. These aspects are emotional regulation, coping, self-assessment, subjective control, social competence,
depression, and others. Subjective well-being is based on an individual's assessment of one's own life, when people assess their own conditions and the values of expectations relying on their previous experience and the extent to which their living standards have been achieved.

Various theories emphasize that negative sentiments and problems are always present and their perception depends on the attitude towards life (Veenhoven, 1994b) and internal and external resources of people (Preiser & Ziessler, 2009). In general, research into the phenomenon of PWB is very practical and valuable in understanding the phenomenon of happiness. Studies have shown that in northern countries, economic conditions alone are not a sufficiently significant factor that has an impact on the sentiment of being satisfied with life among children, teenagers, and adults. According to a researcher in the phenomenon of happiness (Wilson, 1967), a well-paid, young, educated, religious, and married person can be regarded as happy. According to other researchers (Diener et al., 1999), a person is happy if he/she has a positive temperament and is able to have a broader view of events, looking at them not only from a negative angle; lives in an economically developed society; enjoys social guarantees; and has appropriate resources that help him/her achieve set objectives.

There are lot of stressful situations in the daily life. Using coping strategies, people manage critical situations and stressful environments in their lives, which can have an impact on their psychological well-being and health. Many authors point to the importance of positive mental thinking for the further development and growth of university students (Hirsch & Ellis, 1996; Wright, 1964). A coping strategy is defined as the ability of a person to make certain changes at the cognitive and behavioural levels in order to manage psychological stress. Folkman and Lazarus divided coping strategies into two large groups - task-oriented and emotion-oriented. Both strategies aim at reducing and controlling the influence of stresses on people (Folkman & Lazarus, 1980). Constant worries and nervousness from fear of not achieving set objectives deprives students much energy and resources, which has a negative impact on their perception of PWB (Walton, 2002). It is the existence of the mechanism of efficient coping strategies that helps students to alleviate stress and improve their health.

Some research emphasises that religion has an important influence on the psychological well-being. Religious people are more happy (Emmons, 1999). In the scientific literature Religious coping is a multi-faced phenomenon, but it depends greatly on cultural factors, religion is a multifunctional phenomenon that can serve multiple purposes, it has been linked to psychological goals, anxiety reduction, personal control, self-development and research of meaning. Many individuals rely on religious resource to cope with difficulties and crises. The studies within the past years have demonstrated that religious coping significantly predicts changes in mental health (Pargament, 1997). Some Empirical studies have identified significant links between religion and spirituality and Health (Hill & Pargament, 2003). The authors highlight recent advances in the delineation of religion and spirituality concepts and measures theoretically and functionally connected to health. Through measures of religion and spirituality more conceptually related to physical and mental health, e.g., closeness to God, religious orientation, religious support, psychologists are discovering more about the distinctive contributions of religiousness and spirituality to health and well-being. Ai et al., (1998) examined religious coping and found that religious coping was tied to decreased depression and general distress.

2. Research Methods and Procedures

The Research instrument was the medium version of a questionnaire, designed to assess six global dimensions of psychological well-being: autonomy, environmental mastery, personal growth, positive relations, purpose in life, and self-acceptance (Ryff, 1989). Coping Inventory for Stressful Situation (CISS), is a four-factor model of human coping with adversity developed by Endler and Parker, 1990. Their construct differentiates three types of coping: emotion-oriented, task oriented, and avoidant.We also identified praying as a coping strategy, as its significance was supposed to be different from emotional coping in the Georgian Orthodox Christian context. Kutcher Adolescent depression scales (KADS-6), is a self-report scale specifically designed for diagnosis and assesses the severity of adolescent depression. All participants completed the information: age, gender, job and salary, education. Participation was voluntary and anonymous. The questionnaire took about 1 hour to complete. To verify the
Hypothesis, we used structural equation modelling LISREL 19 and Statistics program SPSS 21 was used to process the results.

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Figure N1
PWB- psychological well-being, task- task oriented coping, emotion-emotional coping, pray-praying as coping, avoid-avoidance coping

The hypothesis: Coping strategies and experiencing less depression are in correlation with psychological well-being by Ryff’s six-factor model of psychological well-being.

To test our hypothesis, we used Structural equation modeling (SEM), where depression and psychological well-being are coping dependent variables. The result shows that the determination coefficient of the psychological well-being \( R^2 = .31 \). This model explains the nature of psychological well-being with 31%. We have added all six dimensions of psychological well-being to this model. In this case, depression and coping strategies, as well as dimensions of psychological well-being are considered as independent variables, which should be responsible for a significant contribution to the sense of psychological well-being. Psychological well-being of all of these factors are dependent variables. The model shows that the determination coefficient of psychological well-being is \( R^2 = .96 \). All of these factors combined explain 96% of the model of psychological well-being. The Reliability \( \chi^2 \) of this model is high \( \chi^2 = 11425.007 \) (df)=30, \( p=0.0001 \) and the result of the study, which was researched with the above mentioned model of psychological well-being, strictly conveys the situation in the Georgian population (students) today.

The structural equation modeling of psychological well-being shows that the regression weight of coping strategies in the depression factor is \( \eta^2 = .12 \). This means that 12% causes of depression are coping strategies.

The correlation between the avoidance coping strategies and emotional coping was found \( P = .003 \), as well as between praying and emotional coping, \( p = .031 \). See Figure N1, Table N1.

**Table 1. Depression and coping strategies, analysis of predictors of structural equation modeling**

| Estimate | P |
|----------|---|
| DEPR <-- TASK | -.159 | .008 |
| DEPR <-- EMOT | .212 | *** |
| DEPR <-- AVOID | .171 | .005 |

DEPR-depression, TASK- task oriented coping, EMOT-emotional coping, AVOID-praying as coping, avoid-avoidance coping

**Table 2. Coping strategies, correlations and regression analysis of structural equation modeling**

| Correlation | Estimate | P |
|-------------|---------|---|
| TASK <-- EMOT | -.052 | .414 |
| AVOID <-- TASK | -.110 | .085 |
| AVOID <-- EMOT | .191 | .003 |
| PRAY <-- EMOT | .137 | .031 |
| PRAY <-- TASK | .096 | .130 |
| PRAY <-- AVOID | .035 | .584 |

This analysis makes possible to present a general picture of the relations between variables, as well as a comparison of the direct and indirect effect / effects between variables. The table N3 shows direct influence on the variables and Table N4 indirect – moderation effect.
If we will discuss the influence of coping strategies on the psychological well-being, they have a direct effect. If we will exclude the effect of other variables, there are very strong direct impact of coping strategies on the psychological well-being. Table N3 shows that praying and task-oriented coping have a positive effect on the psychological well-being, while the direct impact of avoidance and emotional coping results in negative. Praying, as coping strategy has the strongest direct impact on all the scales of the psychological well-being, (SELF p = 0.000, ENV, p = 0.000, RELAT, p = 0.000, AUTN, p=0.000, GROW, p = 0.000) and indirect impact on the purposes of Life scale (PURP p = 0.003). It is confirmed that all six dimensions of psychological well-being, coping strategies and depression explains 96% of the psychological well-being. Coping strategies have a direct effect on the psychological well-being, it means if we exclude the effect of influence of other variables, the effect of coping strategies on the psychological well-being are very strong.

Coping strategies’ indirect impact on the depression was also found. They have a moderating function: the emotional and avoidance coping and reduced task-oriented coping increase rates of depression. This influence is moderate and explains 12% causes of depression.

Table 3. Regression analyses between variables, direct affect

|        | DEPR | EMOT | TASK | AVOID | DEPR | PURP | SELF | ENV | RELAT | AUTN |
|--------|------|------|------|-------|------|------|------|-----|-------|------|
| DEPR   | .016 | .213 | -.158| .171  | .000 | .000 | .000 | .000| .000  | .000 |
| PURP   | .133 | .000 | .000 | .000  | -.306| .000 | .000 | .000| .000  | .000 |
| SELF   | .000 | .013 | .000 | .000  | -.115| .000 | .000 | .000| .000  | .000 |
| ENV    | .000 | -2.21| .164 | -.119 | -.270| .000 | .000 | .000| .000  | .000 |
| RELAT  | .000 | -.174| -.000| -.332 | .000 | .000 | .000 | .000| .000  | .000 |
| AUTN   | .000 | -.252| .215 | -.084 | .000 | .000 | .000 | .000| .000  | .000 |
| GROW   | .000 | -.237| .160 | -.216 | .000 | .000 | .000 | .000| .000  | .000 |
| PWB    | .014 | -.039| .023 | -.024 | -.029| .393 | .259 | .351| .345  | .428 |

RELAT-relationship with others, AUTON-autonomy, ENV-environmental mastery, GROW-personal growth, PURP-purpose of life, SELF-self acceptance, PWB- psychological well-being, TASK-task oriented coping, EMOT-emotional coping, AVOID-avoidance coping, DEPR-depression

Table 4. Regression analyses between variables, indirect affect

|        | DEPR | EMOT | TASK | AVOID | DEPR | PURP | SELF | ENV | RELAT | AUTN |
|--------|------|------|------|-------|------|------|------|-----|-------|------|
| DEPR   | .000 | .000 | .000 | .000  | .000 | .000 | .000 | .000| .000  | .000 |
| PURP   | .003 | -.065| .048 | -.052 | .000 | .000 | .000 | .000| .000  | .000 |
| SELF   | .001 | -.024| .018 | -.020 | .000 | .000 | .000 | .000| .000  | .000 |
| ENV    | .003 | -.057| .043 | -.046 | .000 | .000 | .000 | .000| .000  | .000 |
| RELAT  | .003 | -.071| .052 | -.057 | .000 | .000 | .000 | .000| .000  | .000 |
| AUTN   | .001 | -.018| .013 | -.014 | .000 | .000 | .000 | .000| .000  | .000 |
| GROW   | .002 | -.046| .034 | -.037 | .000 | .000 | .000 | .000| .000  | .000 |
| PWB    | .056 | -.336| .217 | -.395 | .000 | .000 | .000 | .000| .000  | .000 |

RELAT-relationship with others, AUTON-autonomy, ENV-environmental mastery, GROW-personal growth, PURP-purpose of life, SELF-self acceptance, PWB- psychological well-being, TASK-task oriented coping, EMOT-emotional coping, AVOID-avoidance coping, DEPR-depression

To make deep analysis of the problem, we carried out a dispersion analysis of PWB, coping strategies, and depression, using the post hoc test. We considered as an independent variable coping strategies on the one hand and depression on the other. In both cases, psychological well-being is presented as a dependent variable. The dispersion analysis of the factors showed that when students have a low level of depression and they actively use the task-
oriented coping strategy, the high level of their psychological well-being does not reduce: $F(3,3) = .634$, $p = .5$, $R^2 = .211$; if students resort to emotional coping on a low scale in conditions of low depression, the high level of their psychological well-being is not reduced: $F(3,3) = .2.052$, $p = .35$. $R^2 = .273$. Also in cases, when students have a low level of depression and they resort to avoiding strategy on a low scale, the high level of their psychological well-being is not reduced. However, if students have a high level of depression and they actively use avoiding strategy, their psychological well-being is reduced: $F(3,3) = .1.014$, $p = .005$. $R^2 = .161$. If students actively resort to prayers as a coping strategy in conditions of low-level depression, their PWB is not reduced, but the same effect is not achieved in case of high-level depression and the strengthening of the praying strategy cannot prevent psychological well-being from reducing. If we compare the aforementioned coping strategies with each other, unlike other coping strategies, the active use of praying as a coping strategy even in conditions of high depression does not draw the average psychological well-being lower than the medium level: $F(3,2) = .3.113$, $p = .06$, $R^2 = .202$.

3. Discussion

The study confirmed the importance of Ryff’s six dimensions model of Psychological wellbeing in Georgian context. In addition, we discussed the correlations between psychological well-being, effective coping strategies and low rates of depression. The presented model explained the nature of psychological well-being by 31%, and if we calculate this model together with Ryff’s six dimensions model, then this correlation explains 96% of psychological well-being. It was found that regardless of their cultural, social and religious backgrounds, praying is an important coping strategy for Georgian students managing stressful situations. The results show this strategy has a stress-buffering effect and has proved to be a situational resource under a stress. In the CISS questioner praying is presented only with one question: ‘by stressful situation I am praying’, but ‘Religious coping is a complex, multi-faced phenomenon, that has no single character and to develop a clearer picture of the various manifestation of religious expression, many research methods and tools are needed’ (Pargament & Raiya, 2007). Religious coping methods are integrated with individuals’ needs, goals and social context. Although our studies did not use comprehensive measures of religious coping, we wanted to show the relationship between religious coping and psychological well-being. More studies are needed to verify this conclusion. The level of psychological well-being is not reduced if task-oriented coping strategy is actively used in conditions of low depression. The level of psychological well-being is not reduced if emotional coping strategy is used on a lower scale in conditions of low depression. The level of psychological well-being is not reduced if avoidance coping strategy is used on a lower scale in conditions of low depression. The level of psychological well-being is not reduced if avoidance coping strategy is used on a lower scale in conditions of high depression. The high level of psychological well-being is not reduced if praying coping strategy is actively used in conditions of low depression, but the same effect is not achieved in conditions of high depression, as psychological well-being is reduced despite the intensification of the prayer strategy. If we compare the aforementioned coping strategies with each other, unlike other coping strategies, the active use of prayers as a coping strategy even in conditions of high depression does not draw the average psychological well-being lower than the medium level:

- The more intensive emotional coping strategy and depression lead to the reduction of PWB and the more intensive task-oriented coping and praying lead to increased psychological well-being.
- The avoidance strategy is in no correlation with psychological well-being.
- Autonomy is in positive correlation with task-oriented coping and in negative correlation with emotional coping.
- Environmental mastery is in positive correlation with task-oriented coping and in negative correlation with avoidance coping strategy, emotional coping strategy, and depression.
- Personal growth factor is in positive correlation with task-oriented coping and in negative correlation with emotional coping and depression.
- Increasing emotional coping and depression lead to the reduction of the rate of the purpose of life and intensifying prayers as a coping strategy lead to the increase in the rate of the purpose of life.
- The correlation between depression and coping strategies was confirmed. Depression intensifies in conditions of intensifying emotional and avoidance coping and reduced task-oriented coping.

In stressful situations, the efficiency of coping strategies depends on psychological well-being on the one hand and on the level of depression and the intensity of the use of coping strategies on the other. The results of the study may
be interesting for the administration and teachers of universities, as the age span of 18-24 is an important period of the psychological and social development of students. Universities can make an important contribution to the psychological well-being of students by helping them in developing aspects that are important for psychological well-being such as self-acceptance, achievement of important aims in their lives, personal growth and development, the formation of positive relations, and the development of autonomy. Universities can teach students how to adjust their living environment to their needs and values.

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