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## Resilience and Quality of Life of Rehabilitated Survivors of Spinal Cord Injury with special reference to SIPA

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### Abstract

This study examines the resilience and quality of life of 209 rehabilitated spinal cord injury survivors, chosen randomly. Using the Brief Resilience Scale (Smith et al., 2008) and the Quality of Life scale (John Flanagan, 1970), the research measures participants' resilience and life aspects such as physical well-being, social relationships, community involvement, personal growth, and recreational activities. The findings reveal a significant link between higher resilience and better quality of life, influenced by age, gender, occupation, injury type, and injury duration. Those with more social support during rehabilitation showed higher resilience and better quality of life in all areas. These results emphasize the need for holistic rehabilitation programs that integrate physical and psychological recovery. The study suggests personalized interventions to improve life satisfaction and resilience, indicating that comprehensive approaches could provide lasting benefits as survivors reintegrate into daily life.

**Key Words:** Spinal Cord Injury, Rehabilitation, Resilience and Quality of Life.

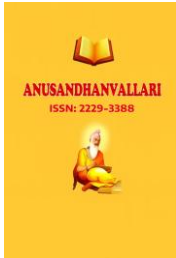
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### INTRODUCTION

Spinal cord injuries have a significant impact on a person's physical, emotional, and social well-being. Rehabilitation for these individuals focuses on restoring physical abilities, building resilience, and improving overall quality of life. This study examines the link between resilience and quality of life in spinal cord injury survivors who have undergone rehabilitation. Often resulting from accidents, falls, or violence, spinal cord injuries can cause partial or complete loss of motor and sensory functions, leading to conditions such as paraplegia or tetraplegia. These injuries frequently come with additional challenges, including pressure sores, respiratory problems, and chronic pain, complicating the rehabilitation process. Effective rehabilitation is crucial for enhancing physical function, fostering independence, and improving quality of life. There is a strong relationship between resilience and quality of life: resilient individuals tend to experience a higher quality of life as they manage challenges more effectively, while a better quality of life can enhance resilience by providing supportive conditions. Comprehensive rehabilitation programs aim to strengthen resilience to improve quality of life. For survivors, quality of life encompasses physical, psychological, and social well-being, influenced by factors such as physical health, mental health, independence, and social support.

### REVIEW OF LITERATURE

In facilitating adjustment to life with spinal cord injury, social support services play an indispensable role. Initiatives such as peer mentoring programs, vocational counseling, and community reintegration endeavors provide emotional support, practical guidance, and encouragement from individuals who have faced similar challenges. Vocational rehabilitation programs stand out for their role in assisting individuals with spinal



cord injury in reentering the workforce or pursuing educational and vocational aspirations, thereby promoting economic independence and societal inclusivity (Hays et al., 2020).

(Carvalho et al., 2019, Jensen et al. 2003) emphasized the critical role played by familial, peer, and professional support networks in enhancing resilience and facilitating recovery following spinal cord injury.

Psychological elements, encompassing depression, anxiety, and adaptive coping mechanisms, exert considerable sway over the quality of life of spinal cord injury individuals. Studies propose that addressing psychological distress and fostering resilient coping strategies are indispensable for improving overall quality of life outcomes (Kennedy et al., 2016, Kennedy & Rogers, 2000).

### AIM

The aim of the study is to find out the association between Resilience and Quality of Life among the rehabilitated survivors of spinal cord injury with the following specific objectives.

### OBJECTIVES

1. To understand the selected socio-demographic and bio-medical conditions of the rehabilitated survivors of spinal cord injury.
2. To understand and measure the level of resilience among the rehabilitated survivors of spinal cord injury.
3. To understand and measure the level of Quality of life among the rehabilitated survivors of spinal cord injury.
4. To find out linkages between Resilience, Quality of Life and selected socio-demography and bio-medical conditions of the rehabilitated survivors of spinal cord injury.

### Research Design

For the present study the author have used Descriptive research design, since an attempt has been made to describe the selected socio-demography conditions, bio-medical conditions, level of resilience and level of quality of life. And the association among the variables the appropriate research design could be descriptive research design. Hence descriptive research design was adopted.

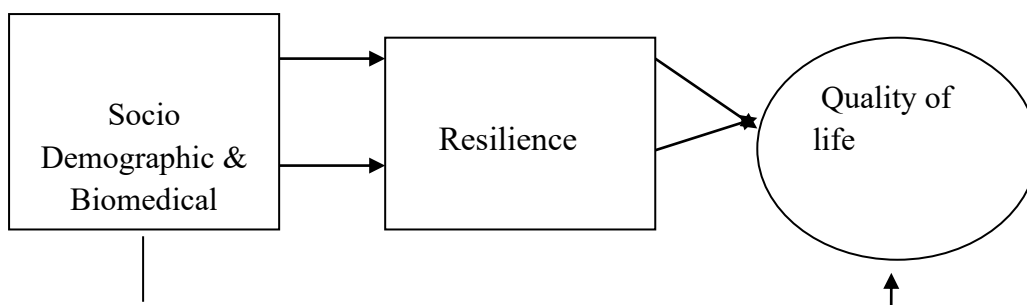
### VARIABLES

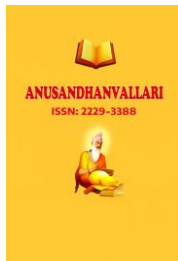
The following are the variables

Independent Variable

Intervening Variable

Dependent Variable





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## HYPOTHESES

1. Higher the level of Resilience higher will be the level of Quality of Life of the rehabilitated survivors of spinal cord injury.
2. Rehabilitated survivors of spinal cord injury do differ with regard to the selected socio-demography and bio-medical conditions and level of resilience and level of quality of life.

## UNIVERSE

Spinal injured persons association strives to create a peer network that has access to information regarding self care, medical advice, financial independence, sport and other supports. Spinal injured persons association provides support to about 2500 individuals with spinal cord injuries, including both rehabilitated and non-rehabilitated survivors. The author hopes to learn more about spinal cord injury survivors who have undergone rehabilitation. The universe consists of about 450 registered rehabilitated spinal cord injury survivors from the four regions of Tamil Nadu—the north, south, east, and west—was recommended by the Spinal Injured Persons Association.

## INCLUSION CRITERIA

This study focuses on rehabilitated survivors of spinal cord injury who are registered with the Spinal Injured Persons Association (SIPA) in Tamil Nadu, including both males and females. Participants must have undergone rehabilitation for a minimum period of one to three months and possess the conscious level to understand and respond to questions.

## EXCLUSION CRITERIA

This study excludes rehabilitated spinal cord injury survivors who are not interested, those who have not received rehabilitation services, those currently undergoing rehabilitation, and individuals who have not answered all the questions from the assessment tool.

## SAMPLING

Thus **Random Sampling** method has been adopted for this study. It was found that there were a total of 450 rehabilitated survivors of spinal cord injuries. After consultation with the statistician, and as per his guidelines, 45% of the samples (209) were fixed as the samples for this study. These 45% of the samples were distributed proportionally to all four regions of Tamil Nadu—the north, south, east, and west.

## TOOLS USED

1. To understand the selected socio-demographic and biomedical conditions of the rehabilitated survivors of spinal cord injury, the researcher has prepared a semi structured interview schedule. This tool contains closed ended questions.
2. To measure resilience, the Brief Resilience Scale by Smith et al. (2008) was used, consisting of six items focused on the ability to bounce back. The scoring follows the authors' guidelines, with items 1, 3, and 5 being positively worded and scored from 1 (Strongly Disagree) to 5 (Strongly Agree). Items 2, 4, and 6 are negatively

worded and reverse scored. The total score, ranging from 6 to 30, represents the overall resilience of the subject. The scale demonstrates high reliability (0.69) and validity (0.80).

- To measure Quality of Life, John Flanagan's Quality of Life Scale (1970) was used, which consists of 16 items covering five areas: material and physical well-being, relationships with people, social and community activities, personal development and fulfillment, and recreation. The study followed the authors' scoring guidelines, grouping items accordingly. All items are positively worded and scored from 1 (Terrible) to 7 (Delighted). The total score, ranging from 16 to 112, represents the subject's overall quality of life. The scale has high reliability (0.84) and validity (0.92).

## RESULTS

**TABLE: 1: DISTRIBUTION OF SAMPLES BASED ON SOCIO DEMOGRAPHIC AND BIO MEDICAL DETAILS.**

S.No	Factors	N (209)	%
1	<b>Gender</b>		
	Male	172	82.3
	Female	37	17.7
2	<b>Age</b>		
	(Below 25)	31	14.8
	(26 To 30)	47	22.5
	(31 & Above)	131	62.7
3	<b>Occupation</b>		
	Unemployed	89	42.6
	Private Employee	34	16.3
	Own Business	86	41.1
4	<b>Type Of Injury</b>		
	Complete Spinal cord Injury	104	49.8
	In Complete Spinal Cord Injury	105	50.2
5	<b>Duration Of Spinal Cord Injury(Years)</b>		
	(Below 3)	49	23.4
	(3 To 6)	55	26.3
	(6 & Above)	105	50.2

The above table explains the distribution of the rehabilitated survivors of spinal cord injury respondents on various socio demographic conditions.

Most of the rehabilitated survivors of spinal cord injury surveyed are males, making up 82.3 percent, while the rest are females at 17.7 percent. In terms of age, the largest group, nearly two-thirds at 62.7 percent, are 31 years old and above. About 22.5 percent are aged between 26 and 30, and the remaining 14.8 percent are below 25 years old. In terms of employment, around 42.6 percent are unemployed, 41.1 percent own businesses, and 16.3 percent work as private employees. As for the severity of their injuries, 50.2 percent have incomplete spinal cord injuries, and 49.2 percent have complete injuries. Specifically 50.2 percent of rehabilitated survivors of spinal cord injury respondents are affected with spinal cord injuries for (above 6 years); 26.3 percent of rehabilitated survivors of spinal cord injury respondents are affected with spinal cord injuries between (3 to 6 years) and remaining 23.4 percent of respondents who are affected with spinal cord injuries are (within 3 years)

**Table: 2: Karl Pearson's Coefficient of Correlation among the Sub Dimensions of QOL and Resilience. (N=209)**

S.No	Factors Of Quality Of Life	Resilience Score
1	Material & Physical Well Being	0.190(**)
2	Relationship With Others	0.112
3	Social, Community & Civic Activity	0.139(*)
4	Personal Development & Fulfillment	0.251(**)
5	Recreation	0.272(**)
6	Total Quality of Life	0.271(**)

\*\* Correlation is significant at the 0.01 level (1-tailed).

\* Correlation is significant at the 0.05 level (1-tailed).

The table clearly shows the relationship between sub dimensions of Quality of Life (QOL) and Resilience. Material & Physical Wellbeing ( $r = 0.190$ ,  $p < .01$ , Sig), Social Community and Civic Activity ( $r = 0.139$ ,  $p < .05$ , Sig), Personal Development & Fulfillment ( $r = 0.251$ ,  $p < .01$ , Sig), and Recreation ( $r = 0.272$ ,  $p < .01$ , Sig) are all positively and significantly linked to Resilience. However, Relationship with Others ( $r = 0.112$ ,  $p > .01$ , Non Sig) does not show a significant connection with Resilience, despite being positively associated. Overall, the results indicate a positive and significant association between Quality of Life and Resilience. This suggests that improving various aspects of Quality of Life can enhance resilience, although Relationship with Others did not have a significant impact. This might be because individuals initially focus on building internal resilience after a spinal cord injury, potentially overlooking external relationship development. Thus, the formulated hypotheses are confirmed through empirical testing.

**Table: 3: Mean, SD and Independent Sample't' Test values for the Study Variables based on Gender:**

S.No	Factors	N	Mean	SD	't' Stat Result (df=207)	Sig
1	<b>Resilience Score</b>				5.91	p<.001**
	Male	172	61.12	7.27		
	Female	37	69.81	8.29		
	Total	209	61.07	7.44		
2	<b>Total Quality Of Life</b>				3.94	p<.01*
	Male	172	71.37	13.29		
	Female	37	79.92	11.69		
	Total	209	71.82	13.03		

NS: Not Significant, \* p<.05 (95%) \*\* p <.01 (99%) \*\*\* p<.001 ( 99.9%)

The above table presents females show higher mean scores in both Resilience (M=69.81, SD=8.29) and Quality of Life (M=79.92, SD=11.69) compared to males (Resilience: M=61.12, SD=7.21) and Quality of Life: (M=71.37, SD=13.29). These differences are statistically significant, with independent sample t-tests showing significant values at the 99.9% level for Resilience (t=5.91, df=207, p<.001) and at the 99% level for Quality of Life (t=3.94, df=207, p<.01). This indicates that females have higher levels of Resilience and Quality of Life. However, Meenakshi Mohan et al. (2023) found contrasting results, suggesting that males exhibit higher Resilience than females. Therefore, the hypotheses are tested and confirmed.

**Table: 4: Mean SD and One Way ANOVA Test values for the Study Variables based on Age:**

S.No	Factors	N	Mean	SD	F-Ratio (df=2 206)	Sig
1	<b>Resilience Score</b>				7.539	p<.001**
	(Below 25)	31	55.35	6.80		
	(26 To 30)	47	59.29	7.80		
	(31 & Above)	131	69.11	7.31		
	Total	209	61.07	7.44		
2	<b>Total Quality Of Life</b>				10.307	p<.001**
	(Below 25)	31	70.17	13.95		
	(26 To 30)	47	74.12	12.44		
	(31 & Above)	131	81.51	13.09		
	Total	209	71.82	13.03		

NS: Not Significant, \* p<.05 (95%) \*\* p <.01 (99%) \*\*\* p<.001 ( 99.9%)

The table above presents the Mean, SD, and One-Way ANOVA results for the study variables, Resilience, and Quality of Life, among rehabilitated survivors of spinal cord injury categorized by age. It is evident that respondents aged 31 and above have higher scores in Resilience (M=69.11, SD=7.31) compared to those in other age categories. This difference is statistically significant, with the F-Ratio value being significant at the 99.9% level (F-Ratio = 7.539, df = 2, 206, p<.001, Sig). Similarly, respondents aged 31 and above also score higher in Quality of Life (M=81.51, SD=13.09) compared to other age categories, with the observed mean difference being statistically significant (F-Ratio = 10.307, df = 2, 206, p<.001, Sig). It can be concluded that respondents aged 31 and above exhibit significantly higher levels of Resilience and Quality of Life compared to other age categories. This finding is consistent with previous research on resilience based on age, as reported by several researchers, such as Terrill AL et al. (2016) and Mohan M and Roumi Deb (2023). Thus, the hypotheses are tested and confirmed.

**Table: 5: Mean SD and One Way ANOVA Test values for the Study Variables based on Occupation:**

S.No	Factors	N	Mean	SD	F-Ratio (df=2 206)	Sig
1	<b>Resilience Score</b>				<b>8.107</b>	<b>p&lt;.001**</b>
	Unemployed	89	59.85	7.88		
	Private Employee	34	61.86	7.84		
	Own Business	86	69.02	6.67		
	Total	209	61.07	7.44		
2	<b>Total Quality Of Life</b>				<b>10.681</b>	<b>p&lt;.001**</b>
	Unemployed	89	65.55	12.97		
	Private Employee	34	74.79	13.57		
	Own Business	86	79.26	11.45		
	Total	209	71.82	13.03		

NS: Not Significant, \* p<.05 (95%) \*\* p<.01 (99%) \*\*\* p<.001 (99.9%)

The table above presents the Mean, SD, and One-Way ANOVA results for Resilience and Quality of Life among rehabilitated spinal cord injury survivors, categorized by their occupation. It's clear that individuals who own their own business demonstrate higher levels of Resilience (M=69.02, SD=6.67) compared to those in other occupations. This difference is statistically significant, as indicated by the F-Ratio at the significant 99.9% level (F-Ratio = 8.107, df = 2, 206, p<.001, Sig). Similarly, those engaged in their own business also report higher scores for Quality of Life (M=79.26, SD=11.45) compared to others, with a statistically significant F-Ratio at the 99.9% level (F-Ratio = 8.107, df = 2, 206, p<.001, Sig). This suggests that individuals involved in owning their own business have notably higher levels of both Resilience and Quality of Life. These findings are consistent with research conducted by Gupta N et al. (2011) and O'Neill J et al. (2020), providing empirical support for the formulated hypotheses.

**Table: 6: Mean, SD and Independent Sample't' Test values for the Resilience and Quality of Life based on Type of Injury:**

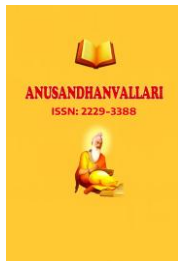
S.No	Factors	N	Mean	SD	't' Stat Result (df=207)	Sig
1	<b>Resilience Score</b>				5.72	p<.001**
	Complete Spinal cord injury	104	61.12	7.71		
	In Complete Spinal cord injury	105	67.02	7.19		
	Total	209	61.07	7.44		
2	<b>Total Quality Of Life</b>				5.53	p<.001**
	Complete Spinal cord injury	104	69.86	15.76		
	In Complete Spinal cord injury	105	79.76	9.28		
	Total	209	71.82	13.03		

NS: Not Significant, \* p<.05 (95%) \*\* p <.01 (99%) \*\*\* p<.001 ( 99.9%)

The table above present the Mean, SD, and Independent Sample't' test values for Resilience and Quality of Life among two groups of rehabilitated spinal cord injury survivors: those with complete Spinal Cord Injury and those with Incomplete Spinal Cord Injury. Individuals with Incomplete Spinal Cord Injury show higher Resilience scores (M=67.02, SD=7.19) compared to those with complete Spinal Cord Injury (M=61.12, SD=7.71), a statistically significant difference ('t' Value =5.72, df=207, p<.001, Sig). This indicates that individuals with Incomplete Spinal Cord Injury generally have higher levels of Resilience, consistent with previous research (e.g., Kilic SA et al., 2013; M. Bhattarai et al., 2017). Similarly, those with Incomplete Spinal Cord Injury report higher Quality of Life scores (M=79.76, SD=9.28) compared to those with Complete Spinal Cord Injury (M=69.86, SD=15.76), also statistically significant ('t' Value =5.53, df=207, p<.001, Sig). Hence, individuals with Incomplete Spinal Cord Injury tend to have better Quality of Life, in line with findings from other studies (e.g., Hicks et al., 2002; Mart ZE et al., 2005; Van Leeuwen et al., 2012; Tjasa Filipic et al., 2021), supporting the formulated hypotheses through empirical evidence.

**Table: 7: Mean SD and One Way ANOVA Test values for the Study Variables based on Duration of Spinal Cord Injury:**

S.No	Factors	N	Mean	SD	F-Ratio (df=2 206)	Sig
1	<b>Resilience Score</b>				10.321	p<.001**
	(Below 3)	49	60.75	6.57		
	(3 To 6)	55	65.88	6.97		
	(6 & Above)	105	71.84	8.01		
	Total	209	61.07	7.44		
2	<b>Total Quality Of Life</b>				11.897	p<.001**



(Below 3)	49	67.53	10.84		
(3 To 6)	55	70.16	13.35		
(6 & Above)	105	78.35	13.67		
Total	209	71.82	13.03		

NS: Not Significant, \* p<.05 (95%) \*\* p <.01 (99%) \*\*\* p<.001 ( 99.9%)

The table above illustrates the Mean, SD, and One-Way ANOVA results for Resilience and Quality of Life among rehabilitated survivors of spinal cord injury, categorized by their duration of spinal cord injury. It's evident that respondents with a duration of (6 years and above) exhibit higher levels of Resilience (M=71.84, SD=8.01) compared to those with other durations of spinal cord injury. This observed difference is statistically significant, as indicated by the significant F-Ratio value at the 99.9% level (F-Ratio = 10.321, df = 2, 206, p<.001, Sig). Similarly, respondents with a duration of (6 years and above) also report higher scores in Quality of Life (M=78.35, SD=13.67) compared to those with other durations of spinal cord injury, with a statistically significant F-Ratio at the 99.9% level (F-Ratio = 11.897, df = 2, 206, p<.001, Sig). Consequently, individuals with a duration of (6 years and above) of spinal cord injury tend to have significantly higher levels of both Resilience and Quality of Life compared to others. However, the researcher has observed that among the rehabilitated survivors of spinal cord injury, those with duration of six years and above display greater resilience and quality of life compared to those with other durations of injuries. This may be attributed to the survivors' adaptation and acceptance of their life circumstances as time progresses. Thus the formulated hypotheses are tested and verified.

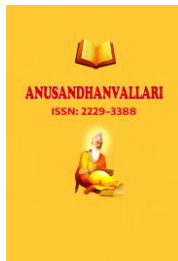
**FINDINGS**

1. The majority 82.3 percent of the rehabilitated survivors of spinal cord injury respondents is Males and the remaining 17.7 per cent of them are Females. Nearing two third of the respondents 62.7 percent are in the age group of (31 and above) years of age, whereas, 22.5 percent of the respondents are in the age group of (26 to 30) years of age and the remaining 14.8 per cent of them are in the age group of (Below 25) years. Nearly two fifth of the respondents 42.6 percent are unemployed, 41.1 percent respondents have their own businesses, and the remaining 16.3 percent respondents are private employees. Majority 50.2 percent of rehabilitated survivors of spinal cord injury respondents are affected with in complete spinal cord injury and remaining 49.2 percent respondents are affected with complete spinal cord injuries. Majority 50.2 percent of rehabilitated survivors of spinal cord injury respondents are affected with spinal cord injuries for (above 6 years); 26.3 percent of rehabilitated survivors of spinal cord injury respondents are affected with spinal cord injuries between (3 to 6 years) and remaining 23.4 percent of respondents who are affected with spinal cord injuries are (within 3 years) (TABLE: 1).
2. It is clear that the Quality of Life in rehabilitated survivors of spinal cord injury is positively and significantly associated with Resilience (r = 0.271, p<.01, Sig). Thus the formulated hypotheses are tested and verified (TABLE: 2).
3. It is observed that the mean score on Resilience for Female is higher (M=69.81, SD=8.29) when compared to Male (M=61.12, SD=7.21). This observed difference is statistically significant as the Independent Sample 't' test value is significant at 99.9% level of significance. ('t' Value = 5.91, df = 207, p<.001, Sig).Quality of Life for Female is higher (M=79.92, SD=11.69) when compared to Male (M=71.37, SD=13.29). This observed difference is statistically significant as the Independent Sample't' test value is significant at 99% level of significance. ('t' Value = 3.94, df = 207, p<.01, Sig). Thus, it could be concluded that the female have more Resilience and quality of Life than male. Thus the formulated hypotheses are tested and verified (TABLE: 3).

4. It is clear that in the rehabilitated survivors of spinal cord injury who are 31 and above age have statistically significant higher level of Resilience ( $M=69.11$ ,  $SD=7.31$ ) which is significant at 99.9% level ( $F\text{-Ratio} = 7.539$ ,  $df = 2, 206$ ,  $p<.001$ , Sig) and Quality Of Life ( $M=81.51$ ,  $SD=13.09$ ) which is significant at 99.9% level ( $F\text{-Ratio} = 10.307$ ,  $df = 2, 206$ ,  $p<.001$ , Sig), when compared to other age category. Thus the formulated hypotheses are tested and verified (**TABLE: 4**).
5. It is very evident that the respondents who are having Own Business, have scored higher in Resilience ( $M=69.02$ ,  $SD=6.67$ ) which is significant at 99.9% level. ( $F\text{-Ratio} = 8.107$ ,  $df = 2, 206$ ,  $p<.001$ , Sig). It is very evident that the respondents who are having Own Business, have scored higher in Quality Of Life ( $M=79.26$ ,  $SD=11.45$ ) which is significant at 99.9% level. ( $F\text{-Ratio} = 10.681$ ,  $df = 2, 206$ ,  $p<.001$ , Sig). It could be concluded that the respondents who are having Own Business have statistically significant higher level of Resilience and Quality Of Life when compared to others. Thus the formulated hypotheses are tested and verified. (**TABLE: 5**).
6. It is observed that the mean score on Resilience for those who had Incomplete Spinal Cord Injury is higher ( $M=67.02$ ,  $SD=7.19$ ) when compared to those who had complete Spinal Cord Injury ( $M=61.12$ ,  $SD=7.71$ ). This observed difference is statistically significant as the Independent Sample 't' test value is significant at 99.9% level of significance. ( $t$  Value = 5.72,  $df = 207$ ,  $p<.001$ , Sig). Thus, those who have had Incomplete Spinal Cord Injury have more Resilience than those who have had Complete Spinal Cord Injury, It is observed that the mean score on Quality of Life for those who had Incomplete Spinal Cord Injury is higher ( $M=79.76$ ,  $SD=9.28$ ) when compared to those who had Complete Spinal Cord Injury ( $M=69.86$ ,  $SD=15.76$ ). This observed difference is statistically significant as the Independent Sample 't' test value is significant at 99.9% level of significance. ( $t$  Value = 5.53,  $df = 207$ ,  $p<.001$ , Sig). Thus, those who have had Incomplete Spinal Cord Injury have more Quality of Life than those who have had Complete Spinal Cord Injury. Thus the formulated hypotheses are tested and verified (**TABLE: 6**).
7. It is very evident that the rehabilitated survivors of spinal cord injury who come under 6 and above duration years of Spinal Cord Injury, have scored higher in Resilience ( $M=71.84$ ,  $SD=8.01$ ) which is significant at 99.9% level. ( $F\text{-Ratio} = 10.321$ ,  $df = 2, 206$ ,  $p<.001$ , Sig). It is very evident that the respondents those who come from 6 and above duration years of Spinal Cord Injury, have scored higher in Quality Of Life ( $M=78.35$ ,  $SD=13.67$ ) which is significant at 99.9% level. ( $F\text{-Ratio} = 11.897$ ,  $df = 2, 206$ ,  $p<.001$ , Sig). It could be concluded that the respondents those who come from 6 and above duration years of Spinal Cord Injury have statistically significant higher level of Resilience and Quality Of Life when compared to others. Thus the formulated hypothesis is tested and verified. (**TABLE: 7**).

## SUGGESTIONS

- It is found out that those who have had Incomplete Spinal Cord Injury have more Resilience and Quality of life than those who have had Complete Spinal Cord Injury. It is suggested that more care and attention be given to those who have complete spinal cord injury to feel better and to boost their confidence level.
- More awareness is to be given to people regarding the accidents and falls which lead to spinal cord injury.
- Family members and care takers of spinal cord injury survivors are to be helped to understand about the need and importance of the rehabilitation



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