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Role of attachment in facilitating adolescents' self-disclosure to parents

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Adolescence is a transitional phase, in which adolescents' interaction with peers' increases considerably and in such stage, to explore how parental attachment affects the process of self-disclosure in adolescents, the present study is formulated to examine the relationship between parental attachment and personal and relational self-disclosure. Personal self-disclosure is defined as disclosing about oneself whereas relational self-disclosure refers to sharing ideas one has about someone or something else. Scales of parental attachment and self-disclosure were used to measure the variables. The study was conducted on 300 randomly selected participants (150 males & 150 females) of age range 18-24 years from Patiala, Punjab. Multiple regression with subgroup analysis was used to examine the relationship between parental attachment and adolescents' self-disclosure separately for boys and girls.

Keywords: adolescence, parenting, parent-child attachment, self-disclosure, gender

Attachment is a secure base from where one can explore the world (Kerr et al., 2003). It begins with the beginning of human life. Human infant being a completely dependent creature quickly develops attachment with the primary caregiver (mother in most cases), who ensures the survival of the little being by nurturing and protecting it (Bowlby, 1969, 1988). So, it can be said that parental responsiveness is the key factor for the development of parental attachment. This fact was also acknowledged by Erikson (1963) in his Psycho-social theory of development when he discussed about the first stage of development and called it 'the stage of basic trust versus basic mistrust'. The basic idea propounded here was that when parents respond to the need of infant quickly, the infant develops a belief that the world is predictable and can be trusted. Help will be available for him/her whenever required and he/she can focus on the environment, explore it, and learn from it, without being worried about one's own safety. But when this type of responsiveness is lacking from the parent's side the infant develops basic mistrust and starts doubting the predictability of environment. Further research demonstrated four distinct patterns of parent-infant attachment and labeled them as secure, anxious-ambivalent, anxious-avoidant, and disorganized (Ainsworth, 1985). Of the four types suggested by the attachment research, the latter three are termed as insecure attachment and are found to be linked with various behavioral problems of infants and young children. However, the phenomenon is not confined to the early stage of life only rather, greatly influences the social and emotional development in later life as well (Bowlby, 1988; Kerr et al., 2003). The early attachment pattern gets internalized in the form of mental representations and predisposes the individual to handle relationships in a particular manner (Bowlby, 1988). This fact draws support from the work of Hazan and Shaver (1987, 1990 & 1994) who extended the typology of attachment pattern to adults and found

four different types again namely secure, anxious- preoccupied, dismissive-avoidant, and fearful-avoidant, where the latter three were included in insecure attachment. Securely attached adult is comfortable with intimacy and mutual dependency and do not bother about rejections while approaching for a new relationship, whereas these characteristics are lacking with adults having insecure attachment. It means in the hour of need a securely attached person will look towards the parents or the people they are attached with for help and support. They can easily share information and seek opinions from significant others for a variety of issues. Considering adolescence as a developmental stage, it is apt to believe that childhood attachment will continue to be a factor affecting the course of adolescents' interactions with their parents including their self-disclosure, but it is not the only factor to do so. The reason lies in the expansion of social environment available for adolescents and their need for independence and identity formation. During the course of development adolescents distance themselves from parents both emotionally and instrumentally (Ryan & Lynch, 1989). Their dependence on peer group increases manifold, they prefer seeking support from their friends instead of parents (Collins & Miller, 1994; Moretti & Holland, 2003). Obviously discussions and disclosures now happen more with peers than with the parents and this creates discomfort for both adolescents and parents. Adolescents face adaptive challenges as they explore a new relationship, which is largely conditional and initially based on give and take phenomenon. If not satisfactory, the newly formed relationship could be at stake. On the other hand, it is difficult for parents to renegotiate their significance in adolescent's life. Their concern towards adolescents' whereabouts grows in proportion to the emotional distancing they feel. To manage the situation parents try different tactics to gather information about adolescents like, supervision, monitoring, and active enquiries about happenings of their daily life. Although good-intentioned, these techniques may appear an undue interference in one's personal space. Very often adolescents take them as a gesture of doubtfulness from parents and feel annoyed at it. In this situation, voluntary sharing of information from adolescents' side can play the role of savior of the relationship.

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Scientifically known as self-disclosure, a term coined by Sidney Jourard (1971); refers to the "degree to which people become transparent (or clear) about their inner thoughts and feelings in their communication with others". Self-disclosure serves multiple functions in managing parent-adolescent relationship. Such as (a) it facilitates communication between parents and adolescents, (b) helps renegotiation of family roles and family goals to accommodate the developmental needs of adolescents, (c) avoids undue emotional strain on parents and (d) decisively influence the nature and quality of relationship in future (Allen & Land, 1999; Cassidy, 1994; Harvey & Omarzu, 1997; Noller & Callan, 1991; Prager, 1995; Reis & Shaver, 1988).

Again the width and depth of disclosure depends upon the mutual understanding and trust between two individuals. Presence of mutual trust and strong emotional bond facilitates voluntary disclosure in adolescents (Pathak, Sinha, & Tiwari, 2016). This is further substantiated by the findings of Mikulincer et al. (1991) who found that those who show secure attachment, disclose more freely about a variety of topics than those who show ambivalent and avoidant attachment pattern. Moreover, adolescents who are securely attached to their parents revert back to them for help and support despite of physical distancing (Furman & Buhrmester, 1985; Noller & Callan, 1994). So in a way attachment and self-disclosure are mutually dependent on each other and are responsible for each other's sustenance.

However, the scenario of adolescence in India is different. Indian adolescents do not feel compelled to move away from their house and parents. They do not feel bothered to earn for their livelihood. They still live with their family in a much protected environment (Verma & Saraswathi, 2002). Interaction with peer group is limited (mainly to school hours & to sporadic informal meetings outside school), and that too, monitored by parents. Parents continue to be the most important figure to talk with whenever some important decisions are to be taken. For example, it is a common experience here to see parents deciding the educational stream, profession, and marital partner for their young ones. Parents also try to guard adolescents from all sorts of emotional problems that may impair their mental health (Saraswathi & Dutta, 1988). Emotional independence from parents is intentionally and actively discouraged during adolescence. So, adolescents in India are neither instrumentally nor emotionally independent from their parents. The concept of autonomy and independence has been culturally adapted and refers to the acquisition of new skills required to make adolescents self-sufficient in managing their daily lives and helping in routine domestic chores. So it can be easily understood that the developmental niche of adolescents in India differs a lot from what is found in the western part of the world. However, there are always two sides of a coin and the other side presents a different story. Although cherishing its own tradition, value system and developmental practices, India has never been a closed culture. It is known for its psyche of co-existence. It imbibes and practices cultural attributes from all over the world. This has resulted in cultural changes which are multifaceted and multilayered. The process of acculturation (cultural change) has had accelerated due to easy availability of various means of connectedness such as air transport and technological devices. PCs and smart phones with a high speed internet connection have taken the whole world to the doorstep of common people. Adolescents and young adults being the most vulnerable section of the society, often experience strong

acculturative currents. As an obvious consequence the striving for independence and autonomy is increasing. Relationship dilemmas between parents and adolescents are surfacing more often and more strongly than ever before in India. The intensity of autonomy demands differ with respect to different domains of life. For example, parental control in selection of study courses, vocations, mates, and sometimes peer group is perceived as legitimate but parental control in selection of food, attires, cosmetics, and fun activities are viewed as unwanted interference. It has been found that pattern of adolescents' self-disclosure follow the same lines. There are domains where the extent of disclosure is more than other domains. However, the overall range of topics covered in voluntary disclosure is proportionate with the intimacy with parents and predictability of their behaviour (Pathak & Sinha, 2018).

Besides this, gender is also a factor affecting the width and depth of self-disclosure. Girls generally disclose more to parents voluntarily (Norrell, 1984) and more meaningful information as compared to boys (Payne, 2001).

Considering the complex interaction of gender acculturation, attachment, and self-disclosure in the life of Indian adolescents, it is important to carefully re-examine how parental attachment affects the process of self-disclosure in adolescents. Keeping this in mind, the present study is formulated to examine the relationship between parental attachment and personal and relational self-disclosure. Personal self-disclosure is defined as disclosing about oneself whereas relational self-disclosure refers to sharing ideas one has about someone or something else. The present study has the following objectives

Objectives of the study

- To study the relationship between parental attachment and adolescents' personal and relational self-disclosure.
- To examine the gender difference with respect to the level of self-disclosure.

Hypotheses of the study

- Parental attachment would be significantly positively correlated with adolescents' relational and personal self-disclosure.
- Girls would disclose personal and relational information more than boys would do.

Method

Participants

The sample comprised 300 adolescents 14 to 19 years old (average age 16.46 years), randomly selected from Patiala city (Punjab), Boys and girls were equally represented in the sample (i.e., 150 boys & 150 girls). After getting written consent, following scales were administered to them.

Instruments

Parental Attachment Questionnaire (PAQ; Keny, 1987): PAQ is a 5-point Likert type scale having 55 items to be rated by participants. It measures the adolescent's perception of the attachment in various areas of relationships such as perceived parental availability, understanding, acceptance, respect, and facilitation of autonomy etc. Its internal consistency was evidenced by Cronbachs Alpha of .96, .88, and .88 respectively.

Self-disclosure Scale (Pathak & Sinha, 2018): This instrument is

designed to measure two dimensions of adolescents' self-disclosure i.e. Relational self-disclosure and Personal self-disclosure, using 18 items which needs to be rated on 4 point scale which ranges from 0 to X (0, 1, 2 & X), where

0= Have told the other person nothing about this aspect of me

1= Have talked in general terms about this. The other person has only a general idea about this aspect of me.

2 = Have talked in full and complete detail about this item to the other person. They know me fully in this respect and could describe me accurately.

X= Have lied or misrepresented myself to the other person so that they have a false picture of me.

The numerical entries were summed (X's were counted as zeros), yielding totals which constituted the self-disclosure scores. Higher scores of the scale indicated higher quality of self-disclosure. The internal consistency reliability of the scale was assessed with the help of Cronbach's alpha coefficients, which was found to be 0.773 for overall scale.

Procedure

First of all various schools of Patiala were contacted for data collection. Participants were randomly selected from the schools which agreed for participation. Purpose of the study was explained to the students and written consent was taken. Having established rapport with the participants, the Parental attachment scale and Self-disclosure scale were given to them. They were asked to read the instructions carefully and give genuine responses for the items. They were ensured about the confidentiality of their reports. While collecting the scales back, they were carefully checked for the missing data and the scoring was done as instructed in their manual.

Results

Once the data collection was over, all data were entered into SPSS (version 20) for analysis, where, first of all, data were cleaned for outliers. Further, the data were subjected to statistical analyses to observe the relationship among parental attachment and adolescents' self-disclosure separately for boys and girls.

Descriptive (Means & Standard deviation) of all the variables were computed separately for boys and girls and results are shown in table-1

Table 1: Showing descriptive statistics for parental attachment and Self-disclosure

Variables	n	Mean	SD	
Parental attachment	Boys	150	191.026	24.645
	Girls	150	197.269	20.619
Relational self-disclosure	Boys	150	011.035	05.135
	Girls	150	011.460	06.463
Personal self-disclosure	Boys	150	009.023	03.205
	Girls	150	009.060	03.463

According to the mean scores, girls seem to be more attached to their parents than boys, however, the difference was not pronounced for personal and relational self-disclosure.

Regression analysis was carried out to test hypothesis one which states that parental attachment would be significantly positively correlated with adolescents' relational and personal self-disclosure

Table 2A: Model summary of regression analysis for girls (Relational self-disclosure as dependent variable)

Model	R	R Square	Adjusted R Square	F	Sig.
Parental attachment	.112	0.013	0.006	1.066	0.307

a. Predictor: Constant, Parental attachment

b. Dependent: Relational Self-Disclosure

Table 2B: Model summary of regression analysis for girls (Personal self-disclosure as dependent variable)

Model	R	R Square	Adjusted R Square	F	Sig.
Parental attachment	.212	0.045	0.019	1.076	0.306

a. Predictor: Constant, Parental attachment

b. Dependent: Personal Self-Disclosure

Table 2C: Model summary of regression analysis for boys (Relational self-disclosure as dependent variable)

Model	R	R Square	Adjusted R Square	F	Sig.
Parental attachment	.151	0.023	0.010	1.066	0.307

a. Predictor: Constant, Parental attachment

b. Dependent: Relational Self-Disclosure

Table 2D: Model summary of regression analysis for boys (Personal self-disclosure as dependent variable)

Model	R	R Square	Adjusted R Square	F	Sig.
Parental attachment	.112	0.013	0.006	1.066	0.307

a. Predictor: Constant, Parental attachment

b. Dependent: Personal Self-Disclosure

Regression analysis revealed that attachment was positively correlated with both dimensions of self-disclosure for boys as well as girls however, the correlation was significant for girls only i.e. relational SD was .151* & 1 for personal SD was .212**). Output showed that attachment significantly predicted the personal self-disclosure of girls ($F=6.976^{**}$) only. So hypothesis 1 is partially accepted.

For testing hypothesis 2 independent sample t-test was conducted to compare the mean scores of parental attachment separately for boys and girls.

Table 3: Showing result of t-test analysis

Variables	Gender	n	Mean	SD	t-Value
Relational self-disclosure	Male	150	11.03	5.13	0.603
	Female	150	11.46	6.46	0.204
Personal self-disclosure	Male	150	09.02	3.20	0.195
	Female	150	09.06	3.46	0.924
Parental Attachment	Male	150	191.02	24.64	1.7307
	Female	150	197.26	20.61	0.0103

Results didn't go with the hypothesis that girls disclose more to

parents than boys. In both high attachment and low attachment groups mean score of self-disclosure of girls and boys did not differ significantly from each other, whereas there was a significant difference between the reported attachment levels of where girls scored higher than the boys.

Discussion

The parent-child relationship undergo various significant changes during the adolescence, however there is much left to understand about how these changes affect and are affected by the quality of relationship between parents and adolescents. Present study attempted to achieve a better understanding of these processes in adolescence by examining the role of parental attachment in facilitating adolescents' self-disclosure.

Result of regression analysis indicated that attachment did not predicted boys' self-disclosure significantly although the two variables were positively correlated. It means that attachment helps boys disclose themselves but there may be other variables mediating the relationship. The picture was little different for girls as attachment significantly predicted their personal self-disclosure. It means that girls can talk freely about their emotions, thoughts, and opinions. This is something important as adolescence is a crucial stage of life for girls. They undergo a lot of physical changes accompanied by cognitive, and emotional changes. If they are securely attached to parents they can easily share their problems and seek guidance from parents.

Here it is important to remember that boys and girls do not differ significantly from each other with respect to the extent they disclose to their parents, but girls reported to be more attached with parents as compared to boys. It goes well with the findings of other studies, which suggest similar trends (e.g.,) in a nut shell it can be said that parental attachment is an important variable to improve the quality of self-disclosure but it should be accompanied by other facilitators such as open communication between parents and adolescents, parents' style of disclosure, parental warmth etc. so that adolescent may feel comfortable to disclose with them.

Conclusion and limitations of the study

The study sharpens the understanding about the concept and domains of parental attachment and self-disclosure. It re-establishes the fact that females are more attached with their mothers and they disclosed more in comparison to males. This study will work as baseline study for upcoming researches of this area. Further we will work on some limitations of this study as some points were left untouched. Our further study will focus on 3 research questions:

In this study adolescents' have to respond in the context of their parents. Further study should focus on parental disclosure too, so that we can get clear picture of the relationship of parental attachment and self-disclosure. Research should also look for mediators between parental attachment and self-disclosure.

In future, cultural impact should also be measured, as cultural difference matters a lot with reference to relevant variables.

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Role of Positive Personality Traits in Fostering Gratitude in Indian Adolescents

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Abstract: The present study was formulated to study the relationship between positive personality traits and gratitude in Indian adolescents. The Sample comprised of 200 adolescents (107 boys and 93 girls) randomly selected from various schools of Lucknow. Positive Personality Trait Questionnaire, Gratitude, Resentment, and Appreciation Test (short form) along with a demographic record schedule were administered. Results depicted a positive relationship between positive personality traits and gratitude, however different dimensions of positive personality predicted the gratitude scores in males and females.

Keywords: Positive Personality, Gratitude, Personality, Adolescence, PPTQ, GRAT.

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Introduction

Gratitude is a very important concept related to the field of positive psychology which is being extensively studied in different parts of the world. The topic contains voluminous research exploring various aspects of gratitude including its dimensions, antecedents and psycho-social consequences. A famous book entitled 'Psychology of gratitude' (Emmons & McCullough, 2004) presents a detailed analysis of the positive outcomes of practicing gratitude in daily life and calls it 'the greatest of all virtues'. Its greatness lies in its ability to promote well-being and quality of life of people and foster other character strengths and virtues too. It is described as a transformative force for the mankind. Solomon (1977) defined gratitude as "an estimate of gain coupled with the judgment that someone else is responsible for that gain". Solomon argues that

recognizing the contribution of others in the gain, gives a positive feeling and make the individual feel thankful to them. However, it is important that the help and contribution received is perceived as generous help not as an obligation otherwise this will not generate a positive valence which is a key element of gratitude.

Fritzgerald (1998) mentions three components of gratitude: appreciation for someone, goodwill for that person and a disposition to act, flowing from appreciation and goodwill. Gratitude is conceived as a “moral-virtue trait” leading a person to seek situations where he can express this thankfulness and appreciation (Bertocci & Millard, 1963). Gratitude has also been characterized as a religious emotion in one of the earliest psychological studies of religion (Leuba, 1912). Gratitude is expressed to God for giving life, health and sustenance through prayers in different religions.

Gratitude comes with several complexities in terms of emotion. Some researchers consider it a “tender emotion and negative self-feeling” (McDougall, 1929), which refers to the feeling of perceived inferiority of the recipient to the giver. Westermarck & McDougall (1970) viewed gratitude as a desire to give pleasure as a return of the pleasure received. On the other hand, Aristotle considered that there is no compatibility of gratitude with magnanimity, as magnanimous people find it inconvenient to be indebted and grateful to others.

A two-step cognitive process is involved that leads to the experience of gratitude: (a) identifying a positive outcome received and (b) recognizing that some external source is responsible for that outcome. This two-step cognitive process defines gratitude as an attribution-dependent state (Weiner, 1985). It has also been defined as “empathic emotions” by Lazarus and Lazarus (1994) and as a “short-term” state that reflects the appreciation of other’s actions by Ben-Ze’ev (2000).

Gratitude is found to be positively correlated with happiness and subjective well-being of an individual (Watkins, 2004; Wood et al., 2010). People having a sense of gratitude are found to have a high level of perceived social support and score low on measures of stress and depression (Wood et al., 2008).

The term positive personality is again an outcome of positive psychology. Just as the Value in Action project run by Peterson and Seligman (2004) is a compilation of strengths and virtues appreciated worldwide, positive personality is a replica of the same idea in the Indian context (Singh & Jha, 2010). After an extensive interviewing and rigorous psychometric

evaluation, the researchers identified four characteristics namely positive self- image, commitment, people-orientation, and culture identification valued highly by Indians and named them collectively as positive personality traits. The positive self- image is defined as maintaining a positive outlook towards self, life and relationship, perceiving oneself as an emotionally intelligent, flexible, and self-reliant individual. Commitment is defined as being honest with oneself and being loyal to one's relationships. It also includes qualities like goal orientation, initiative-taking, resilience, etc. The third dimension of people-orientation can be understood as the confidence of handling people and social situations well and the fourth dimension of culture identification refers to the extent to which a person identifies with his/her culture, tradition, and value system. Some more positive personality traits extracted by other researchers (e.g., Cann, Stilwell & Taku, 2010, Kuipheh & Martin, 2010) include positive affect, increased positive self-esteem, coping skills, problem-solving abilities, interpersonal relating abilities, greater life satisfaction, optimism, self-acceptance, self-confidence, and autonomy. Gratitude, being a positive characteristic can be correlated with positive personality traits. Empirical studies focusing on gratitude give ample evidence to believe in this idea. For instance, dispositional gratitude strongly correlates with subjective well-being, mental health as well as two personality factors, i.e., agreeableness and conscientiousness (Aghababaei & Tabik, 2013). Gratitude is strongly correlated with well-being (Toussaint, & Friedman, 2009; Datu, 2014), and there is a significant contribution of gratitude in predicting happiness. (Safaria, 2014; Rijavec, Jurčec, & Mijočević, 2010). Similarly, many of the positive personality traits such as self-esteem, life satisfaction, optimism and self-acceptance are found to be linked with psychological as well as physical well-being (Cann, Stilwell & Taku, 2010).

Examining the relationship between positive personality traits and gratitude in adolescents is of extreme importance as it can offer a solution to many behavioural problems experienced during this stage of life. Adolescents are usually very hyperactive as well as less forgiving and more revengeful. Adolescents are more motivated to seek revenge from the transgressor (Ghaemmaghani, Allemand,& Martin, 2011).

It has been found that adolescents who count their blessings and are grateful for the things they have in life are found to have a more positive affect, optimistic attitude, and higher life satisfaction (Froh, et al., 2008), lower levels of depression, social integration and higher

academic scores (Froh, et al., 2011) than those who are less grateful. Adolescents scoring high on gratitude scores are found to have lower levels of suicidal ideations where a high level of self-esteem mediates between the two (Li, et al., 2012). Gratitude interventions by health care professionals also established the importance of being thankful in reducing depression and perceived stress (Cheng, et al., 2015). However, another study by Froh et al., (2009) presents a contrasting result that people with high positive affect experienced ‘emotional ceiling’ whereas people with low positive affect need more positive life events to ‘match up’ with the experiences of their peers and hence exhibited greater gratitude and appreciation as compared to their counterparts.

A review of the literature suggested that personality predisposes a person to comprehend a situation and respond to it in a certain manner. So it would be apt to assume that the presence of positive personality traits would foster other desirable values in the person as well. Gratitude is one such quality, which is highly valued in Indian culture and it plays a great role in the mental health, well-being, and growth of an individual. However, the relationship between positive personality traits has not been exhaustively studied especially in the Indian context. Moreover, there are contrasting results obtained in researches. Some of them reporting a high level of gratitude felt by those having a more positive affect, whereas others suggesting a reverse pattern where those having less positive affect experiencing more gratefulness (Froh, 2008, 2009). Several studies have been done on gratitude and its relationship with life satisfaction, social integration, lower levels of envious attitude and depression, as well as higher grade point average (Froh, et al., 2011), no one tested a direct link between positive personality and gratitude especially in the Indian context. Gender differences in gratitude studies are not much studied. However, previous researches reveal a mixed outcome, where one says that females are ahead of males in experiencing a sense of gratitude and derive more social benefits than males (Kashdan, Mishra, Breen, &Froh, 2009) others claim the same to be higher in males (Froh, Yurkewicz, Kashdan, 2009). Explorations need to be made on what effect it has on their positive personality. Therefore, the present study has been conceptualized with the following objectives

- 1) To examine the relationship between positive personality traits and gratitude in adolescents
- 2) To examine gender difference, if any, in the potential relationship of gratitude and positive personality

Based on an extensive literature review following hypothesis has been formulated

H1) There would be a positive correlation between all four dimensions of positive personality and gratitude.

H 2) There must be a significant linear relationship between various positive personality traits and gratitude

As gender difference in the relationship between gratitude and positive personality has not been explored in the Indian setting it was not possible to propose a hypothesis for the second objective.

Methodology

Sample

A sample of 200 participants (107 males and 93 females) was randomly selected from various English medium schools of Lucknow city with prior permission from concerned authorities. The age of the participants ranged from 16 to 18 years.

Research design

Correlational research design has been used in the study. Gratitude was treated as criterion variables and various dimensions of positive personality traits were treated as predictors.

Instruments

The Positive Personality Trait Questionnaire (PPTQ): PPTQ has been developed by Kamlesh Singh and Shalini Duggal Jha in 2010. The questionnaire measures the perceived positive personality traits that are relevant in the Indian setting. It consists of 43 items with four components namely: Positive self-image, Commitment, Outward people-orientation and culture identification. The internal consistency coefficients for the four factors are 0.77, 0.80, 0.79 and 0.79 respectively. The internal consistency coefficient for the overall questionnaire is 0.91. The questionnaire is valid with both convergent and discriminant validity.

Gratitude Resentment and Appreciation Test (GRAT) – short form: GRAT has been developed by Watkins, Woodward, Stone and Kolts in 2003. It is a 16 item scale that measures a person's sense of gratitude and appreciation as well as the level of resentment the person holds. It has three subscales; simple appreciation ($r = 0.88$), appreciation of others ($r = 0.81$) and lack of sense of deprivation ($r = 0.72$). The scale has a good overall internal consistency of 0.86 and

well-established construct validity, factorial validity as well as temporal stability. **Demographic Record Schedule**

A demographic record schedule was used to keep relevant information about the participants.

Procedure

Before the administration of the tests and scales, proper consent was taken from the participants where they were explained the purpose of the study. After the establishment of a healthy rapport, the administration was done. The responses were recorded and the SPSS data file was prepared. It was then screened for outliers and missing values were performed. the total missing values were less than 5 percent of all the cases, including all the variables. These missing values were replaced with the mean value for each particular scale. Correlation as well as regression analysis were performed to find the relationships. The results are presented in the next section.

Result

Hypothesis 1 states that there would be a positive correlation between positive personality traits and gratitude. To test this hypothesis, Pearson product- moment r was computed among all dimensions of PPTQ and gratitude scale separately for males and females. The output is summarized in table 1.1

Table 1.1

Summary of correlations between dimensions of positive personality traits and gratitude resentment and appreciation

PPTQ dimensions	GRAT dimensions							
	Lack of sense of deprivation		Simple appreciation		Appreciation for others		GRAT Total score	
	female	male	female	male	female	male	female	male
Positive self-image	-.025	.023	.417**	.222**	.339**	.288*	.326**	.274**
Commitment								
People	-.043	.043	.305**	.280**	.321**	.342**	.252*	.342**
	.004	.030	.232*	.247*	.085	.072	.155	.193*

orientation								
Culture	.056	-.039	.329**	.276**	.302**	.243*	.311**	.255**
identification								
PPTQ	-.003	.019	.397**	.314**	.308**	.283**	.317**	.324**
Total score								

Notes: ** p<0.01 level (2-tailed), * p<0.05 level (2-tailed)

Abbreviations: PPTQ, Positive Personality Traits Questionnaire; GRAT, Gratitude Resentment and Appreciation Test

Table 1.1 clearly shows a significant positive correlation between total score of positive personality trait and gratitude in both females and males with correlation coefficients of .317 and .324 respectively significant at 0.01 level of confidence. However, the correlation among various dimensions of PPTQ and Gratitude scale reveals differences. The first dimension of GRAT i.e., lack of sense of deprivation is not significantly correlated to any of the PPTQ dimensions rather the magnitude of the correlation coefficient is very low. So one thing can be said that if a person finds himself/herself deprived or not is more a matter of objective comparisons than personality characteristics. Contrary to this the second dimension of GRAT i.e. simple appreciation is significantly positively correlated with all dimensions of PPTQ both in males and females. The last dimension of GRAT i.e., appreciation for others is also significantly positively correlated with all but one dimension of PPTQ, which is people orientation. This applies to both males and females. So hypothesis 1 is satisfactorily supported by the data.

Stepwise regression analysis was performed to test the linear relationship between positive personality traits and gratitude.

Table 1.2

Summary of stepwise regression analysis with gratitude as a criterion variable and positive personality traits as predictor variables

Model	Sex	R	R ²	R ² adjusted	F	Beta	t
(constant)							
Positive self-	Females	.326	.107	.097	10.847**	.326	3.293**

image							
Commitment	Males	.342	.117	.109	13.948**	.342	3.735**

Note: Dependent variable, gratitude, resentment, and appreciation

Notes: ** p<0.01 level (2-tailed), * p<0.05 level (2-tailed)

Excluded variables

Females: Commitment, People Orientation, Culture identification

Males: positive self-image, People Orientation, Culture Identification

The above regression model clearly specifies that out of four dimensions of positive personality trait questionnaire, positive self-image significantly predicted gratitude among females ($R^2 = .107$, $\beta = .326$, $t = 3.29^{**}$) whereas commitment predicted the gratitude score successfully for males ($R^2 = .117$, $\beta = .342$, $t = 3.73^{**}$). The rest of the predictors were excluded from the analysis as their model statistics could not meet the required criterion.

Discussion

The purpose of the present study was to examine the role of positive personality traits in fostering gratitude in Indian adolescents. The study addressed two important issues; first, the relationship between Positive personality trait and gratitude and second, gender differences in the patterning of this relationship. It was hypothesized that positive personality trait would be positively correlated with gratitude (H1) but there could be different dimensions of positive personality that significantly contributes to gratitude in males and females (H2). Pearson product-moment r and stepwise regression analysis were performed to test the two hypotheses and the sample statistics supported hypothesis one but partial support was found for hypothesis two as different dimensions of positive personality predicted the gratitude significantly in boys and girls but those dimensions did not match the hypothesized ones.

Comprehending the major findings of this study in a larger perspective of the Indian value system gives some important insights. The idea of a positive personality is like a compendium of qualities, which are highly valued by Indians, just like an indigenous version of strengths and virtues proposed in the VIA project. Gratitude is also a highly appreciated characteristic in the Indian culture and is also a part of the virtues proposed in VIA. When these two positively correlate with each other it not only confirms that positive personality traits foster

gratitude but also opens a possibility to integrate gratitude into the indigenous set of virtues by further enquiry.

Another finding of the study is that there are differences in males and females for the significant predictors of gratitude as a positive self-image predicted gratitude significantly for females and commitment did this job for males. The difference here is quite obvious as gender is an important variable determining both the process and the end-state of socialization world-wide. A positive self-image is comprised of qualities like having a positive outlook towards self, life, and relationships, emotional intelligence, and flexibility in self. So it would be apt to conclude that the more positive a person is the more he/she tends to recognize the contribution of others in life and become thankful for that or vice-versa. On the other hand, males who feel committed towards themselves as well as for others can better acknowledge and appreciate others' contributions in their lives and therefore become grateful.

These findings are especially relevant for adolescents in India as they live a very protected life with their parents and family. If they recognize the hard work and involvement of parents in their upbringing and they feel grateful, they will be able to understand the parents' perspective. This will reduce parent-adolescent conflict and help to build a harmonious intergenerational relationship. Females who find themselves privileged and satisfied usually tend to be grateful towards the family and society for giving them opportunities and support to fetch their desired goal. Males who are committed towards their relationships, recognize the value and contribution of these relationships in their life and tend to be more grateful than those who are not committed that way.

Implications

The findings of the study demonstrate the importance of positive personality traits in nurturing the value of gratitude in adolescents, so they can be utilized to design programs for school children and college students to enhance the positive personality traits in them and nurture the much-desired values of gratitude. Moreover, these techniques can also be utilized in clinical settings for improving the mental health and well-being of the clients.

Limitations and future suggestions

A relatively larger sample size should be considered for future studies. Moreover, the present study was limited to a particular age group, therefore a comparison of different age groups can be done in future studies. Many other positive psychology variables can be studied together with

positive personality traits such as emotional intelligence, resilience, perseverance, flow, etc. The very concept of positive personality traits can also be elaborated in further researches. By elaborating the data and considering the different cultural perspectives, factor analytic studies could be conducted to explore the positive personality traits including gratitude and forgiveness, and several other positive personality inventories can be developed.

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Technology: Saving and Enriching Life During COVID-19

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The pandemic of COVID-19 has arrested the life of 7.8 million people living on this earth. However, some people are more vulnerable to the risk of this deadly virus. The frailty of senior citizens put them at the top of this list. The past 6 months have not only presented a threat to their physical health but to mental health also. Although lockdown was necessary to check the spread of the coronavirus it culminated in an exponential rise in the problems of loneliness, anxiety, fear, helplessness, and depression. The present paper reviews the role of social networking sites, apps, and other digital platforms in saving and enriching the lives of the elderly, especially those who spent the lockdown alone and were devoid of a regular support system due to unavailability of transport and administrative restrictions on the movement of people. It also analyzes the efficiency of the virtual world in reducing their anxiety of being alone by connecting them with others and also make them feel empowered. The review is based on the online data collected about the insurgence in the percentage of elderly people using such platforms, recent studies analyzing the effects of the COVID 19 pandemic on senior citizens. Besides this personal telephonic discussions were conducted with some elderly people who spent their lockdown alone in their homes. The study was primarily focused on three objectives. Firstly it attempts to understand the ways in which senior citizens made use of social networking sites and various digital platforms for managing life better. Secondly, it analyses the process of adopting technology, and finally, it examined the width and depth of the impact technology created in their life and also the permanence of this change. The analysis clearly suggests an increase in the digital life of elderly people. The process moved in distinct stages from utter confusion to relative ease in using technology, thereby significantly reducing the loneliness, and bringing relatively stable change in the way they lead their life.

Keywords: social network site, COVID-19, elderly, senior citizen, loneliness, digital payment

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INTRODUCTION

The pandemic of COVID-19 has arrested the lives of 7.8 million people living on this earth. After discovering the first infected case in Wuhan, China, in December 2019, COVID-19 has spread beyond China, Asia, and the rest of the world, raising an unprecedented public health problem.

The World Health Organisation (WHO), on March 11, 2020, announced COVID-19 as a pandemic, and as of March 24, 2020, more than 3.5 lakhs cases were confirmed, and more than

14,000 deaths were registered, affecting 190 countries worldwide (WHO website dated March 24, 2020, at 9:00 p.m. Indian standard time) (Coronavirus, 2019). These figures have exponentially increased to about 27.19 lakhs cases with about 1.9 lakhs deaths in 1 month time (WHO website date April 25, 2020, at 05:30 p.m. Indian standard time) (Holmes, 1999).

In response to “flatten the curve” and curb the community spread, In India, a national level “lockdown” was declared starting from midnight of March 25, 2020, initially for 21 days, which was later extended up to May 3, 2020 (The Lancet, 2020). “Lockdown” is an emergency protocol that restricts the public from traveling from one location to another. However, complete lockdown ensures that people remain where they are presently, and the government will permit no entry/exit motions. Although lockdown proves to be a powerful and effective technique to counter the increasing spread of the highly contagious COVID-19 virus, the key side effect of lockdown is that it exacerbated psychological well-being among the citizens. The popular slogan of “social distancing,” which refers to physical distancing among individuals in social settings, gradually ushered people toward loneliness. Social isolation and quarantine, the primary treatment measures adopted, increased the psychological distress among patients and their caregiver manifolds. This results in significant mental health problems ranging from anxiety, fear, sense of loneliness, depressive symptoms, anger, sleep disturbances, etc. Similar findings were reported on SARS (Severe Acute Respiratory distress Syndrome) patients when they were kept in isolation (Reynolds et al., 2008).

However, the level of risk and distress people suffered from was of varying degrees. According to a survey by the US Centers for Disease Control and Prevention (CDC) in March 2020, more than 80% of deaths have been reported in patients over 65 years of age, indicating vulnerability of the elderly to the virus (Bialek et al., 2020; Li et al., 2020). The picture is largely the same in India also. According to the WHO data elderly (above 60) account for 51% of the 1,48,153 deaths in India (Guitton, 2020). Because of this, it is most likely that others might avoid meeting them, which further aggravates the consequences of social distancing. Santini et al. (2020) further verified this fact; they recently demonstrated that social disconnection puts older adults at an increased risk of depression and anxiety.

From a technological perspective, the COVID-19 pandemic has provoked massive, immediate switching to online platforms. With unprecedented changes in population use of digital technologies and media (Guitton, 2020), the digital platform’s status changes from an amenity to a priority; not only are they the primary means of accessing information and resources, but they are also one of the only surviving routes for physical, educational and leisure activities and also for social interactions. This change is observed in all sections of the population, especially people who are in their 60s. In India, 25–30% of senior citizens are now active on the internet as compared to the 6–8% active users 6 months ago (Statista). This is an exponential rise in the number of users in this age group. A lot has been said and written to describe the increasing digital literacy among the elderly. However, a systematic and

comprehensive study examining the interactive influence of the pandemic and technology on the life of the elderly is still needed. Precisely it would include the analysis of the functional utility of technology for neutralizing the physical and psycho-social risk of infection on the one hand and the compelling effect of a pandemic that broke the techno-resistance in the mind of people and ushered them to new normal away from their conventional way of doing things on the other. Therefore, a small qualitative study was designed, which primarily focused on three objectives. Firstly, it attempted to understand the ways in which senior citizens made use of social networking sites and various digital platforms for managing life better. Secondly, it analyzed the process of adapting to technology. Finally, it examined the width and depth of the impact technology created in their life and the permanence of this change.

MATERIALS AND METHODS

Suitable participants were identified through convenient sampling and contacted over the phone. The objectives of the study were explained to them and their consent was taken. Proper appointment was fixed for the interview at a suitable time when they can easily spare 30 min for the interview. Special attention was given to rapport building before actual questions were asked. Interview was conducted on a video call connected through whatsapp and their responses were noted verbatim by the researcher. It started with simple questions about themselves and their family like their name, age, and residence to warm them up and also to make them comfortable before actual questions were asked. Familiarity with and use of technology is not a tabooed topic to talk about so it was not difficult at all to get responses. In fact, respondents enjoyed discussing various issues during the interview, which shows their positive inclination toward the interview. The scripts were later on analyzed for the basic issues raised in the study.

Sample

In view of the objectives elderly people living all alone or with husband/wife at least for 5 years were identified. While selecting the sample it was ensured that (a) they have spent the whole lockdown away from their children and other members of their extended family, (b) they had access to smart-phones and laptops/desktops, which are the essential tools for entering into the virtual world. Convenience sampling method was used and 20 participants were included in the sample. Males ($n = 10$) and females ($n = 10$) were equally represented in the sample. Age ranged from 58 to 65 years. As the sample was selected through convenience sampling, especial care was taken to ensure the external validity of the sample. Participants were selected from five different states (i.e., Delhi, Rajasthan, Kerala, Uttar Pradesh, and Bihar) and 11 different cities (i.e., Varanasi, Mirzapur, Deoria, Ballia, Patna, Kushinagar, Gorakhpur, Trivendram, Jodhpur, Ghazaibad, and Delhi) of the country.

Participants came from diverse professional backgrounds. Among the female participants six were home-makers, two were

Post Graduate teachers in government schools, one was working in the private sector and one retired teacher (govt. School) was there. Among male participants five were retired from various government offices and five were in jobs. Out of these five, one was Sub-Inspector Police, one was a manager in Life Insurance Corporation, one was a contractor, and two were bank employees. When asked about their SES they all reported their monthly income between 40,000 and 100,000 INR.

Information about current health status revealed that 12 participants were suffering from problems like high blood pressure, diabetes, thyroid and goiter but they were functional enough to do their daily job. None of them were suffering from any serious or terminal illness. The participants were never found infected with COVID-19 during the lockdown.

Instrument

This is a small qualitative study based on narrative approach where narratives were generated through a structured in-depth interview having twenty questions to understand the importance and use of electronic devices, digital payment methods and social networking sites in the life of senior citizens during the lockdown. Interview also focused on the way various social networking sites and digital payment apps helped senior citizens to manage their lives during this lockdown.

The Interview-Schedule

An interview-schedule was developed to get a deeper insight into the impact of COVID-19 on the lives of elderly and its proper management with the use of technology. Core issues addressed by the interview were (a) familiarity with technology, (b) reluctance to technology, (c) difficulties in initiation, (d) functional utility of technology, and (e) long-term capacity building. Initially thirty questions were written. Thereafter based on elaborated discussions twenty questions were retained for their clarity and scope to elicit responses. The schedule contains twenty questions. The first section has five questions devoted to assessing their relationship with children. For example, how frequently do your children visit you? (Q. no. 3) and how much emotional support did you get from your children during the lockdown? (Q. no 5). Next section also had five questions related to the familiarity and utility of technology in daily life before COVID-19. For example, whether technology was a part of your life prior to COVID-19? (Q. no. 6). Have you used any digital payment mode prior to COVID-19? (Q. no. 9). Section three was devoted to understanding the reasons of resistance to technology and difficulties faced by the participants when they started using it. This section contained two questions viz., why didn't you use social networking sites/online shopping/payment before? (Q. no. 11) and when you started using these online platforms what were the difficulties or challenges that you faced? (Q. no. 12). Section four had five questions that gather information about the various usage of these online platforms during the lockdown. Sample questions are which social networking sites have you used to connect to your family? (Q. no. 13) or how these online platforms helped you reduce your anxiety and loneliness during lockdown (Q. no. 16). The last section had three questions. Q. 18 asked participants to describe their journey

of learning and using technology. Q. 19 will you continue using these online mechanisms even after lockdown. Unlike the other questions, Q. 20 asked for direct comparison of seven important aspects of participants' lives pre and post lockdown on a five-point scale, where 1 represented minimum and 5 represented maximum. These were (i) friendliness of people around, (ii) confidence in using technology, (iii) connectedness with people around, (iv) experience of self-sufficiency, (v) level of self-esteem, (vi) level of mental alertness, and (vii) overall mental health.

Questionnaires were initially prepared in Hindi but considering the wider regional coverage in sample selection the questions were translated in English as well using the translation-back-translation method for the convenience of respondents.

RESULTS

Content analysis of the transcripts started with examining the quality of participants' relationship with their children. This is an important factor determining the level of loneliness in elderly. Responses revealed that most of the participants were living alone for 5 years or less than that. Couples are living alone because their children are out for job/studies or are settled at a distant place after marriage. Participants reported regular visits of children before lockdown. The frequency of visits varies from once a week to once in 6 months depending upon the distance between the places they reside. During lockdown the children were continuously in touch with their parents over phone, WhatsApp, and video call. No history of family conflict or broken relationships was reported by anyone of them. So, living alone is due to situational constraints not because of any family dispute or broken relationships.

Familiarity With and Reluctance to the Technology

Familiarity with digital platforms or technology refers to the knowledge of availability and functional utility of these things and does not necessarily include first hand use. Reluctance to technology refers to the reservations of participants for using communication technology, e-commerce sites, digital payment modes and social networking sites over other conventional methods of doing things.

While examining the familiarity of participants with the digital world that there were two levels of this familiarity. First was the familiarity with the tools and second was the familiarity with the software. Participants started their narration by saying that they have smart phones and laptops. When asked about their usage the most common response was that they use smartphones to make voice calls, video calls, and send WhatsApp messages. Six of them had their Facebook accounts also but were not very active on it except one who was the Sub-Inspector in the police department. So, there was a clear preference for communication technology over e-commerce technology. Participants were also using professional softwares relevant to their jobs. For example, the banker was working

with the banking software, the LIC agent was using his office software. However, there was no such techno-dependency of other participants.

Incidental use of online shopping and digital payments was reported. When asked about the ease of online shopping, which saves time and energy, participants said that local shopkeepers also give doorstep delivery. “We order routine stuff (especially grocery, fruits, vegetables, milk, bakery items) over phone and shops would deliver and we can pay them in cash.”

Reluctance to Technology

The reasons for this limited use of various digital/online tools were (a) face to face interaction was preferred over the virtual mode, (b) fear that is not safe; financial transaction is risky even sharing information on Facebook has a risk of unwanted use of personal details (c) difficult to understand, icons were confusing (d) could not find enough time to learn, (e) didn't feel a need to use technology, (f) children would do the things for us, as they don't find time to teach these things, (g) online shopping is difficult as we cannot try product before buying, the color, texture, and quality can be judged better if you see it. (h) what if the company doesn't pick up the product we want to return, (h) it takes a lot of time to get the product online whereas we can directly purchase it from the market. One of the participants was not using technology at all. So, it can be said that these people were familiar with the available online options but these options were not much preferred over the offline options.

Difficulty in Initiation

All of them have started using these things during lockdown. However, the process seemed to be fairly difficult to initiate. Participants reported that it was confusing and difficult to understand. There is an unknown fear of things going wrong, instructions and options written in English were not clear to them. They didn't know how to change the language. Operating a smart phone or laptop was not so simple for them. The situation was even more difficult for those in job because they had to accommodate the professional requirements that too with the newly learned technology. There was no one to help them learn these things. Children instructed them over phone, which was not enough. Some of them tried to see YouTube videos to learn using technology.

Functional Utility During Lockdown

People used online platforms for (i) making video calls and talking to friends and relatives, (ii) buying things/medicines online, (iii) financial transactions, (iv) official meetings, (v) learning new things on YouTube for managing one's leisure time. Facebook, WhatsApp, and YouTube are the most used sites. Some people have used zoom meeting app also. Almost all payment methods have been explored including Google pay, UPI (Unified Payment Interface), net banking, Paytm, Phone pe etc. participants used Amazon, Myntra, and Flipkart to buy things but it is largely combined with offline shopping especially for Grocery, fruits, vegetables, milk, and milk products. Only two participants said that they used online shopping

to buy these kinds of stuff. Others preferred to buy these things offline. Either they go to the market or they ordered it on phone and the shopkeepers delivered it or there were some arrangements made by the local governing bodies to ensure proper distribution of these things in every locality. Participants reported that they had not required online medical consultation apps. If any such thing was required, they called their doctors and managed to get the prescription. Instead, they used online platforms to buy medicines other than ordering them on phone. They also said that SNS and other online platforms helped to overcome anxiety and loneliness as it was a nice way to spend time and learn something new and fruitful. Online shopping was an interesting experience. We could talk to family members and relatives over a video call, which reduced anxiety to a great extent as we could see them and discuss things with them.

Long Term Capacity Building

All the participants reported that they will continue using technology even after COVID is completely over. They all described it as a journey of learning new things. They say that they are still in the learning phase. It was full of knowledge but difficult too. A direct pre- and post-lockdown comparison revealed that (a) people perceive people around them as less friendly than before COVID, (b) they felt more confident in using technology, (c) there is a slight increase in social connectedness, self-sufficiency, and self-esteem after lockdown and (d) the level of mental alertness and mental health was almost the same before and after lockdown.

DISCUSSION

The present study was taken up to understand how SNS, digital payment modes, online shopping, and various apps help senior citizens manage their lives well during the lockdown.

The first step toward understanding the matter was the assessment of the participants' awareness of the availability and functions of these things and then to have an idea of the use of technology in daily life. Here the familiarity with technology and reluctance toward its use both are high. This means the unavailability of gadgets and the internet is not the only reason for its limited use by the elderly; psychological factors are also important. The apprehension of things being messed up or becoming a victim of online fraud while using a digital payment system or perceived inability to learn something new or the mindset that the conventional methods are better than the digital ones all are psychological factors that need to be addressed before elderly can become active users of technology. Similar findings were reported by studies carried out in the US and other European countries also (Yuan et al., 2016). These studies (e.g., Marquié et al., 2002; Selwyn et al., 2003) identify several non-cognitive factors such as lack of interest, perceived redundancy of technology, fear of computerization, negative attitude toward spread of technology, and lack of confidence as potential deterrents for using technology.

However, the sudden lockdown and the fear of contamination by the deadly CORONAVIRUS put the elderly under strict social isolation (Chen, 2020; Jordan et al., 2020; Niu et al., 2020). The fact that Information and Communication Technology was the only way to maintain contact with the outer world motivated them to practice what they knew. Examining the pattern of use reported by the participants clearly showed their inclination for communication technology. The technology was most frequently used to contact children and other family members living in distant places. Video calls took over the audio calls, and various online meeting apps like Google Duo and Zoom were also used for making family calls, which were like family reunion events during the lockdown. These platforms were also used for professional meetings with colleagues by those who were on the job. The two teachers in our sample used these platforms for taking classes in the new normal. The next preferred online service was digital payment. The participants explored different payment modes like G pay, Paytm, PhonePe, and other banking apps. For shopping of utility items, the trend was mixed. Participants preferred shopping the groceries and milk products from local shopkeepers over the phone, whereas other items were ordered on e-commerce sites. Amazon, Flipkart, Myntra, Snapdeal were the sites most commonly cited by the respondents. Unquestionably, the Information and Communication Technology was the biggest savior during the COVID-19 pandemic. However, it was not a smooth shift to the new normal from the conventional methods for most of us, especially for the elderly who had their reservations about technology use.

While talking of the difficulties in learning/using technology, the participants' most common problem was the lack of a proper support system. Children and other family members usually lack time and patience to match the learning pace of the elderly. Online aids are not easy to explore, and they also fail to accommodate the special needs of the elderly (Berkowsky et al., 2013). However, the extraordinary circumstances of the pandemic played a significant role in sensitizing people about this issue. Children themselves became the biggest motivator and instructed their parents over the phone about how to use a particular application. Number of specially tailored Youtube videos demonstrating the use of these things also increased manifolds.

The use of online platforms compensated for the face-to-face interaction with family and friends on the one hand and also enhanced their self-sufficiency, confidence, and self-esteem. The mechanism was also fascinating. After a certain age, when the elderly do not remain very open to new things and become confined to the conventional ways of doing things, they somehow become dependent on their children for (i) information, (ii) decision-making, and (iii) execution of that decision. The use of online services made the state-of-the-art information available at their doorstep. It simplified the exchange of information and facilitated discussion about a service or product with similar others, thereby helping them make proper decisions. The availability of various online shopping platforms, digital payment modes, and online apps like Urbanclap, on which they can book various services online, has made life easy. Availability of medical

consultation apps like Practo that gives a package of consultation, diagnostic testing, and allied services like physiotherapy has reassured them easy access to all required facilities without dwelling into the hassles of going to the hospital everyday health problems. Mynatt and Rogers (2001) also highlight the importance of using technology in the "functional independence" and "independent living" of the elderly in their houses.

Few participants who were very new to the online world reported that they have started using SNS and online services, but they do not do it themselves; instead, their husbands have learned to use these things, and they do it for them. Maybe getting good experience and watching others using technology is the first step for overcoming resistance to it. Responses suggest that in the future, they would like to give it a try.

Findings reveal vivid uses of the technology and reaffirm the virtual world's efficiency to manage real-life crises. It gives very useful lessons to facilitate the diffusion of technology in the larger society, especially in those pockets with their own specific needs like remote rural areas, young children, females, and senior citizens. This also allows assessing the extent to which hiatus of the real world can be compensated by the virtual world, at least to some extent. It was a practical demonstration of the saying "there is no age to learn." For example, Facebook can help get help from people around in the hour of need when you stay away from your family. SNS gives an excellent method of talking and expressing oneself, which is a healing mechanism in itself. This is especially true for the elderly population, who often suffer from being heard of. This is substantiated because participants were happily talking to their distant relatives who were not in touch for a long time.

Moreover, this learning exercise has the immediate benefit of adding knowledge and skills and has a long-term benefit of keeping their brain active, reducing the risk of dementia and other age-related cognitive deterioration. This fact is reiterated on many occasions by many institutes working with the mental health of the elderly. The National Institute of Ageing, United States, emphasizes the importance of continuous stimulation of the brain through various sensory modalities, and learning something new is the best way to do that.

Overall, it can be said that technology has a synergistic effect on human adaptability. It has tremendous scope for crisis management. Future research must focus on simplification and effective dissemination of online tools and resources to develop an efficient crisis management system.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/**Supplementary Material**, further inquiries can be directed to the corresponding author/s.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

SS and AV has equally contributed and were supported by PT. All authors contributed to the article and approved the submitted version.

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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fpsyg.2021.647681/full#supplementary-material>

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Development and psychometric evaluation of the Hindi version of adolescents' Self-disclosure Scale

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The present paper reports the development and psychometric properties of the Hindi version of the newly developed self-disclosure scale for adolescents'. Qualitative interview schedule was developed and administered on 50 parents (both father & mother) and 50 adolescents (both boys & girls). Initially 46 items (for 7 domains i.e., like/dislikes, studies, career, money, friendship, physical changes, personality & attitude/opinion) were written and on the basis of reliability analysis, some psychometrically poor items were deleted, and only 29 items were included in final scale. After that, through Factor analysis, 18 items were retained and classified in two components, named as Personal self-disclosure and Relational Self-disclosure. The psychometric properties of the Self-disclosure scale were evaluated on a sample of 300 participants. Item analysis of the scale revealed that some items were psychometrically adequate and retained in final scale, whereas psychometrically poor items were removed from final scale. However, the reliability of the scale was found to be highly satisfactory for both components of self-disclosure (alpha = .84 for relational self-disclosure & 0.60 for personal self-disclosure). Overall, the findings revealed that this newly developed self-disclosure scale is a reliable and valid tool to measure the level of adolescents' self-disclosure with their parents.

Keywords: self-disclosure, qualitative interview, physical changes, personality, item analysis

Adolescence (13-21 years) is a transitional phase of human growth and development between childhood and adulthood. "An adolescent is a person between ages 10 and 19" (WHO). Adolescence is a developmental stage but sometimes portrayed as stressful for both parents and adolescents. In this stage, adolescents encounter with several socio-emotional developments and dilemma between autonomy and dependence.

During adolescence, parents accept adolescents' identity experimentation and drive for emotional autonomy as normal, but at the same time they try to exert control on the ideas and behavior of adolescent to prevent them from potentially risky situations and getting culturally uprooted (Steinberg et al., 1992).

Parenting is a dynamic process not a fixed state therefore it needs continuous assessment of the child's need, abilities and situational demands. These assessments and adjustments are not possible without an adequate and accurate knowledge of the child's whereabouts. Therefore parents try to know more and more about their child. To know about their adolescents' daily life, parents use several techniques like, active tracking, shadowing of adolescents, parental control, soliciting information from children, spouse, adolescents' peer group and others, as well as listening to their children, children's voluntary disclosure and observing their children's behaviour.

Now days, parent promotes, and encourages self-disclosure from children, because voluntary disclosure from child enables parents to know more about him/her and also helps in building an atmosphere

of trust and honesty towards each other. "Self-disclosure is a process of revealing personal information about oneself to another" (Jourard, 1971). It is an extent to which people make themselves "transparent" (or clear) about their inner thoughts and feelings in their self-related communications with others. It allows individuals to validate their perception of reality and opens the relationship to growth and development (Johnson et al., 2010). It is related to effective behavioural management in adolescent on one hand and strengthening of emotional bond between parents and adolescents on the other hand. In interpersonal relationship, Waring (1987) and Derlega (1993) classified self-disclosure in two major forms, one is *Personal self-disclosure*, means disclosure about oneself (in a form of emotion expression, self-clarification, & social-validation) and another is *Relational self-disclosure* which focuses on disclosing one's relationship with another person (for relationship development, social control, intimacy & accommodation). In 2000, Omarzu explained 3 facets of self-disclosure, (a) *Breadth* which refers to the variety of topics a person willingly discloses to others (b) *Duration* which refers to the amount of time people spend sharing personal information with others, and (c) *Intimacy* refers to the importance people place on the topics they discuss.

There are several theories which tries to explain the concept of self-disclosure, i.e., The Social Comparison Theory, Johari Window Model, The Social Penetration Theory and The Social Exchange Theory. The social exchange theory (Homans, 1958) and social penetration theory (Altman & Taylor, 1987) are more relevant in interpersonal relationship and explains concept and process of self-disclosure.

During 70s, attempts were made to assess the concept and process of self-disclosure in clinical setting and interpersonal relationship. Sidney Jourard (1971) created the self-disclosure scale which measures self-disclosure in clinical setting or counselling. Jourard (1971) noted that person need to self-disclose to get in touch with

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their real selves, to have intimate relationships with people, to bond with others, in pursuit of the truth of one's being and to direct their destiny on the basis of knowledge. On being transparent or open, individuals feel relieved that a burden was taken off their shoulders, they experience peace of mind and consequently happiness, contact with his/her real self and better able to direct their destiny on the basis of knowledge (Jourard, 1971). Jourard's self-disclosure scale is used in counselling psychology for measuring self-disclosure in the context of client and therapist. The instrument is helpful for counselors to assess their client's problem on the basis of their self-disclosing frequency in different areas.

The present study attempts to develop the Self-disclosure Scale for adolescents, which can be used in assessment of parent-adolescent relationship and evaluates its psychometric properties. The psychometric evaluation includes examination of the item level reliability as well as the reliability of the full scale. This scale attempts to examine the issues adolescents are reluctant to talk about or what are the issues, adolescents freely disclose/ don't disclose to parents.

Method

Search for content domains

In the search for content domains, an interview was made and answered by 50 parents (both father & mother) and 50 adolescents (both boys & girls).

The interview questionnaire aims to gather data about the self-disclosing activities of the adolescents (both boys & girls). The interview questionnaire indicates both parents (father or mother, with whom adolescents disclose maximum), topic disclosed, situation where one discloses, how one discloses, characteristics while disclosing.

Item writing and review

Based from the interview, 46 items under 7 domains were constructed. The 7 domains were Like/ dislikes, Studies/ career, Money, Friendship, Physical changes, Personality and Attitude/opinion.

It was a 4-point scale (0, 1, 2, X) where,

0= Have told the other person nothing about this aspect of me.

1= Have talked in general terms about this. The other person has only a general idea about this aspect of me.

2= Have talked in full and complete detail about this item to the

other person. They know me fully in this respect and could describe me accurately.

X= Have lied or misrepresented myself to the other person so that they have a false picture of me.

The items were reviewed by two Psychology professors from Banaras Hindu University. Some corrections were done and after being reviewed the pilot study were done. In pilot study sample comprised of 300 adolescents (150 boys & 150 girls) with age range of 13-20 years (mean age= 16.4633). Adolescents were randomly selected from different schools of Patiala city and their mothers were automatically included in the sample. Obtained data from pilot study were analyzed and on the basis of reliability analysis of data, some psychometrically poor items were deleted, and out of 46 items only 29 items were included in final scale.

Item analysis and factor analysis

The 29 items were inter-correlated and the factors were extracted the SPSS computer software. The items were grouped into two components using Principal component analysis.

In the final form of scale, there were only 18 items were retained and 11 items were deleted in the item analysis due to low factors loadings (below .40). There were two components were extracted in the Principal component analysis, named Personal self-disclosure and Relational self-disclosure. 11 items were grouped in first component (Relational self-disclosure) and remaining 7 items were grouped in second component (Personal self-disclosure).

Results

After completing data screening process, psychometric properties of new developed self-disclosure scale were done. For this reliability analysis and factor analysis were done.

Reliability analysis

Table 1 showed description of reliability analysis and suggested reliability of total scale is $r = .773$, which indicated a strong internal consistency. This means that respondents who score high on one item also tended to select high scores for the others, similarly, respondents who selected a low score for one item tended to select low scores for the other items in general. It shows, internal consistency of the scale is good. Overall, the elementary data analysis suggests that the new self-disclosure scale is psychometrically reliable to measure the quality of self-disclosure.

Table 1. Reliability Index of Self-disclosure Scale

S. No.	Domains of Self-disclosure Scale	Items (total items 46)	Previous Cronbach's alpha	Deleted items Alpha	Cronbach's
1.	Like/Dislike	Items 1-7	0.43	2, 4, 5	.582
2.	Studies/ Career	Items 8-14	0.58	14	.660
3.	Money	Items 15-19	0.31	15, 18, 19	.516
4.	Friendship	Items 20-26	0.70	21, 23_a, 23_b	.789
5.	Physical changes	Items 27-30	0.43	27	.508
6.	Personality	Items 31-35	0.43	33, 34	.555
7.	Attitude/Opinion	Items 36-41	0.25	36, 37, 38, 41	.473

Cronbach's alpha of full scale (29 items)

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Table 2

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Item no.

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22_a

22_b

24

25_a

25_b

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29

30

31

32

35

39_a

39_b

Table 3

Compon

Factor analysis

Factor analysis was used to construct the factors of newly developed self-disclosure scale. Bartlett's test of sphericity and the Kaiser-Meyer-Olkin measure of sampling adequacy were used to determine the factorability of the matrix as a whole. The value of Bartlett's test of sphericity is significant ($p=0.000$). In addition, the Kaiser-Meyer-Olkin measure is 0.710 which is greater than 0.6. Usually if the Bartlett's test of sphericity is significant, and the Kaiser-Meyer-Olkin measure is greater than 0.6, factorability is assumed. Thus, based on these results, it was appropriate to proceed for Factor Analysis to discover the underlying factors of the newly developed self-disclosure scale. Principal components analysis was performed on the finally selected 29 items with SPSS Version 20.0 (SPSS, Inc., Chicago, IL) using Varimax rotation.

Table 2 & 3: Summary table of factor analysis (standard factor loadings & component extracted)

Item	Component 1	Component 2
1	.517	
7	.749	
10	.707	
20	.567	
22_a	.673	
22_b	.634	
24	.688	
25_a	.427	
25_b	.606	
26	.638	
29	.478	.474
30		.476
31		.598
32		.434
33		.660
35		.631
39_a		.545
39_b		

Table 3: Showing components extracted

Components Extracted through Factor Analysis			
Component	Name	Items (Overall 18 items)	Cronbach Alpha
1	Relational Self-disclosure	1, 7, 10, 20, 22_a, 22_b, 24, 25_a, 25_b, 26, 40	0.84
2	Personal Self-disclosure	29, 30, 31, 32, 35, 39_a and 39_b	0.60

Discussion

The findings of the present study provide enough support for the reliability of the newly developed Self-disclosure scale and its adequate psychometric properties suggest that the component of the newly developed Self-disclosure scale can be reliably measured in parent-adolescent context.

Reliability

The initial analysis (total 46 items) of Reliability Statistics revealed that the value of the coefficient of Cronbach's α for this scale is 0.809, which is very high and indicates strong internal consistency among all items, however, domain-wise alpha suggested a low reliability for some domains like Money (item no. 15-19, $r=0.31$) and Attitude (item no. 36-41 $r=0.25$). The analysis suggested that the domain-wise reliability will improve if some of the items are deleted, therefore 17 items were identified and dropped from the scale and the reliability was reanalyzed thereafter, which are shown in table (table 1) and final reliability was found 0.773.

Factor analysis

The table 2 and 3 shows the rotated factor matrix for the items. Tabachnick and Fidell (2001) stated variable with factor loadings more than 0.42 is considered average, whereas loadings below 0.42 is not considered good. After performing Varimax Rotation with Kaiser Normalization, component 1 comprised of eleven items with loadings ranging from 0.42 to 0.74. The items included in component 1 were 1, 7, 10, 20, 22_a, 22_b, 24, 25_a, 25_b, 26 and 40. Component 2 comprised of seven items with factor loadings ranging from 0.43 to 0.66. The items in component 2 were 29, 30, 31, 32, 35, 39_a and 39_b. Based on the nature of items included, component 1 was named as 'Relational self-disclosure' and component 2 was named as 'Personal self-disclosure' as they matched nicely with the Jourard's dimensions. Finally, 18 items were included in the new self-disclosure scale. Personal self-disclosure refers to disclosure about oneself (i.e., I had a terrific day at work). It gives relationship partner "up to date" information about what each persons is thinking and feeling. And relational self-disclosure, refers to disclosure that focuses on one's relationship with another person/objects/issues/situations or their interactions with them (i.e., I can't imagine a better way to spend this holiday weekend than with you!).

Norming and interpretation for the scale is not yet further established where it needs to be administered to a large sample size. An intensive study along with confirmatory factor analysis should be made with considerable and appropriate number of respondents.

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