The Mediating Role of Resilience in Psychological Well-Being and Social Capital with Anger

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ABSTRACT

The aim of the present study was to investigate the mediating role of resilience in psychological well-being and social capital with anger. The research method was descriptive-correlation and path analysis. The statistical population of this study was men and women between 15 and 62 in three groups of youth, adults and middle-aged. After removing the defective questionnaires, the sample size reached 273 people, including 189 (69.2%) women and 84 (30.8%) men. In this study, cluster random sampling method was used for the final selection of members of the sample group. The instruments are including The Spielberger State -Trait Anger Inventory, Ryff scale psychological well-being (RSPWB), Rafiei social capital inventory (2007) and Conner-Davidson resilience scale. The validity and reliability of all questionnaires used in the research were reviewed and confirmed by the researcher. Data analysis in this study was performed by path analysis method. The results showed there is a significant negative relationship between anger and psychological well-being, social capital and resilience (p <0.01). Also, the results show that psychological well-being, social capital, and resilience had a direct effect on anger and psychological well-being had an indirect effect on anger through resilience. Also, the hypothesis related to the existence of an indirect relationship between social capital and anger is rejected with 95% confidence (p> 0.05).

Keywords
Anger management, Mediating role, Aggressive behaviors.

Introduction

Anger is a fundamental emotion [1] which is related to threat and negative assessment, it also activates physiological responses and affects behavioral tendency [2-4]. Anger may have destructive effects such as injury and damage, destructive attacks to oneself and others, unexpected death and dangerous treatments, anger may also have constructive effects such as expressing feelings, finding and keeping one's role and place among other people and creating favorable relationships, all of these traits have made anger to be known as double-edged sword [5]. There are always some individuals, among all classes and all ages who create an insecure environment for the people around them due to expressing their aggressive behaviors; therefore, aggression cannot be attributed to a particular age or period. Anger experiences are shaped by cognitive assessments [4]. Research findings have demonstrated that there is a relationship between anger and long-term dangers and also serious health issues like hypertension and cardiovascular disease [6-8], asthma [9] and Cancer [10]. High level of anger predicts mortality rates [8].

One of the main factors in increasing, decreasing and moderating anger and also aggressive behaviors is social capital. Social capital refers to institutions, relationships and norms which shape the quality and quantity of social interactions [11]. Increasing evidence demonstrate that social capital is always vital and necessary for sustainable growth a development [12]. Kastlyvnh provides a comprehensive and concise definition of social capital: "the value of all resources and benefits that a person has gained and taken control through his/her position in the relationship with others". The types of capital that a person has, is the basis of formation of different social relationships among various social groups.
individual's family relationships are formed under the influences of having various kinds of capital. Having social capital and higher range of social relationships, not only allow the individual to have higher social-cultural power and insight but also allow the person to pass through all the problems and handle them properly in his/her married life; and it seems that this group of individuals show the least amount of violence and aggression against their wives [13].

Nahapiet and Ghoshal (1998) consider social capital to include three dimensions [11, 14]:
- structural dimension which includes the patterns of communication among the member of a group or social units which itself includes three dimensions: network connection, network embellishments and network stability.
- communicative dimension which includes the amount of mutual trust among members of a social unit. Trust is a very important and vital factor in providing effective mutual communications among the members.
- cognitive dimension includes perception, beliefs and mutual social-cultural conceptions, which are accepted by the individuals and remain among them through common concepts, memories or common language.

According to the study of [15], entitled "Social Capital and Adolescent Violent Behavior": Correlates of Fighting and Weapon Use among Secondary School Students Results demonstrate the importance of social capital factors across domains as significant resources moderating violence outcomes, especially parent-child relationships and school affiliation. In another research done by [16] entitled "Social Capital, Family Violence, and Neglect", findings suggested that increasing social capital decreases the odds of neglectful parenting, psychologically harsh parenting, and domestic violence but not harsh physical punishment.

Anger and also aggressive behavior have disastrous outcomes for people and among all the outcomes we can mention the reduction of psychological well-being. Over the years, there have been two approaches to define well-being:

The first approach which is based on hedonism, believes that well-being is having positive and pleasurable feelings and absence of painful and negative feelings. However, in the second approach, well-being is not known as merely having the maximum level of pleasurable experiences and minimize the negative experiences, in contrast, in the second approach, well-being is the attempts to actualize one's existential potential [17]. This approach is also known as the Aristotelian approach [18]. In the study done by [19] entitled: "Investigation of the Effect of Intolerance of Uncertainty and the effect of Anger Control on the Relationship between Forgiveness and Psychological Well-Being through Structural Equation Modelling", the results showed that increase of tendency to forgiveness also increases anger control level and it was found that this mediates the effect of tendency to forgiveness on psychological well-being. In another study done by [20], it was demonstrated analysis of the data revealed that higher levels of anger were associated with lower levels of psychological well-being as well as higher levels of psychological distress. In contrast, higher levels of anger control were associated with higher levels of psychological well-being as well as lower levels of psychological distress.

One of the factors and also the trainings which seem to be appropriate in reducing anger and impulsive behaviors is resilience. Resilience or the ability to adjust positively to threats is a psychological issue which has been investigated in individual's response to problematic circumstances [21]. Resilience also means the capability of a person in creating of bio-psychological and spiritual balance in the face of problematic situations, it is also kind of ability in self-healing, having optimism, intellectual flexibility, excel at converting problems into an opportunity for learning and growth, having perseverance and self-esteem, having a healthy-supportive network, ability to develop emotional and supernatural capabilities, having independence in decision and opinion, having the sense of humor and the ability to solve problems and resolve conflicts [22-25]. According to the existing models, there are three functional areas in the definition of resilience and focusing on it: 1) resilience as a personality trait, 2) resilience as a positive mental state or mental health (for example: positive understanding, self-concept, academic achievement, being successful in duties and responsibilities etc.), 3) resilience as a dynamic process which is the result of the interaction of individual and peripheral variables and changes over time. This definition is far more considered than the prior definitions because of comprehensive framework and combining individual and environmental characteristics to create resilience [26]. In the study conducted by Almakanin, Hisham A.; Alkhawaldeh, Mohammad k. [27] entitled "The Effectiveness of Anger Management Training in Reducing Aggressive Behavior and Improving Resilience among Children with Hearing Disability at Amman" the results indicate the high efficiency of the anger management training program in reducing aggressive behavior and improving resilience among children with hearing disabilities. In another research conducted by Azarnioshan, Behzad., Naderi, Habibollah., Shojaee, Ali Asghar., & Asghariganji, Askar [28], entitled "The Mediating Role of Resilience in the Relationship Between Perceived Parenting Styles and Anger Management" results demonstrate resilience was a positive predictor of anger management and played a mediator role between authoritative and authoritarian parenting styles and anger management. In other study done by Sadri Damirchi E., Basharpour S., Ramezani SH., Karimanpour GH, 2018, entitled "Effectiveness of resilience training on anger control and psychological well-being in impulsive students" the results of multivariate covariance showed that resilience training can be effective in psychological well-being and anger control in students with impulsive behavior (p<0.00).

In this study we intend to assess psychological well-being and social capital on anger; however, unlike other research, we mainly focus on considering resilience as a mediator variable and investigate the direct or indirect effects of psychological well-being and social capital on anger with the consideration of resilience as our mediator variable. Since anger is a natural emotion and we are
also witnessing an increasing number of destructive consequences of this emotion among people, and finally, since the relationship between resilience, the mediator variable, and independent variables, psychological well-being and social capital on anger has never been studied in Iran, in this research, we plan to investigate this issue from a psychological perspective.

**Figure 1:** Conceptual model of the mediating role of resilience in the relationship between psychological well-being and social capital with anger.

**Hypothesis**
Resilience has a mediating role in psychological well-being and social capital with anger
Psychological well-being, social capital and resilience have a direct effect on anger
Psychological well-being and social capital have an indirect effect on anger through resilience
Psychological well-being and social capital have an indirect effect on anger through mediation of resilience

**Method**
The design of the present study was a descriptive correlation based on path analysis.

**Statistical population, sample and sampling method**
The statistical population of this study was men and women between 15 and 62 in three groups of youth, adults and middle-aged. In this study, 280 individuals were selected by random sampling method.

Finally, after removing the defective questionnaires, the sample size reached 273 people, including 189 (69.2%) women and 84 (30.8%) men. In this study, cluster random sampling method was used for the final selection of members of the sample group. The questionnaires were given to the sample group and the sample group answered the questions considering the ethical principles and the principle of confidentiality of the results. In order to evaluate the research model, SEM structural equation modeling method and amos-23 statistical software were used.

**Measuring instrument**
The instruments are including The Spielberger State-Trait Anger Inventory, Ryff scale psychological well-being (RSPWB), Rafiei social capital inventory (2007) and Conner-Davidson resilience scale. Ryff scale psychological well-being has 18 options and 6 subscales. The subject is asked to judge himself on one of the options 1 to 6, completely opposed, partly opposed, slightly opposed, slightly agreeable, partly agreeable and fully agreeable. Higher score is a sign of better psychological well-being. The numbers 3-5-9-10-13-16-17 is scored inversely. The psychometric features of this questionnaire show that the reliability and validity of psychological well-being scales have been reported in several studies. The internal consistency coefficient of the sub-scales of short form of psychological well-being scales, as well as the internal consistency coefficient of the whole test is reported to be about 50%. In order to standardization of well-being scales, Ryff has reported this questionnaire as follows: Autonomy 76% - Environmental control 90% - Individual growth 87% - Positive relationship with others 91% - Purposeful life 90% - Self acceptance 93%. Evidence of the convergence validity of the test suggests that six factors of psychological well-being are positively associated with satisfaction of life, self-esteem and creativity and with depression, chance and external control source has negative relationship.

The Spielberger State-Trait Anger Inventory-2: This scale was prepared by Spielberger [3] in 57 materials. The questionnaire consists of six scales and five subscales. Alpha coefficients have reported anger rate scale, anger-state, anger-trait, anger mood and anger reaction subscales 0.90-0.82 -0.89 -0.70, respectively. Khodayari Fard, Lavasani, Akbari zardkhaneh and Layaghat (2007) have assessed the reliability and validity of this questionnaire using a sample of 1272 students from Tehran University. Based on this research, the validity of the tool was varied by Cronbach's alpha method in multiple subscales between 0.60 for internal anger expressing and 0.93 for anger-state. The coefficient of validity of bisection technique is reported to be 0.57 for the internal anger expressing subscale and 0.89 for the state of anger subscale. Also, the coefficient of validity with a re-test method was 0.58 for an internal anger expressing and 0.93 for the anger-state subscales.

The Social Capital Questionnaire was developed by Rafiee, et al. in (2007). The questionnaire has 20 items that measure this structure in two forms of the inter-group and intra-group. The factor structure of this tool consists of three factors related to inter-group social capital (empathy and belonging, trust, cooperation and participation) and two factors associated with intra-group social capital (having relationships with people with different interests and life-styles), Which generally explain 58% of social capital changes. This tool has high reliability ($\alpha = 0.825$) and its Cronbach's alpha coefficient is 0.825.

Conner-Davidson resilience scale: The questionnaire has 25 items in a 5-point scale. In this questionnaire, the maximum score is 100 and the minimum is zero, the score for each subject is equal to the sum of scores for each of the questions. Connor and Davidson (2003) have reported test-retest reliability of this questionnaire on 24 patients with GAD and PTSD (0.87).

The convergence validity of this questionnaire was done by using the Kobasa Hardiness Questionnaire on 30 psychiatric patients.
and the results showed that resilience questionnaire has correlation with kobasa hardness questionnaire (0.83) and perceived stress (0.76), also suggest that high levels of stress relate to low stress (Conner, Davidson, 2003). In general, the results show the reliability and validity of the resilience questionnaire. In Iran, resilience questionnaire was standardized by Mohammadi (2006) and the results showed that this questionnaire has a Cronbach's alpha of 0.89. Regarding its validity, using factor analysis method, the calculation of each score with the total score showed that except for the three questions, the coefficients of other questions were between 0.14 and 0.64. In the present study, Cronbach's alpha was obtained 0.89 for the whole scale.

**Findings**

**Descriptive Findings of Research Variables**

Table 1 shows the mean and standard deviation of the subjects in terms of anger, psychological well-being, social capital and resilience separately for men and women.

Observing the mean scores of anger, social capital, psychological well-being and resilience in Table 1 shows that there is no significant difference in these dimensions between men and women.

**Statistical analysis of research hypotheses**

In order to investigate the relationship between research variables, the correlation between them was first calculated.

The results are reported in Table 2:

As shown in Table 2, there is a significant negative relationship between anger and psychological well-being, social capital and resilience (p<0.01). Therefore, with 99% confidence, we can say that there is a significant negative relationship between psychological well-being, social capital and resilience scores with anger.

In order to evaluate and study the relationship structure of variables in the proposed research model and also the mediating role of resilience in the relationship between psychological well-being and social capital with anger in individuals, using SEM structural equation modeling, path statistical method of path analysis was used.

The results related to the implementation of the model in standardized and non-standardized mode along with some of the most important indicators of model fit are presented in the following figures and table.

The values obtained for these indicators show that in general, the model is in a good position to explain and fit. In the following, along with the tables of direct effects, the research hypothesis is tested.

The results of Table 4 show that psychological well-being, social capital, and resilience had a direct effect on anger. Therefore, the hypothesis related to the direct effect of psychological well-being, social capital and resilience on anger was confirmed with 95% confidence (p <0.05). To test these indirect effects, Sobel mediated effect test was used.

The Sobel test was used to investigate the mediating effect of resilience on the relationship between psychological well-being and social capital with anger.

### Table 1. The mean and standard deviation of the subjects in terms of anger, psychological well-being, social capital and resilience separately for men and women.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>anger</td>
<td>Female</td>
<td>189</td>
<td>38.85</td>
<td>13.66</td>
<td>-.156</td>
<td>-.379</td>
</tr>
<tr>
<td></td>
<td>Man</td>
<td>84</td>
<td>38.27</td>
<td>14.21</td>
<td>-.209</td>
<td>-.319</td>
</tr>
<tr>
<td>psychological well-being</td>
<td>Female</td>
<td>189</td>
<td>73.79</td>
<td>9.75</td>
<td>.157</td>
<td>-.574</td>
</tr>
<tr>
<td></td>
<td>Man</td>
<td>84</td>
<td>73.66</td>
<td>10.70</td>
<td>-.232</td>
<td>-.447</td>
</tr>
<tr>
<td>social capital</td>
<td>Female</td>
<td>189</td>
<td>89.50</td>
<td>16.24</td>
<td>.375</td>
<td>-.047</td>
</tr>
<tr>
<td></td>
<td>Man</td>
<td>84</td>
<td>90.31</td>
<td>19.77</td>
<td>.203</td>
<td>-.412</td>
</tr>
<tr>
<td>resilience</td>
<td>Female</td>
<td>189</td>
<td>87.03</td>
<td>19.38</td>
<td>-.414</td>
<td>.305</td>
</tr>
<tr>
<td></td>
<td>Man</td>
<td>84</td>
<td>85.13</td>
<td>20.23</td>
<td>-.567</td>
<td>.044</td>
</tr>
</tbody>
</table>

**Table 2: Correlation between anger, psychological well-being, social capital and resilience.**

<table>
<thead>
<tr>
<th></th>
<th>Anger</th>
<th>Psychological well-being</th>
<th>Social capital</th>
<th>Resilience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anger</td>
<td>Pearson Correlation: 1</td>
<td>sig. (2-tailed): .000</td>
<td>N: 273</td>
<td></td>
</tr>
<tr>
<td>Psychological well-being</td>
<td>Pearson Correlation: -.506**</td>
<td>sig. (2-tailed): .000</td>
<td>N: 273</td>
<td>273</td>
</tr>
<tr>
<td>Social capital</td>
<td>Pearson Correlation: -.407**</td>
<td>sig. (2-tailed): .000</td>
<td>N: 273</td>
<td>273</td>
</tr>
<tr>
<td>Resilience</td>
<td>Pearson Correlation: -.507**</td>
<td>sig. (2-tailed): .000</td>
<td>N: 273</td>
<td>273</td>
</tr>
</tbody>
</table>

**.** Correlation is significant at the 0.01 level (2-tailed).
Table 3: Fits of the initial model.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
<th>Fit indicators</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$</td>
<td>2.18</td>
<td>Less than 3</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RMSEA¹</td>
<td>0.07</td>
<td>Less than 0.1</td>
<td></td>
</tr>
<tr>
<td>CFI²</td>
<td>0.93</td>
<td>Higher than 9.0</td>
<td></td>
</tr>
<tr>
<td>NFI³</td>
<td>0.92</td>
<td>Higher than 9.0</td>
<td></td>
</tr>
<tr>
<td>GFI⁴</td>
<td>0.95</td>
<td>Higher than 9.0</td>
<td></td>
</tr>
</tbody>
</table>

¹ Root Mean Square Error
² Comparative Fit Index
³ Normed Fit Index
⁴ Goodness of Fit Index

Table 4: Factors and significance of direct effect of components on anger.

<table>
<thead>
<tr>
<th>Criterion variable</th>
<th>Predictive variable</th>
<th>Type of effect</th>
<th>Non-standardized coefficient</th>
<th>$\beta$ standardized</th>
<th>Significant statistics</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anger</td>
<td>Psychological well-being</td>
<td>Direct</td>
<td>-0.40</td>
<td>-0.29</td>
<td>-4.76</td>
<td>0.001</td>
</tr>
<tr>
<td>Anger</td>
<td>Social capital</td>
<td>Direct</td>
<td>-0.14</td>
<td>-0.17</td>
<td>-3.02</td>
<td>0.002</td>
</tr>
<tr>
<td>Anger</td>
<td>Resilience</td>
<td>Direct</td>
<td>-0.18</td>
<td>-0.25</td>
<td>-3.86</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Table 5: Coefficients and significance of indirect effect of components on anger.

<table>
<thead>
<tr>
<th>Criterion variable</th>
<th>Predictive variable</th>
<th>Type of effect</th>
<th>Non-standardized coefficient</th>
<th>$\beta$ standardized</th>
<th>Sobel statistic</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anger</td>
<td>Psychological well-being</td>
<td>Mediated by resilience</td>
<td>-0.17</td>
<td>-0.12</td>
<td>-2.03</td>
<td>0.03</td>
</tr>
<tr>
<td>Anger</td>
<td>Social capital</td>
<td>Mediated by resilience</td>
<td>-0.06</td>
<td>-0.07</td>
<td>-1.13</td>
<td>0.31</td>
</tr>
</tbody>
</table>

Figure 2: Model in standard coefficient mode.
The results of Table 5 show that psychological well-being had an indirect effect on anger through resilience, so the hypothesis that there is an indirect relationship between psychological well-being and anger is confirmed with 95% confidence (p < 0.05). Also, the hypothesis related to the existence of an indirect relationship between social capital and anger is rejected with 95% confidence (p > 0.05).

**Discussion**

The aim of the (current) research was to investigate the mediating role of resilience in psychological well-being and social capital with anger and also to confirm/clarify the relationship and also the direct and indirect effects/impacts of psychological well-being and social capital through resiliency to anger. The first finding in the study showed that, firstly, there is no significant difference between men and women in these variables. Secondly, according to data obtained from the SEM Structural Equation Model, the PATH statistical method for analysis, there was a significant negative correlation between anger and psychological well-being, social capital, and resilience scores with anger. The findings also indicate that psychological well-being has an indirect effect on anger through resilience, hence, the hypothesis of "there is an indirect relationship between psychological well-being and anger" has been confirmed with 95% certainty, but the hypothesis of an indirect relationship between social capital and anger is infirmed/failed with 95% confidence.

Therefore, the second hypothesis of the research has been confirmed. The findings of the research are almost consistent with the findings of [15,20,28]. Other data of this study indicated that psychological well-being, social capital and resilience had direct effect on anger. Therefore, the hypothesis of a direct effect of psychological well-being, social capital and resilience on anger was confirmed with 95% confidence which is approximately inconsistent with the finding of Zolotor and Ranyan [16] which had been indicated there was no relationship between social capital and physical punishment.

According to all of the mentioned data, it can be concluded, psychological well-being, social capital and resilience have pivotal role in increasing and decreasing of anger and also aggressive behaviors. Moreover, individuals with lower amount of social capital are more likely to be more aggressive; In contrast, individuals with high levels of psychological well-being show higher levels of positive emotions, especially in encountering/face of unfavorable feedback towards them and even they show more resilience and endurance in encountering of life problems and they are more insistence to solve them, which is consistent with the findings of [29,30].

![Figure 3: Model in non-standardized coefficient mode.](image-url)
References
