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Predicting the level of resilience of adults aged 25–65 relation to the elderly according to their interpersonal problem-solving methods

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Abstract:

BACKGROUND: Elderly home caregivers are among the first and most important people involved in elderly care. Since the process of caring for the elderly affects the mental, physical, and life conditions of the caregivers, it is of utmost importance to study interpersonal problem-solving methods and the role they play in the resilience of caregivers. In this regard, the study was conducted to predict the resilience of adults aged 25–65 years compared to the elderly according to their interpersonal problem-solving methods.

MATERIALS AND METHODS: This is a descriptive correlational study. Two-hundred and sixty-two adults aged 25–65 living in Iran in different genders, marital status, majors, and occupations participated in this study. The data obtained from responding to questionnaires of resilience and interpersonal problem solving of respondents were analyzed using Pearson's correlation coefficient and linear regression correlation coefficient.

RESULTS: The findings showed that there is a significant relationship between resilience and some problem-solving methods (frankness and transparency, realism, exposure, sympathy, pursuit and challenge, and incentive agreement) of elderly home caregivers. According to the result of linear regression, among the respondents' interpersonal problem-solving methods, realism was the only predictive variable for resilience ($P = 0.006$). That is, being more realistic is related to more resilience in caring for the elderly.

CONCLUSIONS: Some interpersonal problem-solving methods of adults are related to their resilience in caring for the elderly. Paying attention to these resilient practices and behaviors can be effective in improving the quality of care for the elderly and reducing their difficulties. The results of this study can be used in long-term and practical planning for elderly home caregivers.

Keywords:

Elderly, interpersonal problem-solving methods, resilience

Introduction

Elderly is a growing process that will account for a high percentage of the world's population in the near future. According to United Nations estimates, the world's elderly population will double in 2025, that is, 1.2 billion people.^[1] Meanwhile, Iran is also a growing country whose elderly population is increasing due to the

improvement of health standards and access to health care and treatment.^[2] According to the report of a member of the Supreme Council of the Cultural Revolution, Iran will face a 30% increase in the elderly group in 2050.^[3]

In this regard, the growth of the population due to the increasing number of elderly people is considered an influencing factor on the social and economic system of the

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society. Due to the fact that the elderly suffer from psychological problems such as anxiety and depression, inactivity and chronic diseases, as well as the physical, cognitive, and social changes in this group, they need long-term care.^[4] On the other hand, caring for the elderly is one of the important functions of every family.^[5,6] A family caregiver includes a family member who provides services to a person in need of care without receiving a salary.^[7] Since long-term care of the elderly causes a feeling of physical, mental, and social exhaustion, it affects the quality of care for the elderly, and in some cases, the ground is provided for neglecting and misbehaving with the elderly.^[8] In order to reduce the care burden of elderly caregivers and improve their performance, self-empowerment such as resilience is needed. Resilience is important because it creates the right capacity to withstand stressful situations, reduces the negative effects of stress, and also as a personality trait, it is considered as appropriate response and flexibility in the face of life pressures.^[9,10] Research findings in this field show that people who have low resilience are more vulnerable and do not have the motivation, courage, and necessary solutions to face stressful situations; therefore, they see their problems significantly big and consider themselves victims of circumstances. On the other hand, more resilient people have more self-confidence and self-belief.^[11] In such a situation, caregivers increase the quality of life of the elderly with more resilience by creating a calm environment for them to feel a sense of belonging and acceptance. This issue reduces psychological problems such as depression, social anxiety, and feelings of loneliness.^[12] In this regard, the result of a study shows that the resilience of caregivers is one of the crucial factors that provide quality services to the elderly.^[13]

On the other hand, Werner and Smite stated that resilience can be improved by increasing interpersonal problem-solving skills.^[14] Interpersonal problem solving is a cognitive-emotional and behavioral process. By performing purposeful, conscious, and rational behaviors, people adapt better to stressful situations and strengthen their performance in interpersonal relationships that include problem solving, communication, roles, emotional responsiveness, and behavior control.^[15,16] They lead to a more efficient and motivated communication between the elderly caregiver and the elderly and reduce the difficulty of care. In this context, the result of a study has shown that people whose relationships are defined based on closeness, intimacy, and understanding are somewhat immune to life pressures.^[17] In addition, the results of another study have emphasized the effect of problem-solving skill training on more effective communication between caregivers and the elderly.^[18] In summarizing the studies conducted on caregivers and the elderly, it was found

that the variable of problem solving was generally studied by researchers. Considering the importance of interpersonal interactions, this study intends to investigate interpersonal problem-solving methods along with its components in the target population. In this regard, the study was conducted to predict the resilience of adults aged 25–65 years compared to the elderly according to their interpersonal problem-solving methods.

Materials and Methods

Study design

This cross-sectional study was conducted in 2021.

Study participants and sampling

Using Cochran's sample size formula, 262 adults in the age group of 25–65 living in Iran, who are called young according to the classification of the World Health Organization^[19] in gender, marital status, fields, and occupations, participated in this study. Due to the stability of the critical condition of the disease of COVID-19 and the necessity of observing the principles of health and physical distance during the study, face-to-face communication for questioning was avoided and the sample was invited to cooperate in the relevant social groups using convenience method.

Being 25–65 years old, willing to participate in research, having sufficient skills to use a mobile phone and answer the virtual questionnaire are among the inclusion criteria, and due to the online response, if all the questions are not answered and the final submission is not confirmed, the questionnaire will not be received by the researcher.

The process of data collection and questionnaire implementation

The questionnaires of resilience of home caregivers and interpersonal problem solving were prepared online and the link related to the response was sent to participants in the study for adults aged 25–65 in the cities of Isfahan, Tehran, and Yazd through social networks (WhatsApp and Telegram); moreover, an invitation letter was sent. When the responses reached the desired sample size, the virtual link was disabled.

To measure resilience, the resilience questionnaire of elderly home caregivers developed by the researcher was used.^[20] This questionnaire has 38 items based on a 5-point Likert scale (disagree, somewhat disagree, neither disagree nor agree, agree) with four scales of self-efficacy and acceptance, tolerance and controllability, responsibility and commitment, and behavioral emotional regulation. The range of scores (from the lowest to the highest score) is from 38 to 190 (calculated

on the basis of 20–100) with a mean and standard deviation of 49.72 ± 63.11 in the studied sample (adults 20 years and older). A higher score indicates more resilience. According to the study, face validity, content validity, exploratory factor analysis, and convergent and divergent validity have been performed and confirmed. The reliability of the questionnaire was calculated using Cronbach’s alpha coefficient of 0.92 and it was calculated for the scales of the questionnaire in the range of 0.91–0.67. Reliability was reported as 0.866 using the split-half method: 8.39.

A validated and localized questionnaire by Peter Honey, Samoui *et al.*, was used to measure interpersonal problem-solving methods.^[21] This questionnaire contains 40 pairs of phrases, and depending on the measured feature, one of the phrases gets a score of one and the other gets a score of zero. By adding up the score of each scale and the scores of all scales, 10 scores are calculated for each individual. A higher score indicates greater ability in the desired feature. This questionnaire has the components of responsibility, frankness and transparency, realism, exposure, self-regulatory, sympathy, pursuit and challenge, incentive agreement, and flexibility. At the end, demographic characteristics such as gender, age, marital status, field of study, educational level and employment status, and elderly care experience were asked.

Data analysis

In the data analysis, for the comparability of the averages, the scores were analyzed based on 100 in the SPSS-21 software, and the data were analyzed using the Pearson correlation coefficient method and the linear regression coefficient to predict the criterion variable.

Ethical considerations

Regarding the confidentiality of information and compliance with ethical principles in the questionnaires, the participants were not required to write their first and last names, and before sending the questionnaires, an invitation letter was sent to them. In addition, the participants were assured that the information provided by them will be used confidentially and only for research work.

This study was approved by the ethics code number IR.MUI.NUREMA.REC.1400.094 and was carried out with the support of Isfahan University of Medical Sciences.

Results

The mean and standard deviation of the scores of interpersonal problem-solving methods and resilience of the respondents were presented in Table 1.

Table 1: Mean and standard deviation of the mean scores of elderly home caregivers to the interpersonal problem solving and resilience questionnaire scales

Scales	Mean±standard deviation
Responsibility	79.76±21.32
Tolerance and controllability	67.08±27.17
Realism	79.31±21.67
Exposure	72.14±20.74
Self-regulatory	68.17±21.29
Sympathy	76.65±21.86
Pursuit and challenge	68.24±1.27
Incentive agreement	78.69±22.11
Flexibility	75.87±20.88
Resilience	71.49±11.67

According to the data in Table 1, the highest average score of the respondents in the interpersonal problem-solving questionnaire belonged to responsibility 79.8, realism 79.3, and incentive agreement 78.7, respectively. The average resilience of elderly caregivers was 71.5.

The results of correlation scores of interpersonal problem-solving methods and resilience of the respondents are shown in Table 2.

The results of Table 2 show that there is a significant relationship between resilience, frankness and transparency, realism, exposure, sympathy, pursuit and challenge, and incentive agreement of the respondents. Moreover, for a more detailed examination of the relationship between interpersonal problem-solving scales and resilience, the regression correlation coefficient in Table 3 was used. The findings showed that 9% of the variance of the resilience variable was explained by interpersonal problem-solving methods. In addition, the results of the *F* test ($P < 0.0001$ and $F = 29.87$) indicate the significance of predicting resilience based on nine input variables (interpersonal problem-solving methods). That is, at least one of the nine problem-solving scales can predict resilience. The prediction results of the resilience variable are shown in Table 3.

According to the results of Table 3, it was found that realism ($P = 0.006$ and $B = 0.114$) is the only predicting variable of respondents’ resilience in this study. That is, more realism is associated with more resilience. The regression equation is as follows:

$$(\text{Realism}) y = 53.52 + 0.114$$

Discussion

The results of this study showed that in the variable of interpersonal problem solving, the components of responsibility, realism, and intensive agreement obtained a higher average score. There was a direct

Table 2: Investigating the relationship between resilience and problem-solving methods in interpersonal relationships in elderly home caregivers

Problem-solving questionnaire scales	Responsibility	Tolerance and controllability	Realism	Exposure	Self-regulatory	Sympathy	Pursuit and challenge	Incentive agreement	Flexibility
The correlation coefficient	0.104	*0.231	*0.324	*0.201	0.050	*0.212	*0.246	*0.171	0.082
Significance level	0.95	>0.0001	>0.0001	0.001	0.426	0.001	>0.0001	0.006	0.190

*They are significant at the 0.01 level

Table 3: Predicting respondents' resilience based on problem-solving methods in their interpersonal relationships

	Nonstandard coefficients		standard coefficient		
	25/53	4.46	11.99	>0.001	
Responsibility	>0.0001	0.035	-0.001	0.008	0.99
Frankness and transparency	0.21	0.031	0.05	0.68	0.49
Realism	0.114	0.041	0.211	2.75	0.006
Exposure	0.015	0.039	0.027	0.38	0.70
Self-regulatory	-0.15	0.034	0.027	-0.43	0.66
Sympathy	0.47	0.036	0.089	1.31	0.18
Pursuit and challenge	0.34	0.032	0.078	1.04	0.29
Incentive agreement	0.21	0.036	0.039	0.57	0.56
Flexibility	-0.002	0.036	-0.003	0.043	0.96

relationship between resilience and realism, frankness and transparency, exposure, sympathy, pursuit and challenge, and intensive agreement. Among the nine components of problem solving, only realism predicted the respondents' resilience.

According to the findings of Table 1, the respondents scored higher in responsibility, realism, and intensive agreement, respectively. These results are consistent with the findings of some studies related to responsibility.^[22,23]

In explaining these findings, it can be said that since responsibility is an internal commitment to perform assigned tasks, when family members, along with their main roles, accept the role of care for the elderly, they face any logical event, event, and difficulty. Moreover, when facing the elderly to solve possible problems, they consider the condition of the elderly person and the existing situation and adopt a realistic view and agreeable behavior.

Other findings of this study showed that there is a direct relationship between resilience and realism, frankness and transparency, exposure, sympathy, pursuit and challenge, and intensive agreement. These results are consistent with the findings of studies regarding the relationship of resilience with realism,^[24] sympathy,^[25,26] pursuit and challenge, and intensive agreement.^[27] These studies show that realism, sympathy, pursuit and persistence, and agreeableness are effective on resilience.

In explaining this finding, it can be said that since some personality traits have an effect on the choice of problem-solving methods,^[17] it seems that people try to

see problems realistically in order to solve interpersonal problems, such as interacting with the elderly. These people try to see the problems realistically, raise them at the right time with frankness and transparency, solve the problem peacefully, and create and experience less tension. They conserve their energy for better care and interaction. This is part of the consequence of problem solving in a resilient way.

Another result of this study is that there is no significant relationship between resilience and responsibility, self-regulatory, and flexibility. The findings of this study are not consistent with the results of the study,^[28] self-regulatory,^[29-31] and flexibility^[32] in terms of the relationship between resilience and responsibility. The reason can be the difference in the statistical population and the measurement of these components in the questionnaires used in each of these studies with the present study.

In explaining this finding, it seems that people with a high responsibility characteristic have been pressured in terms of mental conditions over time by accepting the role of caring for the elderly along with other responsibilities. Therefore, the increase in psychological stress in these people causes a decrease in resilience. On the other hand, self-regulatory was examined in this study with people's ability to find the root of problems instantly, to try to change their attitude with the aim of changing their behavior, and it seems that the sum of these attitudes does not have a direct effect on resilience. There is no relationship between resilience and flexibility, and it can be explained as follows: in this study, flexibility was measured by the ability of people to solve problems at the right time, to listen to others' objections in caring for the elderly, these skills are not directly related to resilience.

It should be noted that no research was found that has investigated the relationship between resilience and interpersonal problem-solving components. Another result was that among the nine components of problem solving, only realism predicted the respondents' resilience. The result of this study is in line with the result of the research showing that resilient individuals can reduce interpersonal problems and be more resilient in the face of problems with the ability to provide simple solutions.^[33]

Realism can indicate the ability of people to consider interpersonal problems and conflicts as normal which can be solved, and the ability to breaking up the issues into smaller parts. In this situation, people can manage problems and make beneficial interactions by identifying and proposing issues and finding suitable solutions. In fact, resilient people do not run away from problems since they have a realistic view. With the ability to overcome problems, these people tolerate pressure better. They follow up on their duties and affairs and protect themselves as much as possible from mental health problems such as depression and high anxiety.^[34]

One of the limitations of this research was that this study was conducted during the COVID-19 pandemic. Therefore, it was not possible to communicate with the participants in person to give the questionnaire and to use methods such as interviews along with the questionnaire to complete the data. Another limitation of this research is the selection of samples through social networks, and caution should be observed in generalizing the results. The novelty of the subject of this study regarding the investigation of interpersonal problem-solving methods in relation to the resilience of the elderly was the positive point of this study.

Conclusion

Considering the increase in the elderly population in Iran and the challenges and problems faced in caring for this group, the results of this study can serve as a warning for families and planners so that by improving interactions and realism, these people can provide the elderly with better and more flexible care. At the same time, caregivers' behavioral needs should be considered for better adaptation to their roles and duties toward the elderly. Researchers are advised to design qualitative studies to provide a practical model related to resilience or problem solving in the interpersonal relationships of elderly caregivers.

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Conflicts of interest

There are no conflicts of interest.

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