Majority of hepatitis C patients undergoing antiviral therapy have emotional distress which leads to face anxiety accompanies depression. Presence of increased anxiety and high depression may markedly increase fear among these patients which may lead to decreased willingness more refusal to have antiviral therapy. **Objectives:** To assess the effect of educational program on emotional distress of Hepatitis C virus patients undergoing antiviral treatment therapy. **Methods:** A one group pretest- posttest quasi experimental study was conducted in the Hepatitis C department of Jinnah Hospital Lahore, Pakistan. A purposive sample of n=32 patients was recruited. Adult patient, have a confirmed diagnosis of Hepatitis C, Age 18-60 years, on antiviral therapy for last 12 weeks were recruited. A, 6 weeks and 6 educational intervention sessions were provided. Each session consisted of 45-60 minutes. Validated tool of hospital anxiety and depression scale was used for data collection from participants to assess the emotional distress. Data were entered and analyzed using SPSS version 21.0. Comparison of emotional distress scores before and after the intervention was analyzed using a paired t sample. A P value ≤ 0.05 was considered statistical significant. **Results:** The study results revealed a significant effect of the educational intervention program on emotional distress (Pre interventional emotional distress score 30.66 ± 5.807 and post interventional emotional distress score 19.03 ± 5.433) among hepatitis C patients (p- value <0.001) **Conclusions:** It is concluded that Nursing education program has effect on emotional distress among HCV patients undergoing antiviral therapy.
infections who are undergoing antiviral therapy may hold more stress and depression. Due to increased number of such patients they were reluctant to start the treatment of antiviral therapy. In case of proper education among the patients undergoing antiviral therapy, the treatment may have great improvement in successful treatment [6]. Patients who are having hepatitis C virus infection and undergoing through antiviral therapy may pass through some serious phases of amplified frustration, poor anger management and bigger depression. Presence of increased anxiety and high depression may markedly increase fear among these patients which may lead to decreased willingness more refusal to have antiviral therapy[7]. In various trials, a large number of patients with anti-viral therapy reported high level of anxiety and depression which further lead to suicidal thoughts or suicidal attempts. According to literature more than 33% hepatitis C patients undergoing antiviral therapy have depression. Many of the patients discontinued the treatment of antiviral therapy due to increased level of anxiety and depression [8]. This anxiety and depression may many a times reach to a maximum level where several patients may discontinue the treatment or disturb or decrease the doses. This is because of the increased level of depression and decreased the coping level with the signs and symptoms and side effects of the therapy[9]. It is quite obvious from the practices of nurses that the advanced nurse practitioners or nurses with advanced skills and education have the opportunity to provide very skillful management and sound scientific education to all patients with chronic hepatitis C disease [19]. It is believed that with proper nurses’ guidance and education the chance of hepatitis C disease and its associated complications are being eradicated [10]. Nurses are the source of support to patients and enable them to discuss and convey their issue to the health care team who can make suitable changes in prescription and provide other suggestions that are more helpful to handle these problems. Such preventive steps by nurses may lead patients towards healthy happy life [11]. A randomized control study was conducted at the National Liver Institute, Menoufiya, Egypt to find the effectiveness of a nurse-led teaching intervention and found a substantial reduction in Hepatitis C virus emotional distress after the intervention compared to before [12]. The positive benefits of psychosocial psychotherapy on emotional discomfort were supported by the other study's findings [13].

M E T H O D S

A quasi experimental pre-post study design was used to carry on this study. This study was conducted at the Hepatitis C Clinic of Jinnah Hospital, Lahore, Pakistan. The study participants were all patients coming to Hepatitis C clinics meeting the inclusion criteria. Patients, who were Adult conscious with a confirmed diagnosis of Hepatitis C, Age 18-60 years old, on antiviral therapy, Both Male and female patients were recruited. Patients, who were had developed Liver Cirrhosis or Liver Carcinoma, having physical trauma, and having no emotional distress were excluded from the study. An educational program was developed with the help of different books, internet material and gastro experts. The educational intervention consisted of 6 sessions where each session consisted of 45-60 minutes. This was done through different learning methods like individual based lecture, groups’ discussion and distribution of handout. To conduct this educational program, the participants were approached individually on the day of their follow-up at the outpatient department. The educational interventions plan started from January, 2022 till June 2022, where each study participant received all the education sessions one by one each month during their OPD visits. Emotional distress was measured by Hospital anxiety and depression scale: Developed by Lorig et al., [14]. This tool consists of total 14 items. Each item is scored on a scale of 0-3. Zero means not at all and 3 means all the times. Total questionnaire score ranges from (0) minimum to (42) maximum score. Emotional distress is operationally defined and measured as below: Score <14 or <33.33% = normal (no emotional distress). Score from 14-24 or 33.33% - 57.13% = (mild emotional distress). Score >24-34 or 57.13% -80.95% = (moderate emotional distress). Score>34 or >80.95% (severe emotional distress). The hepatitis C patients coming for antiviral treatment were approached for data collection. To assess the emotional distress among the hepatitis C patients as a pre assessment, self-administered closed ended Urdu translated questionnaires were provided. After the intervention, the participants were asked to fill the data collection tool of Emotional distress again to assess the comparison. Data of the study participants were entered in statistical software SPSS version 21.0. Results of the study were presented as mean ± standard deviation through tables. Emotional distress pre and post score was compared using Paired t-test after checking for normality test assumptions. p-value < 0.05 as standard value was considered as significant value.

R E S U L T S

Table 1 below shows that 8 (25%) research participants were between the ages of 18-40 years’ age group, 8 (25%) were 41-53 years of age and remaining 16(50%) were >53 years of age. It was also found that 15 (46.9%) participants were male and 17 (53.1%) were female participants. Furthermore, it is also shown that that in relation to marital
status 71.9% of the study participants were married and on the other hand only 9 (28.1%) of the study participants were unmarried. Moreover, majority of participants i.e. 21 (65.6) had monthly income between 17,000. 17 (53.1%) of the participants were uneducated, 9 (46.9%) of them were having education up to matric and no one was with education above level or above.

Table 1: Demographic characteristics of participants (n=32)

| Age in (Years) | N(%) |
|----------------|------|
| 18-40 years    | 8 (25%) |
| 41-53 years    | 8 (25%) |
| > 53 years     | 16 (50%) |

| Gender         |       |
|----------------|-------|
| Females        | 17 (53.1%) |
| Male           | 15 (46.9%) |

| Marital Status |       |
|----------------|-------|
| Married        | 23 (71.9%) |
| Unmarried      | 9 (28.1%) |

| Monthly Income/PKR |       |
|--------------------|-------|
| <17,000 PKR/month  | 8 (25%) |
| 17,000-30,000 PKR/month | 21 (65.6%) |
| > 30,000 PKR/month | 3 (9.4%) |

| Education Status |       |
|-----------------|-------|
| Uneducated      | 17 (53.1%) |
| Up to Matric    | 15 (46.9%) |
| Graduation and Above | 0 (0.0%) |

Table 2: Emotional distress pre and after intervention

| Emotional Distress | Pre [n (%)] | Post [n (%)] |
|--------------------|-------------|--------------|
| No Emotional Distress | 0 (0.0) | 12 (37.5) |
| Mild Emotional Distress | 7 (21.9) | 1 (3.1) |
| Moderate Emotional Distress | 12 (37.5) | 3 (9.4) |
| Severe Emotional Distress | 13 (40.6) | 0 (0.0) |

The results findings of this current study revealed that the studied participants were having age in years as (46.25 ± 9.553). This finding is supported by the result of a previous study which assessed the effect of nursing educational program intervention on the emotional distress of the patients having hepatitis C infection and going through the treatment of antiviral therapy, where also the age average of participants was (40 ± 16.57683) years [15]. Also the finding of this current study is in line with a previous study, which carried out research to assess the effect had by nursing education protocols on selected depression issues caused by antiviral therapy among hepatitis C patients. Findings collected by Malky et al., study revealed similar results which showed that the average age of study participants was 41.06 ± 9.31 in years [16]. In contrast to the current study, Aas et al., study used a low age mean, slightly above than half (55.6%) from the intervention group were found to have the average age of more than 20 years and more than one third of the control group (38.9%) having an average age of 19.4 years [17].

Table 3: Mean and standard deviation of emotional distress pre and after intervention

| Variables | Pre-intervention Mean ± SD | Post-intervention Mean ± SD | t  | p-value |
|-----------|-----------------------------|----------------------------|----|---------|
| Emotional Distress | 30.66±5.807 | 19.03±5.433 | 8.537 | .000 |

DISCUSSION

The results findings of this current study revealed that the studied participants were having age in years as (46.25 ± 9.553). This finding is supported by the result of a previous study which assessed the effect of nursing educational program intervention on the emotional distress of the patients having hepatitis C infection and going through the treatment of antiviral therapy, where also the age average of participants was (40 ± 16.57683) years [15]. Also the finding of this current study is in line with a previous study, which carried out research to assess the effect had by nursing education protocols on selected depression issues caused by antiviral therapy among hepatitis C patients.

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The most important component of the care strategy for hepatitis C virus patients receiving antiviral treatment therapy is the nursing education intervention program. Interactive healthcare improvements in emotional distress is among the HCV outcomes that have been positively impacted by educational programs on self-management of hepatitis C. Additionally, it significantly contributes to bettering Hepatitis C control and encourages patients to lead healthier lifestyles. Finally, the educational program proved to be a valuable tool for enhancing HCV emotional distress and reducing emotional distress as evidenced by the favorable results recorded for the participant participate in intervention group.

**Conflicts of Interest**
The authors declare no conflict of interest.

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