Socioeconomic Status, Dependent Personality and Nail Biting Behavior Among Adults: Evaluation of Structural Relationship

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ARTICLE DETAILS	ABSTRACT
History *Revised format: May 2019* *Available Online: June 2019* **Keywords** *Socioeconomic Status, Income, Education, Profession, Dependent Personality, Nail Biting Behavior, Adults* **JEL Classification:** A14, D91	The main objective was to investigate the socioeconomic status and dependent personality as the predictor of nail biting among adults. A sample of 101 adults that nail bit was selected from Sialkot city that aged above 19 to 75 years using purposive sampling from government and private educational institutes and local communities. The socioeconomic status and nail biting measured in the demographic form asking information about income, education, profession and do you nail bit. Further, dependent personality was checked with Dependent Personality Disorder scale Urdu version (Shahzadi & Bano, 2018). Results showed that there is significant predictive relationship present between these two variables on samples (N= 101), R= .432 which indicates a moderate correlation. The R2= .187 which indicated that 1.8% variation in the dependent variable, can be explained by the independent variable. Adjusted R-square a modify form of R-square which is also 1.7 variation in data. Descriptive results of this study showed that these two variables from sample (N= 320) are co-occur only in (N= 101) participants with 31.5 percentage generally in both male and female of Sialkot city. Structure Equation Modeling was used for the analysis of data. The model fit summary indicated the p value of .000 which indicates that socioeconomic factors and dependent personality was the significant predictor of nail biting among adults. All the model fit indices were also in the best prescribed limits as Chi-square/df (1.106), Goodness of Fit Index (.976), Adjusted Goodness of Fit Index (.940), Comparative Fit Index (.974) and Root Mean Square Error of Approximation (.033). Furthermore, the income regression estimate indicates that when income, profession and dependent personality goes up by 1 standard deviation, the nail biting goes up by 0.21, 0.12 and 0.4 standard deviations respectively whereas in case of education, it goes up by 1 standard deviation and the nail biting behavior goes down by .09 standard deviations. Conclusion: In conclusion, the socioeconomic status and dependent personality was the significant predictor of nail biting behavior among adults.

1. Introduction

In current research one of the compulsive oral habit of nail biting is focused for the adult population. Roberts, O'Connor and Belanger (2013) stated that nail biting is the insertion of fingers into the mouth or if a contact of nail and teeth is present is called nail biting. An individual putting his or her fingers in mouth over and over again and cannot control this behavior is also known as nail biting. It is also called with another name as Onychophagia and defined as putting and biting one or more than one finger nail by teeth in mouth (Ghanizadeh, & Shekoohi, 2011). Nail biting is a common behavior usually seen in childhood and adolescence, according to Shahraki, Yassaei, & Moghadam, (2012) children shift their habit of thumb sucking into nail biting when they grow up. People bit their nails when they need satisfaction in stressed situations. However, many people, even in adulthood, practice nail biting in stress. When these practices get repetitive and intentional acts of habitual behaviors they become disorders and people indulge in self-harm (physically) and feel embarrassment for powerlessness over their behavior (Maraz, Hende, Urban & Demetrovics, 2017).

Further, nail biting is reflected in psychiatric disorders such as impulse control disorders due to three features of intensity, duration and frequency (Ghanizadeh, 2008). Nail biting can be classified into self-injurious behavior or as a stereotypic movement disorder (Stein & Simeon, 1999). Other believes, nail biting is related to Spectrum of Obsessive compulsive disorder (Pacan, Grezesiak, Reich & Szepietowski, 2009). According to Maraz, Hende, Urban and Demetrovics (2017) nail biting is the part of pathological grooming disorders. Ghanizadeh and Shekoohi (2011) suggested that the emotional and major depression disorders are underlying of nail biting. Furthermore, nail biting prevalence in adulthood was 4.5 to 10.7% (Leung & Robson 1990).

Moreover, the unappealing look of physical damage to skin and nails may cause feelings of embarrassment, humiliation and guiltiness, leading to complex family and social associations (Siddiqui, Qureshi, Marei, & Mahfouz, 2017). Hence, people consider nail biting is one of the anxious patterns of behaviors, but the driving energy may not be nervousness. These indications display that people are often perfectionists whom with impulsive nail biting, skin picking, or hair pulling, and these behaviors help them to soothe their dullness, frustration and disappointment. Another important study reported that one from very 20 individuals suffered from stereotypic repetitive disorders, like nail biting and hair pulling to harm their grooming or cause pain for them. Here, it is reported that these behaviors are very hard to quit and feel weak to discontinue (Cosier, 2015).

There could be numerous factors that can affect the nail biting behavior in adults. Beside, other the socioeconomic status of the affective population is important to be noticed. The socioeconomic status has been measured in this study with the indicators of education, profession and income. A study conducted on nail biting behaviors of children showed that families that had average income show grater nail biting habits whereas parents with better education's children showed less nail biting behavior (Rajchanovska, & Zafirova, 2011). Schwartz (2019) in the article titled as It's Called Onychophagia or Nail Biting argued that if nail biting hinders the social and work activity there will be a need of psychotherapy to uproot the greater psychological issue.

Another important factor affecting the nail biting behavior of adults that has been study in the research is dependent personality. Everybody has his/her own personality. Almost every day we assess and describe the personalities of different people. According to Cattell (1950) a personality is something which indicates what a person is likely to do in a certain situation whereas the dependent personality disorder is categorized anxious personality disorders, which are marked by feelings of nervousness, anxiety and fear. Furthermore, the dependent personality disorder is also marked by helplessness, submissiveness, an excessive need to be taken care of and for constant reassurance and an inability to make decisions. Dependent personality disorder is one of the most frequently diagnosed personality disorders. It appears equally in men and women, and usually appears in early to middle adulthood. A pervasive and excessive need to be taken care of which leads to submissiveness and clinging behavior as well as fears of separation is described as Dependent personality disorder (Simonelli & Parolin, 2017).

Finally, there is a need to study the link between dependent personality and nail biting. After searching it has been witnessed that there was no direct study found to established the linked between dependent personality and nail biting. Therefore, to establish the link the characteristics of dependent personality were examined. This disorder is closely related to nervousness, anxiety, fear and depression. Further, the dependent patients have negative and disrupting social behaviors (Overholser, 1996). There were researches that established the linked between nervousness, anxiety, fear, depression and antisocial behavior with the nail biting behavior (Ghanizadeh, 2008; Ghanizadeh & Shekoohi, 2011).

On the basis of indirect association of these variables researcher made an assumption and hypothesized that dependent personality disorder would be a significant predictor of nail biting. Further, it examine the socioeconomic status and dependent personality as the predictor of nail biting behavior among adults.

2. Methods
2.1   Participants
Participants for this study was a total number of 101 individuals (N=101), recruited from government and private educational institutes and local communities of Sialkot city. Male and female both participants were selected with age range of 19 years to 75 years old.

2.1.1   Inclusion Criteria
- Age range of participants were between 19 years to 75 years
- Participants were from all communities and government and private universities
- Participants were included who have both mail biting habit and dependent personality disorder

2.1.2   Exclusive Criteria
- Age range of participants was not below the 18 years
- Participants were not included who do not have both nail biting habit and dependent personality disorder

2.1.3   Sampling Technique
Purposive sampling strategy adopted by researcher to select the participants from government and private colleges/universities and local communities. Sample size was N=101 which comprises male and female participants.

2.2   Research Instrument
The instruments which were used in this study are demographic form and indigenous scale of Dependent Personality Disorder (DPDS).

2.2.1   Demographic Form
A demographic form was used to obtain information about participant. Demographic form included; name, age, gender, birth order, education, profession, marital status, number of siblings, guardian, mother living, father living, living with parents, family system and Do you bit your nail? If yes, then in which situation you mostly bit your nails? Your fingers get wounded when you bit your nails? Do you often bite your nails? Do you bite your nails for a specific reason? Can you control your habit? Do you bite your nails unconsciously?

2.2.2   Dependent Personality Disorder Scale (DPDS)
Dependent Personality Disorder scale is a 21-item self-report Likert scale designed to measure the dependent personality disorder among adults. Responses of each items were scored as 0 = strongly disagree, 1 = disagree, 2 = neutral, 3 = agree and 4 = strongly agree. The dependent personality disorder scale shows good reliability.

2.3   Procedure
Samples of male and female adults were taken from different colleges, universities and communities of Sialkot. Consent letter was presented to heads of the institutes describing the research study. After getting permission students and faculty were approached and briefed about the purpose of the study. All participants were also assured about the confidentiality about the personal information gathered during the data collection and would be privately kept and will only be utilized when required for the sole purpose of our research work after filling the personal and demographic information as per predetermined research criteria, newly developed Dependent Personality Disorder Scale (DPDS) was administered. To avoid misunderstanding of the content the questions were read out one by one by the researcher. Completion of the questionnaire was followed by thanks to participants for their contribution in the study.

2.4   Ethical Issues in Research
Current research was conducted with careful consideration. Participants were treated with respect. An informed consent form was signed from every participant and at the same time they also have will to withdraw their

participation at any time without sorry. In short, during the whole procedure of current research, researcher kept four key of ethical principle; respect for the person's right and dignity, responsibility and integrity.

2.5   Data Analysis

For analyzing the predictive relationship between variables Linear regression and Structure Equation Modeling (SEM) was used through Analysis of SPSS-21 and a Moment Structures (AMOS) (version 21) for Windows. The SEM is considered as the best analysis to estimate structural associations between different variables. The SEM analysis gives model fit indices to establish the relationship.

3. Results

A total of 101 adults were included in the study. The Linear regression analysis and Structure Equation Modeling (SEM) analysis was executed to foresee the socioeconomic status and dependent personality disorder as the predictor of nail biting among adults.

Table 1: Frequencies of Demographic Characteristics of the Sample (N=101)

Characteristics	Frequencies	Percentages
	F	%
Gender		
Male	36	35.6
Female	65	64.4
Age		
18-------29	76	75.2
30-------41	15	14.9
42-------53	4	4.0
54-------65	1	1.0
66-------75	4	4.0
Birth Order		
First order	37	36.6
Middle	36	35.6
Younger one	28	27.7
Education		
Under Metric	1	1.0
Metric	5	5.0
F.A	13	12.9
B.A	33	32.7
M.A	48	47.5
Higher Education	1	1.0
Profession		
Job	13	12.9
Business	6	5.9
Student	72	71.3
Jobless	2	2.0
House Wife	8	7.9
Marital Status		
Married	21	20.8
Unmarried	80	79.2
Guardian		
Mother	4	4.0
Father	78	77.2
Other	18	17.8
Mother Living		
Yes	92	91.1
No	9	8.9
Father Living		
Yes	91	90.1
No	10	9.9

Living with Parents		
Yes	85	85.1
No	15	14.9
Family System		
Joint	44	43.6
Neutral	57	56.4

Table 9 shows the Frequencies of different Demographic Characteristics of the sample.

Table 2:Summary of linear Regression analysis of Nail Biting as a Predictor of Dependent Personality Disorder

Predictor	R	R^2	$AdjR^2$	F	P
Dependent Personality Disorder	.432	.187	.178	22.703	.000

Note p<.05, Table shows nail biting would be a significant Predictor of Dependent Personality Disorder.

This table provides the R and R square values. The R value represents the simple correlation and is 0.432 which indicates a moderate correlation. The square value indicates how much of total variation in the dependent variable, can be explained by the independent variable. In this case, 1.8% can be explained. Adjusted R-square a modify form of R-square which is also 1.7 variation in data.

Table 3: Summary of Coefficients of Nail Biting as a Predictor of Dependent Personality Disorder

Model	Un standardized Coefficient		Standardize Coefficient		
	B	SE	Beta	T	P
Constant	41.592	2.278		18.257	.000
Nail Biting	2.347	.493	.432	4.765	.000

Dependent variable; Dependent Personality Disorder

Table provides the β0 and β1 values. B0 is an initial point of regression. This line is starts from 41.592. β1 is slop and it shows one unit change in independent variable cause 2.347 unit change in response. P-value .000 shows the highly significance of model.

Table 4: Model Fit Summary (N=101)

P Value	Chi-square/df	GFI	AGFI	CFI	RMSEA
.000	1.106	.976	.940	.974	.033

GFI= Goodness of Fit Index, AGFI=Adjusted Goodness of Fit Index, CFI= Comparative Fit Index, RMSEA= Root Mean Square Error of Approximation

The table of model summary showed the p value of .000 which indicated that the model was fit and confirmed the significant relationship of socioeconomic status and dependent personality on the nail biting behaviors of adults in Sialkot. The model fit indices were also in the appropriate limit as chi-square/df ratio was below the prescribe limit of less than 3. The values of GFI, AGFI and CFI were above .900 and model is said to be best if the value is above .90. Finally, the RMSEA value was .033.

Figure 1: Structure equation modeling (path analysis) for Socioeconomic Status, Dependent Personality on Nail Biting Behavior
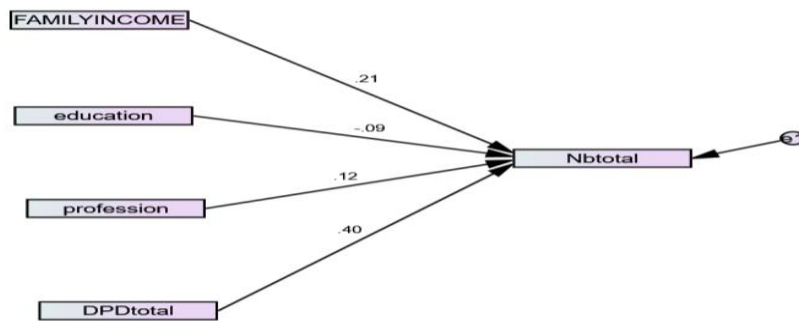
Further, the figure gives the standardized regression weights. These could help in determining the amount of change in nail biting behavior because of income, education, profession and dependent personality. The income regression estimate was .21 that indicates that when income goes up by 1 standard deviation, the mail biting goes up by 0.21 standard deviations. Further, the education regression estimate was -.09 which means education goes up by 1 standard deviation, the nail biting behavior goes down by .09 standard deviations. On profession regression estimate was .12 which specify that when profession goes up by 1 standard deviation, the nail biting goes up by .12 standard deviations. Finally, on dependent personality regression estimate was .4 that reflects that when dependent personality goes up by 1 standard deviation, the nail biting behavior goes up by 0.4 standard deviations.

4. Discussions

It was hypothesized that dependent personality disorder would be a significant predictor of nail biting behavior. According to the finding of this study, the research hypothesis has accepted and significant. Mostly it is observed that dependent personality disorder can cause negative consequences in everyday regulation and can pose significant trials for management of dependent personality disorder's traits and patterns of emotions of clinginess, insecurity, and suggestibility (Bornstein, 2012). Furthermore, people with dependent personality disorder practice increased distress and relational clashes and have less social support (Trull, Jahng, Tomko, Woods, & Sher, 2010). Specifically, dependent patients have complications creating and keeping close interpersonal association, because of negative and disrupting social behaviors, which leads to subjective feelings of loneliness and depression (Overholser, 1996). High levels of dependency and dependent personality disorder are linked with an increased risk for other mental illnesses. Dependent personality disorder is often comorbid with eating disorders, anxiety disorders, and somatization disorders (Bornstein, 1992). Dependency is a problematic construct and people considered dependency a negative trait or construct which lead to serious personality issue such as dependent personality disorder. This disorder is closely related to anxiety, fear and depression. Further, Individuals need support and guidance in every aspect of their life even in their everyday choices and decisions. This clingy behavior makes them sick and led to worst just due to fear of losing that person whom which they are dependent. If that person left, people with dependent personality disorder experience extreme anxiety and fear of separation. The reason might be that mostly people dislike dependency and clingy behavior, submissiveness and these types of comments make dependent people overwhelmed about being left alone and being taken care of their selves which cause depression and other emotional disorders.

Previously several disorders were investigated with personality disorders but in this study researcher interested to examine and exploring the relationship of habits with dependent personality disorder. Researcher chose nail biting habit on the basis of prevalence and everyday observations in surroundings. Researcher assumed that there would be a relationship between nail biting habit and dependent personality disorder. As mentioned earlier that dependent personality disorder is closely associated with anxiety, depression, obsessive compulsive disorder and fear (Simonelli & Parolin, 2017). Studies also indicated that nail biting is also related with above mentioned disorders (Ghanizadeh, 2008; Ghanizadeh & Shekoohi, 2011). On the basis of indirect association of these variables researcher made an assumption and hypothesized that dependent personality disorder would be a significant predictor of nail biting. Results also showed highly significant and positive predictive relationship between these variables which suggested that person with dependent personality disorder also has chance of nail biting behavior and it has been proved that current findings supports the assumption of researcher and stated that there is a predictive relationship between these two variables. But the lake of supportive evidences that dependent personality disorder and nail biting is directly associated, so present study is the first effort to relate and explore the relationship of these variables. A lack of evidence on nail biting is insufficient to clear the notion that nail biting leads to which types of psychological and behavioral problems among adults. Limited literature on nail biting habit and indicate that these are behavioral issues which can be a consequence of stress or anxiety. There is no evidence found in

above mentioned literature about the relationship of nail biting and dependent personality disorder. Current research would be a first effort to relate these three variables that whether the dependent personality disorder can be a predicator of nail biting behavior among adults.

In our study data was obtained using the demographic form and indigenous Dependent Personality Disorder Scale (DPDS) and was analyzed statistically. Linear regression analysis was performed to examine the relationship between nail biting and dependent personality disorder among adults. The relationship between these two variables were highly significant R^2 (N=101) = .187, p = .000. The individuals with dependent personality disorder also had nail biting behavior. According to age ranges groups 76 participants (N = 76) were in 1st group of age (18 to 29), 15 participants (N = 15) were in 2nd group (30 to 41), 4 participants (N = 4) were in 3rd group (42 to 53), 1 participant (N = 1) in 4th group (54 to 65) and 4 participants (N = 4) were in 5th group of age (66 to 75). Which shows that nail biting and dependency is more common in young adults with 75%, with the growing age both variables decreases as 14% in thirties, 4% in forties, 1 percent in fifties and again increases from 1% to 4% in sixties and seventies.

Total of 320 samples were selected for this study (N=320), 119 were male participants (N=119, 37.3%) and 195 were female participants (N=194, 60.8%). Only 101 participants (N=101, 31.5%) had both nail biting and dependent personality disorder. According to results, from selected participants (N = 101), 36 were male adults (N = 36, 30.2%) with nail biting and dependent personality disorder and (N = 65, 32%) were females' adults with both nail biting and dependent personality disorder. From total number of participants (N = 320) 42 male participants (N = 42, 13.1%) had dependent personality disorder and 93 female participants (N = 93, 29.1%) had dependent personality disorder. Results showed that female adults have more percentage of dependent personality disorder than male adults. Percentage of nail biting behavior from total samples (N = 320), 69 were male participants (N = 69, 21.6%) and 72 were female participants (N = 72, 22.5%) which shows that nail biting behavior is equally practiced in both genders.

Further, the objective of the study investigates the socioeconomic status and dependent personality disorder as the predictor of nail biting among adults. Structure equation modeling was done to analysis the results of the study. The analysis has given the model fit that was established significantly at the p value of .000. This model fit confirmed the predictive relationship of socioeconomic status and dependent personality with the nail biting behavior among adults. Furthermore, the index of chi square/df (1.106) was in the acceptable limit of less than 3 (Byrne, 2006). The values of other indices of GFI (.976), AGFI (.940) and CFI (.974) were above .900 whereas a value greater than .90 was considered as appropriate Hooper, Coughlan & Mullen, 2008) (Hu & Bentler, 1999). However, in the current research the indices were well above the limit thus, establishing the predictive relationship. Lastly, the REMSE value was .033 and Browne and Cudeck reported that the value less than 0.08 may be considered as a reasonable good model (Browne & Cudeck, 1993). In conclusion it could be said easily that it was a good fitted model and there was a predictive relationship between the socioeconomic status and dependent personality with nail biting behavior among adults.

It was hypothesized that the socioeconomic status and dependent personality disorder will be the predictor of nail biting among adults. As the above mentioned finding accepted the hypothesis there was no direct study available on adults to support the findings. The role of socioeconomic status in predicting the nail biting behavior was confirmed with the significant relationship of income, education and work with the nail biting (Rajchanovska, & Zafirova, 2011) (Schwartz, 2019) whereas dependent personality can cause negative consequences in everyday regulation and can pose significant trials for management of dependent personality disorder's traits and patterns of emotions of clinginess, insecurity, and suggestibility (Bornstein 2012). Furthermore, people with dependent personality disorder practice increased distress and relational clashes and have less social support than most (Trull, Jahng, Tomko, Woods, & Sher, 2010). Specifically, dependent patients have complications creating and keeping close interpersonal association, because of negative and disrupting social behaviors, which lead to subjective feelings of loneliness and depression (Overholser, 1996). As mentioned earlier that dependent personality disorder is closely associated with anxiety, depression, obsessive compulsive disorder and fear (Simonelli & Parolin, 2017; Pincus & Gurtman, 1995; Overholser, 1996). Studies also indicated that nail biting is also related with these disorders (Ghanizadeh, 2008; Ghanizadeh & Shekoohi, 2011). Finally, this indirect association was supportive by the finding of the current research hence, the present study is the first effort to relate and explore the relationship of socioeconomic status and dependent personality with nail biting behavior among adults.

5. Conclusion

Dependency is very common in all groups of ages especially among adults. It is needed to develop the tool for measurement and management for dependent personality disorder its causes and leading behaviors. Nail biting is one of these, which is alarming behavior for fear, stress and anxiety. Hence, the purpose of current research is to find out the predictive associations between nail biting and dependent personality disorder. It is concluded that there is a significant predictive relationship between nail biting and dependent personality disorder, these behaviors lead to each other, there would be more chances of have nail biting habit with dependent personality disorder.

6. Limitations and Recommendations

There are certain limitations of the present study which can be overcome and worked on in future. The sample of the current study was just taken from few institutes and communities of Sialkot city. Sample size was very small and difficult to generalize to the whole adult population. Further, inclusion of large groups and different age groups can improve the results and findings of the study.

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