



RESEARCH PAPER

The Prevalence and Relationship between Tolerance and Life Satisfaction in Male and Female Multiple Sclerosis Patients in Peshawar, Pakistan

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ABSTRACT

The study evaluated the prevalence and relationship between tolerance and satisfaction in patients with Multiple Sclerosis in Peshawar, Pakistan. Tolerance affects MS patients due to psycho-somatic aspects and its satisfaction with life. Correlational and convenient sample technique has been used. Ninety MS patients' data is collected, and the Tolerance for disagreement scale and satisfaction with Life scale were used to analyze the level of tolerance and satisfaction in MS patients. 35 males and 54 females were selected for research. The participants' mean age is 33.4%; their mean of tolerance for disagreement is 40.33; and their average level of life satisfaction is 15.03. Tolerance for disagreement had a significant relationship with Satisfaction with Life. Therefore, satisfaction with life affecting the tolerance for disagreement in a MS patients. This study indicated that Tolerance for disagreement and Satisfaction with Life is correlated; as tolerance decreases, satisfaction will automatically decrease. Satisfaction level is effective in enhancing tolerance for disagreement. Psychologist and counselors need to work on MS patient's mental wellbeing by addressing Life satisfaction and tolerance level.

KEYWORDS Satisfaction, Multiple Sclerosis Patients, Tolerance

Introduction

The process by which a person develops the capacity to recognize, regulate, and assess his or her own and others' opinions and manage them is referred to as tolerance for disagreement. This contributes significantly to adjusting to the environment. Different psychological issues lead to changes in tolerance.

Tolerance for disagreement is the ability to accept and respect the views and opinions of others, even if they differ from one's own. It is an important skill to have in any relationship, as it allows individuals to have an open and honest discussion without becoming angry or upset. Even if they disagree with others' viewpoints, those with a high tolerance for difference can listen to them and consider them. They can engage in constructive dialogue and find common ground rather than becoming defensive or shutting down communication. Tolerance for disagreement can be developed through practice, such as by actively listening to others and trying to understand their point of view. It can also be helpful to set aside personal biases and focus on finding solutions rather than trying to prove one's point of view.

Multiple Sclerosis and Emotional Conditions

Multiple sclerosis patients find difficulties in emotional communication. Studies conducted on front temporal dementia (FTD) and strokes have shown that these conditions might be accompanied by behavioral and emotional abnormalities. One neurological disorder that affects multiple sclerosis's psychological and behavioral elements of life.

One of the key aspects of the human's psychological and mental condition and communication with the outside world is the relationship between tolerance and satisfaction. Because the brain regions processing tolerance and satisfaction are the same and cannot be separated from one another.

Multiple sclerosis (MS), a chronic autoimmune condition that affects the central nervous system, can affect any part of the central nervous system, including the brain and spinal cord (CNS). One of the most prevalent and important factors in young adults' physical disabilities is MS. On standard physical examinations, many brain lesions appear to have no symptoms, but these patients may have subtle to noticeable psychological and behavioral alterations.

Conflicts result from differences and disagreements, which are defined as the incongruity of objectives or benefits in two direction modes (Chan & Goto, 2003; Saucedo, 2003).

A person does not have to view every point of view as equally valid to be tolerant. It can also be viewed from others' points of view and perspectives and come to an improved and better choice in this way. According to John Stuart Mill, one must enable opposing viewpoints to come to light because discussion and the interchange of ideas will help one to develop a clear understanding of one's reality.

Literature Review

According to literature the idea of disagreement for tolerance occurred for acceptance of differing opinions to distinguish between right and wrong choices (Burgoon, Heston, & McCroskey, 1974). This necessity to distinguish between the terms "disagreement" and "conflict" was recognized by McCroskey and Wheelless in 1976. They distinguished clearly between the phrase, defining the first as the relationship of tolerance for disagreement, and defining the second as "competition, animosity, suspicion, mistrust, and consciousness" (McCroskey & Wheelless, 1976).

Their difference made it abundantly evident that disagreement and conflict are two distinct ideas but that the dynamics of the relationship between the parties involved and their tolerance for disagreement determine how any disagreement develops. A person's limited tolerance for anything that challenges their beliefs is what turns a simple disagreement into a confrontation. (McCroskey & Wheelless, 1976).

McCroskey (1992) claimed that "those with a high tolerance for disagreement are generally conflict resistant, whereas people with a low tolerance for disagreement are very conflict-prone" based on this idea (p. 172), a person who has a good understanding of tolerance for disagreement is better equipped to communicate thoughts and effectively construct their arguments (Richmond & McCroskey, 2010).

These arguments are related to individuals with differing levels of disagreement for tolerance perceiving conflict differently and choosing different management strategies as a result (Teven 2000).

Life satisfaction is a subjective measure of how content and satisfied a person is with their life. It is a personal judgment that everyone makes about their own life. Factors affecting life satisfaction include personal relationships, health, employment, personal growth, and leisure activities. It is important to note that life satisfaction can vary greatly from person to person, and what may be satisfying for one person may not be for another.

In these patients, there hasn't been enough research done on the relationship between life satisfaction and the ability to tolerate conflicting situations. To evaluate

whether or if the level of life satisfaction in MS patients can affect their tolerance, we looked at the relationship between these two variables.

A person's strategy when a conflict emerges to mitigate the damaging consequences and enhance the beneficial outcomes will be linked to life satisfaction.

Hypotheses

- The prevalence of tolerance will be higher among females than males.
- The prevalence of life satisfaction will be higher in males than females.
- A low tolerance level will predict a low level of life satisfaction.
- A high level of tolerance will predict a high level of life satisfaction.

Material and Methods

The Multiple sclerosis patient's data were statistically evaluated with the help of SPSS software. The Pearson correlation test was used to analyze the relationship between the variables since the data were not regularly distributed. The University of Peshawar's ASRB ethical committee accepted the study based on the Ph.D. degree declaration.

Research Design

The correlational research design was used in this research.

Sample

Ninety eligible multiple sclerosis patients were chosen from Peshawar's outpatient private clinics and government and private hospitals.

Inclusive Criteria

In this research study, patients with multiple sclerosis disease who were between the ages of 20 and 70 were included.

Exclusive Criteria

Patients who had received psychotherapy, counseling, or corticosteroid therapies within the previous month and other conditions related to mental and physical severe health illness that could be the main reason for a lack of tolerance and life satisfaction were excluded.

Instruments

Demographic Information Sheet

Basic information, such as name, sex, age, education level, disease onset, and course of therapy, was taken on demographic data.

Tolerance for Disagreement Scale

The scale to measure tolerance for disagreement was created and constructed by Teven, J. J. Richmond, V. P., and his research partner McCroskey, J. C. subsequently validated the scale (Teven et al., 2013). The Tolerance for Disagreement Scale was employed in this research to estimate the level of tolerance in patients with multiple sclerosis. The TFD scale's mean and the standard deviation is (M=52.11, SD=9.2), and its alpha reliability is .86, so it's a valid and reliable tool to assess tolerance and disagreement. The reliability of the

items on the TFD scale was calculated to be .90, with the mean and standard deviation values (M= 45.53, SD = 7.8).

The Satisfaction with Life Scale (SWLS)

In 1985, Diener, Emmons, Larsen, and Griffin developed the scale to measure one's level of life satisfaction. The goal was to ascertain each person's mental assessment of their level of pleasure with their existence. The Satisfaction with Life Scale was constructed to measure a person's degree of life satisfaction and is trustworthy, well-recognized, and valid. The questionnaire uses a seven-point Likert scale and five items with various response options to gauge the fulfillment and life satisfaction levels of people with multiple sclerosis (Diener, Emmons, Larsen, & Griffin, 1985).

The inter-item correlation was also calculated and found 0.71–0.75 and 0.65–0.80, which is noticeably high. On the item-test scale, each item displayed moderate to high correlations, with a range of 0.64 to 0.74. The exploratory factor analysis ranged from 0.611 to 0.834, consistent with findings from earlier research papers (Pavot, Diener, Colvin, & Sandvik, 1991).

Alpha coefficients for the Satisfaction with Life scale have been reported by earlier researchers from .79 to .89; for the current data sample for multiple sclerosis patients, the alpha is .86 (Antaramian, 2015; Pavot & Diener, 1991).

Procedure

The Department of Psychology and hospitals officially approved the study before it could begin. The Multiple sclerosis patients were selected from medical wards, neurology wards, OPDS of government and private hospitals, private neurology, and psychiatry clinics. Before distributing the questionnaire, the subjects had been informed in detail about the research study and built a rapport. Subjects were asked for their demographic data. The questionnaires were completed sequentially by each participant. The subjects with multiple sclerosis were asked to give their consent and sign it before the data collection from the research participants.

Data Analysis

The data collected from multiple sclerosis patients for their satisfaction with their life and the tolerance they have for others is evaluated with the help of the SPSS Statistical Package for Social Sciences.

Results and Discussion

To investigate the prevalence of MS in Pakistan, district of Peshawar, 90 multiple sclerosis patients in total were evaluated. Patients with multiple sclerosis were recruited for the study. 54 male and 35 female multiple sclerosis patients were taken for the study. The MS patient's age range was 20 to 70 years.

Table 1
Descriptive statistics for demographic characteristics of multiple sclerosis patients

<i>Characteristics</i>	<i>Mean</i>	<i>Male</i>	<i>Female</i>
Number of MS patients	90	54	35
The mean age of patients (year)	33.4	24.4	29.2
The mean duration of disease (year)	5.02	5.01	7.03
TFD	40.33	40.22	40.31
SWL	15.03	14.12	16.45

The patients from 20 to 30 had a mean age of 27.4 years (Men: 24.4 years and women: 29.2 years). The mean for disease duration was 5 years (Men: 5 years, and women: 7 years) (Table 1).

The mean Tolerance for disagreement of the MS patients was 40.33 (Men: 40.22, and women: 40.31). The mean Satisfaction with Life of the MS patients is 15.03 (Men: 14.12, and women: 16.45) without significant differences ($P = 0.05$)

Table 2
The correlation between Tolerance for disagreement and satisfaction with life in multiple sclerosis patients

Variables	SWL	TFD
TFD	-	-
	1	-
SWL	.269*	1
	.010	

$N=90$, the correlation between tolerance for disagreement and satisfaction with life is significant at the 0.05 level*. The correlation is high between tolerance for disagreement (TFD) and satisfaction with life (SWL). Table 2 represents the nature of the correlation between Tolerance and satisfaction level. The study demonstrated that SWL had a direct positive relationship with TFD. There is a significant positive correlation with the level of SWL and TFD ($r=0.239$, $P<0.05$) in patients.

Table 3
Mean, SD, SEM, and t-value for differences in scores between male and female MS patients on Tolerance for Disagreement and Satisfaction with Life with (N=90)

MS patients		n	M	SD	95% CI		t(87)	U - L	Cohens'd
					F	SEM			
TFD	Male	54	40.22	11.47	1.30	2.31	-.04*	[-4.6, 4.5]	0.008
	Female	35	40.31	9.21					
SWL	Male	54	14.12	6.73	.37	1.45	-1.60	[-5.21, .56]	0.348
	Female	35	16.45	6.64					

** $p < 0.05$

Satisfaction with life (SWL) has a significant difference between males and females. However, tolerance for disagreement (TFD) has no significant differences between males and females (P -values were < 0.05 , respectively).

An independent sample t-test calculates the Tolerance for Disagreement and Life Satisfaction for male and female MS patients (see Table 3).

On the scale of tolerance, the mean for men ($M=40.22$, $SD=11.47$) was less than the mean for women ($M=40.31$, $SD= 9.21$), which shows a significant difference ($t(87) = -.04$, $p < 0.05$).

There is a significant difference ($p < 0.05$) that has been estimated for male/female multiple sclerosis patients on tolerance for disagreement.

In terms of life satisfaction, there is no significant difference ($t(87) = -1.60$, $p 0.01$) between males ($M=14.12$, $SD=6.73$) and females ($M=16.45$, $SD=6.64$). The mean scores' variance was insignificant (mean differences= -2.32 , 95% CI: -5.2 to 0.56). Regarding life

satisfaction, there is no significant difference between male and female multiple sclerosis patients ($p < 0.01$).

The findings indicate that, compared to female MS patients, males had a lower tolerance for disagreement. Similarly, low scores on satisfaction with life indicate a lower level of life satisfaction in male MS patients. According to the findings, males are less satisfied with their lives as compared to females.

Table 4
Multiple linear regression analysis between the TFD as a dependent variable and SWL as independent variables (N=90)

<i>Variable</i>	<i>M</i>	<i>SD</i>	<i>B</i>	<i>SE</i>	<i>P</i>	<i>95% CI [L - U]</i>
TFD →SWL	40.33	10.55	.17	.06	.010	[.042, .301]
SWL →TFD	15.03	6.7	.42	.16	.010	[.103, .74]

Note. *C. I = 95% confidence interval, TFD →SWL= tolerance for disagreement effect on satisfaction with life, SWL →TFD= satisfaction with life effect on tolerance for disagreement.

Table 4 shows higher tolerance for disagreement (TFD) to be a good predictor of Satisfaction with life (SWL) in Multiple Sclerosis patients. Table 4 shows the effect of tolerance for disagreement and satisfaction with life on each other. The p-value for this regression analysis is less than 0.05 and is considered significant.

Discussion

This research investigated the correlation between Tolerance and satisfaction in the life of MS patients. This study showed that demographic information of MS Male and female patients with age and tolerance for disagreement had a significant correlation with life satisfaction.

A research study found a significant relationship between MS and social problems (Mahmoodi et al, 2009).

The basic purpose of the current research was to evaluate whether and to what degree life satisfaction is predicted by characteristics such as tolerance for disagreement in MS patients. The findings revealed that TFD strongly predicts life satisfaction, although age and gender significantly predict tolerance for disagreement in males as compared to females. Given the numerous problems that people with multiple sclerosis face in their daily lives, the findings in the current research study demonstrate that tolerance for disagreement in life promotes life satisfaction.

The study elaborates life happiness was not substantially predicted by tolerance for disagreement. Tolerance for disagreement is a powerful emotion that influences people's bodily reactions, cognitive abilities, and moods (Satc et al., 2020). In contrast to the presence of negativity, the absence of positivity can have just as much significance (Wood and Johnson, 2016).

In contrast to the results of the study, earlier research found that life satisfaction and tolerance for conflict were significantly and favorably correlated with resilience, stress, and depressive symptoms (Yldrm and Arslan, 2020) and negatively linked with mental well-being (Satici et al., 2020). Most tolerance vulnerabilities for family and friends were due to mainstream news use; social networking significantly impacted the patient. The investigation discovered that the participants' tolerance and satisfaction level was moderate.

When faced with a serious or apparent threat like fear, tolerance is typically a primitive response. Since it comprises generating a reaction to anything that is perceived to be threatening to the existing situation. (Dozois and Rnic, 2019).

Since life satisfaction is widespread, sudden adjustments may not have a significant immediate impact. Because tolerance for dispute is a transitory feeling, it has a smaller impact on life satisfaction than other positive factors. In this situation, the good impact of life satisfaction has neutralized the negative impact of tolerance. In our research findings, gender, age, and tolerance level will significantly predict satisfaction with life.

In a correlational research investigation, (Kołtuniuk, Pytel, et al, 2021) extended the role of disease acceptance, stress perception, and the life satisfaction of male and female answers on the life satisfaction scale, resulting in equivalent life satisfaction for both men and women.

The results found that there is a significant relationship between age and life satisfaction. The research subject in the present study had an average age of 41.04, which could be why life satisfaction is significantly predicted (table 4)

Satisfaction with life is inversely related to the positive aspect of tolerance for disagreement in MS patients. If life satisfaction is high among Multiple Sclerosis patients, the tolerance for disagreement will be high, and if one is low, then the other will also be low, as both are positively correlated with each other.

A previous study presented that tolerance for disagreement has a strong correlation with health mechanisms related to personality traits, well-being, and stress. Since lack of tolerance in the MS patient is significantly more prevalent than the normal patients (Fox et al, 2019).

This research could increase our knowledge of several issues related to life satisfaction and tolerance level of psychological and personality traits of the patients with MS. The study shows that in multiple cases of sclerosis, patients with a lack of tolerance may suffer from a lack of satisfaction with life. This research studied the relationship between tolerances for disagreement with satisfaction with life in patients with Multiple sclerosis.

According to the study's findings, the patients who are more satisfied with their lives are more tolerant of different perspectives. A high degree of tolerance is a sign of health and of being fully functional, whereas a low level is seen as a sign of individual stress and sadness. (Martin, 2007)

Conclusion

Psychological factors play a very influential role in the personality of multiple sclerosis patients' attitudes and behaviors. Tolerance and life satisfaction are also the most effective factors for social endurance. Personality disorders are somewhat common among Multiple sclerosis patients and sometimes occur in the illness's early stages. Patients with Multiple Sclerosis are frequently recognized to experience emotional and psychological issues.

Some research studies conducted to evaluate the relationship between tolerance and psychological problems in Multiple Sclerosis patients; however, these studies presented the association between depression and personality disorders. This evidence helps to explain our results, which have implications for patient care. As the research demonstrates, tolerance and satisfaction are significant factors for the mental health of multiple sclerosis patients.

Therefore, finding the relationship between tolerance and life satisfaction level in MS patients can help psychologists and mental health care to devise treatment methods. Some issues of MS patients may be due to psychological issues and stressful situations. Since tolerances for disagreement and Satisfaction with life are correlated, provided that Psychotherapy and counseling for rehabilitation might be effective.

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