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Role of Demographic Factors in Predicting Psychological Adjustment among Adults

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ABSTRACT
The purpose of the study was to investigate how demographic characteristics can predict adults' psychological adjustment. Data was gathered using a cross-sectional research methodology. The data for the 300 adult participants came from 300 individuals in Jhelum and Gujarat. Convenient sampling, or a non-probability sampling strategy, was used to choose the sample. Participants' ages were asked on the demographic sheet, while Naz, Bano, and Leghari's Scale of Adjustment for Adults was used to assess psychological adjustment. The results of neural network in the study showed that adult psychological adjustment was influenced by demographic factors because there was little disparities found between the relative errors of training and testing. If there was a smaller difference between the relative errors of training and testing it indicates a stronger predictive connection between the variables. The neural network model has also emphasized the importance of forecasting demographic factors for psychological adjustment in adults. The findings showed that marital status was the most significant predictor of psychological adjustment, followed by education, birth order, father's education, rural–urban area and age. Marital status had a stronger effect on psychological adjustment. It was determined that the most significant predictor of psychological adjustment was marital status. Adults' psychological adjustment is influenced by a number of factors, including age, father's educational background, birth order, rural versus urban location, and subsequent education.

Keywords: *Demographic Factors, Adult, Cross sectional study, Psychological Adjustment, Neural Network.*

Psychological Adjustment: Definition, Theories, and Contextual Factors

One important measure of mental health is psychological adjustment, which is the balancing act between internal and external demands. According to the laws of learning, it is defined as the equilibrium, interaction, or dialectical and dynamic adaptation between the individual and their surroundings, involving both biopsychological) and psychosocial dimensions (Matos-Ramírez, et al., 2024). Maladjustment is clinically noted in the Adjustment Disorder criteria in the DSM-5 and

provides further subtypes based on predominant symptoms, such as Depressed Mood, Anxiety or Disturbance of Conduct (American Psychiatric Association, 2013).

Theoretical Models of Adjustment

Adjustment is understood within two major models:

Stress and Coping Theory: Adjustment consists of two processes: appraisal (noting a situation is stressful), and coping (dealing with the reaction from it). Strategies pushed under coping can be problem-focused (changing external situation) and/or emotion-focused (dealing with the reaction). Successful adjustment depends upon the ability to flexibly problem-solve and attend to emotional responses (Lazarus & Folkman, 1984).

Ecological Model: this model considers an individual's adjustment entailed in the cultural and environmental context that is drenched in history and social contexts (microsystem, mesosystem, exosystem, and macrosystem). For maladjusted behaviors, it is seen as conflict between the individual and the embedded and systemic influences. (Bronfenbrenner, 1979). Imagine this way to see why demographics are critical; it serves as proxies for life experiences, structural stressors, and access to opportunity or resources that necessarily is what defines coping capacity or adjustment. (American Psychiatric Association, 2020).

Demographic Variable	Key Findings on Adjustment	Citation
Marital Status	**Strongest Protective Factor:** Married adults most often experience the greatest well-being because marriage provides emotional support and buffer against stress (Carr & Springer, 2010; Kiecolt-Glaser & Newton, 2001). Divorced and widowed adults sometimes go through long periods of maladjustment (Hetherington & Kelly, 2002).	Carr & Springer, 2010; Kiecolt-Glaser & Newton, 2001; Hetherington & Kelly, 2002
Education	**Buffer Against Stress:** Higher education increases resources and fosters cognitive flexibility, enabling more effective problem-focused coping and a greater locus of control (Ross & Wu, 1996). Lower literacy is associated with reliance on less effective, emotion-focused coping (Mirowsky & Ross, 2003).	Ross & Wu, 1996; Mirowsky & Ross, 2003
Age	**Coping Flexibility:** Adjustment tasks change throughout life (e.g., identity in early adulthood, loss in late adulthood; Arnett, 2000; Kurth et al., 2024). Due to life experiences, coping flexibility may typically increase from early to middle adulthood.	Kurth et al., 2024
Residence (Rural/Urban)	**Stressors vs. Resources:** Adults from urban environments experience higher exposure to environmental stressors (e.g., crime, density), while benefiting from better access to specialized mental health services compared to rural adults (which have strong community bonding capital), whose limited access to services are likely to adversely affect long-term	Xu et al., 2018

	outcomes for persons struggling with mental health (Xu et al., 2018).	
Father's Education	**Proxy for SES:** A parent's education level can be useful to predict a child's psychosocial outcomes as it denotes greater economic stability, an enriched home learning environment, and a more authoritative parenting style (Conger & Donnellan, 2007; McLoyd, 1998). It fosters higher self-esteem in adult offspring, as well as adopted adaptive coping strategies (Bradley & Corwyn, 2002).	Bradley & Corwyn, 2002; McLoyd, 1998; Conger & Donnellan, 2007
Birth Order	**Family Dynamics:** Adler's (1931) argument is that birth order shapes one's "life style" (i.e., first-borns are to push forward in achieving something; middle-borns are more sensitive to the needs of others). While classical theories are compelling, empirical research has often been inconsistent or weak, especially for broader personality and adjustment categories; however, some cognitive advantage has been suggested for first-borns, albeit modest (Ernst & Angst, 1983; Adler, 1931).	Adler, 1931; Ernst & Angst, 1983

Rationale and Practical Implication

The rationale behind this study is based on the evidence that demographic factors are strong indicators of differential risk and access to resources (American Psychiatric Association, 2020). By isolating the most important predictors of differential risk and access to resources, we can use empirical evidence based methodology to develop targeted and culturally informed interventions (Sue et al., 2007).

Practical implications include:

1. **Counseling:** Counselors can utilize demographic factors for targeted assessment and inquire about cultural and socioeconomic realities as a part of the treatment modality (American Psychiatric Association, 2020).
2. **Workplace Well-being:** Employers could use demographic information to spot inequalities and provide demographic-specific assistance, like financial literacy materials or an ERG tailored to the particular stressors of working-parent or minority groups (American Psychiatric Association, 2020).
3. **Public Health:** The findings of the study can help build programs that are culturally placed depending on the community rather than just the person and can be utilized to distribute informational resources fairly in areas that have a higher risk profile (McLaughlin et al., 2010; Sue et al., 2007).

Objectives of the Study

To investigate the normalized significance of demographic characteristics in forecasting adult psychological adjustment.

Material and Methods

A cross-sectional research design was employed in the study. For this study, three hundred individuals were gathered from households and educational institutions. A convenient non-

probability sampling strategy was employed to gather data from the districts of Gujrat and Jhelum. While individuals with any kind of physical or mental disability were not allowed to participate in the survey, adults were.

Adults' psychological adjustment was assessed using the Scale of Adjustment for Adults and the demographic form. The scale developed based on Beck's cognitive theory (Beck, 1964) and the DSM criteria for adjustment disorder with three domains: conduct difficulties, anxiety, and depression (American Psychiatric Association, 2013). The 48 items on this scale were divided into 8 subscales covering the three categories of conduct difficulties, anxiety, and depression (Naz et al., 2019). Additionally, it had a Cronbach alpha of.938 and was on a 3-point Likert scale. Additionally, the measure exhibited strong divergent and convergent validity. 71 was the cut-off mark on the scale (Naz et al., 2022).

The supervisor gave his approval for the study. The author was emailed to obtain permission to use the scale. Data collecting was then initiated. Adults above the age of 19 were given the surveys. Authorities granted permission to visit households and educational institutions for this reason. After obtaining the participant's verbal and oral informed consent, demographic data was used to gauge their level of adjustment. Data was gathered using either a self-reported questionnaire or an in-person interview. The adults were instructed to carefully complete the questionnaire by checking the option that best fit their needs. The responses were noted in a booklet. The study excluded participants who refused to provide data. Additionally, privacy and confidentiality were guaranteed.

Data Analysis

Following data collection, descriptive statistics and neural networks were used to analyze the data using IBM statistics SPSS (Statistical Package for Social Sciences, version 21).

Results

The relevance of demographic characteristics as a predictor of psychological adjustment in adults was anticipated through the application of neural network analysis. Regression has been proven to be less suitable than neural networks (Bakar & Tahir, 2009). This approach can also investigate the role that demographic factors have in controlling adults' psychological adjustment. In the first phase, psychological adjustment was in the dependent column and demographic characteristics were in the factor. We'll look at the relative error between training and testing. Lastly, the neural network model has clarified the significance of demographic variables for adult psychological adjustment.

Table 1 Relative Error for Training and Testing

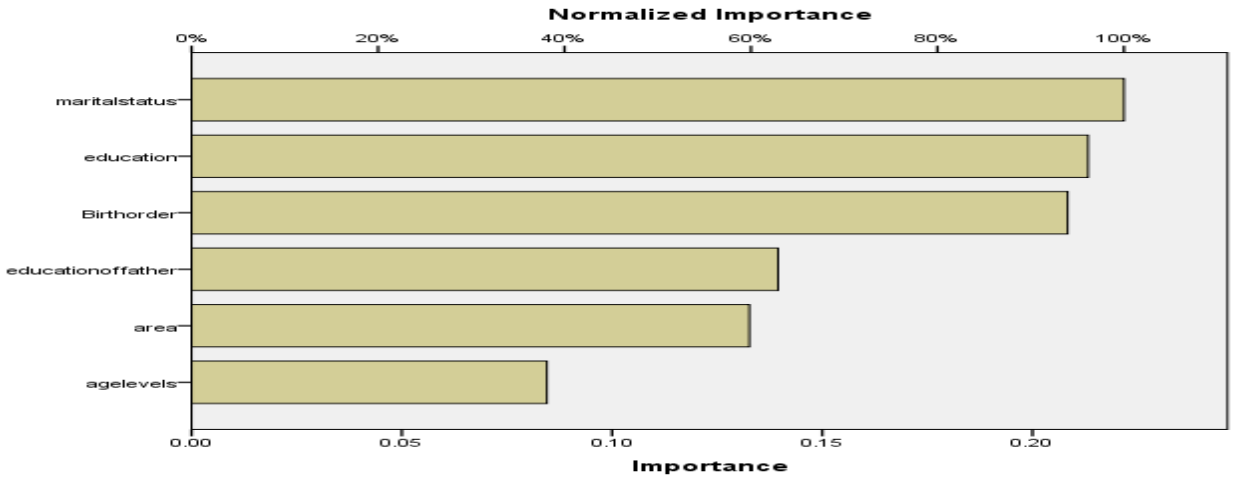
	Relative Error
Training	.970
Testing	.974

The predictive association between the variables is greater if there is a smaller gap between the relative errors of testing and training (Table 1). Since we didn't find much differences, we can affirm that adult psychological adjustment was determined by demographic characteristics.

Table 2 Normalized Importance of Independent Variables

Variable	Importance	Normalized Importance
Marital Status	0.222	100.0%
Education	0.213	96.2%
Birth Order	0.208	94.0%
Father's Education	0.139	62.9%
Area	0.133	59.8%
Age Levels	0.085	38.1%

The significance of predicting demographic determinants for adult psychological adjustment has also been highlighted by the neural network model. According to the results, the most significant predictor of psychological adjustment was marital status (0.222, 100% normalized importance), followed by education (0.213, 96.2% normalized importance), birth order (0.208, 94% normalized importance), father's education (0.139, 62.9% normalized importance), rural–urban area (0.133, 59.8% normalized importance), and age (0.085, 38.1% normalized importance). Compared to other demographic characteristics, marital status had a greater impact on psychological adjustment. The figure below illustrates the significance.



Discussion

Using neural network analysis achieved a strong predictive relationship between the different demographic predictors and adult psychological adjustment, using a technique viewed as better suited than traditional regression strategies for addressing a complex, nonlinear pattern of relational experiences (Jabłońska & Zajdel, 2020). The model presented reliable evidence of generalization, as shown with the small difference in relative error for the training set (0.970) and testing set (0.974). This level of agreement was strong evidence the model is not over fit indicating predictability could be applied to new data.

It illustrates how demographic traits are significant in relation to psychological adjustment. A ranked order indicating variations in the demographic influence on psychological adjustment is made clear by the normalized importance analysis.

Results showed that the most significant factor in predicting adjustment was marital status (0.222, 100% normalized importance). According to the literature, historical and relational family variables are more important than general age classification based on fundamental geographical location. The most significant predictor of psychological well-being was marital status, indicating that social and relational elements had a greater influence on psychological well-being than other demographic traits. This finding reflects a body of literature linking positive psychology to marriage stability and satisfaction which showed lower rates of depression and anxiety (Fillo et al, 2017). A healthy supportive marriage is ultimately recognized as a protective factor against life stressors (Gómez-Lópe et al., 2019). On the other hand, single individuals or individuals in distressed marriages often report greater loneliness and stress which affect adjustment in a negative manner (Waite & Gallagher, 2000). The maximal importance of this variable is a primary and influential finding of the neural analysis.

Following education emerged as the second most important variable (0.213, 96.2% normalized importance), to assist in adjustment. The significance of education is likely due to higher educated individuals being able to develop better coping skills and problem-solving abilities which may lead to having greater access to socio-economic resources. This is consistent with studies that show that education improves self-control and socioeconomic position, two important protective variables for mental health (Kondirolli & Sunder, 2022). The socioeconomic and intellectual effects of the home environment were reflected in the respondents' education, which was moderately relevant. A parent with higher education probably had a more stimulating home life and more resources, which would strengthen the adults' psychological development's foundation of protection (Conger et al., 2010). The fact that this feature showed some predictive relevance suggested that environmental context was important.

Psychological adjustment was also influenced by the rural-urban area (0.133, 59.8% normalized importance), and research has shown that access to social support networks, mental health services, and various stressors can differ between rural and urban areas, which can change a person's ability to cope and adapt. Of the factors examined, age levels were the least significant predictive factor (0.085, 38.1% normalized importance). Even while it is evident that psychological requirements and difficulties vary throughout life (Erikson, 1963), the neural network model suggests that variables like education and relationship status have a far greater impact on adjustment than does age group classification alone. The overall findings indicate that adult psychological adjustment is a multi-determined outcome with relational stability and an individual's socio-historical background (as measured by education and early family factors) being the primary driving factors, while demographic categories of age and location play a much lesser role.

Conclusion

It was concluded that marital status was the most important factor in predicting psychological adjustment. Afterward education, birth order, father's education, rural–urban area and age plays an important role in determining psychological adjustment among adults.

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