INTRODUCTION
Parenting stress results when the balance between parents' perception of the demands of parenting outweigh perception of their resources for meeting those demands.1 Difficulty to manage behavioural problems of children with autism directly adds to stress of care givers.2 However, parents of children having autism exhibit an extraordinarily higher level of stress due to pervasive nature of child problems.3 Parents' low sense of coherence (SOC), and low Parental Self Efficacy (PSE) also emerged in the literature to signify high stress among parents of children with autism.4,5 Olsson and Hwang highlighted Parents' evaluation of their human resources for support in the role of parenting and SOC concerning parenting role as determinant of their stress and depression.6 Stress eventually leads to poor mental health of parents.7 Thus, figuring out various risk factors associated with parental stress is crucial for the well-being of parents.

Given that parents of autistic children exhibit more stress than parents of normal children and of children with other developmental disabilities,8 risk and protective factors of stress in parents of children with autism has been a burning issue among researchers for the last few decades. Parents' sense of coherence and their self efficacy appeared to shape parental cognitive process to resolve their stress.9 SOC of parents of autistic children positively contributes to their self control, positive appraisal of the situation and accepting their responsibility as parents.10 SOC of parents of autistic children and their PSE appeared to determine the ways of coping to deal with behavioural problems of children, inversely relates to guilt feelings as parents, and determines their stress level.9,11 Demographic variables appear to cause difference in stress experience of parents of children with autism. Studies report mothers significantly higher on stress levels than fathers,3,12 particularly the older mothers.8,13

The present study was planned to explore the relative strength of the factors such severity of child's impairment, personal characteristics of parents (SOC, PSE), and demographic variables in predicting stress among the parents of children with autism. No previous study has tested the relative role of these variables in stress of parents of children with autism.

METHODOLOGY
A sample of 100 parents (50 mothers and 50 fathers) of children with autism was recruited through purposive
Factors associated with stress among parents of children with autism

The present study aimed to analyze the factors associated with stress among parents of children with autism. It was conducted with parents who were approached after contacting special education schools/centers for autistic children and outpatient child Psychiatry of Children Hospital, Lahore. More than 200 parents were contacted and 100 parents showed consent and completed the questionnaires. Computer program Statistical Package for Social Sciences (SPSS) version 16 was used to analyze the data.

RESULTS

A one-way MANOVA was conducted to examine the role of gender of parents on various parental characteristics (Table I and II).

The results in Table II reveal a significant main effect for gender at 0.014 level of significance (Wilks λ = 0.89, F (3, 96) = 3.74). The observed effect size of this relationship is η² = .105. Results from this one-way MANOVA demonstrate a significant multivariate effect for the relationship, as Hotelling's T (3, 96) = 0.12, p = 0.014. Univariate results for this relationship demonstrate a significant effect for parent's sense of coherence, F (3, 96) = 5.11, p = 0.026; Table I shows that fathers show greater sense of coherence (M = 60.02 ± 11.25) as compared to mothers (M = 54.56 ± 12.83). Results for parenting self-efficacy and parenting stress were non-significant, F (3, 96) = 2.00, p = 0.160, F (3, 96) = 0.69, p = 0.347 respectively.

Table III shows that no demographic variable emerges to be significantly correlate with study variables. Severity of child impairment, parents' SOC and PSE not only significantly correlate with one another, but also showed significant correlations with the outcome variable: parenting stress (rₛ = -.53, -.27, -.35; pₛ < 0.001, 0.007, < 0.001).

Table I: Descriptive statistics of parents on study variables (n = 100).

<table>
<thead>
<tr>
<th>Parenting variables</th>
<th>f (%)</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sense of coherence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mothers</td>
<td>50 (50)</td>
<td>54.56</td>
<td>12.83</td>
</tr>
<tr>
<td>Fathers</td>
<td>50 (50)</td>
<td>60.02</td>
<td>11.25</td>
</tr>
<tr>
<td>Parenting self efficacy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mothers</td>
<td>50 (50)</td>
<td>344.32</td>
<td>46.73</td>
</tr>
<tr>
<td>Fathers</td>
<td>50 (50)</td>
<td>330.24</td>
<td>52.62</td>
</tr>
<tr>
<td>Parenting stress</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mothers</td>
<td>50 (50)</td>
<td>70.44</td>
<td>28.59</td>
</tr>
<tr>
<td>Fathers</td>
<td>50 (50)</td>
<td>65.32</td>
<td>25.54</td>
</tr>
</tbody>
</table>

Sampling strategy. Parents of children with any other psychiatric problem, and single parents were not included in the study.

Severity of impairment of child with autism was measured with the Childhood Autism Rating Scale (CARS). The CARS is a widely used rating scale for the detection, diagnosis, and measurement of severity of impairment of autism. It consists of 14 domains measuring behaviours associated with autism, and 15th domain rates general impressions of autism. Each domain is scored on a Likert scale ranging from 1 to 4. The Cronbach's alpha of the CARS was .78 in the present study.

Parents' self efficacy was measured with the Tool to Measure Parenting Self-efficacy (TOPSE). TOPSE is a multi-dimensional questionnaire, which includes 48 statements that focus on six parenting self-efficacy domains: play and enjoyment, emotion and affection, empathy and understanding, discipline and boundary setting, control, self-acceptance, learning and knowledge, and pressures of parenting. The responses are given on a Likert scale ranging from 1 to 5. Higher score indicates a higher level of difficulty. The Cronbach's alpha of the CARS was .78 in the present study.

Parents' sense of coherence was measured with Sense of Coherence- Short Form (SOC-SF). Stronger SOC is represented by a high score. Each item is rated on a 7-point Likert scale. Short-form SOC is quite valid and reliable. For the present study the Cronbach's alpha was 0.90.

Parenting stress was measured with Parenting Stress Scale: Autism (PSS-A). It comprises of 28 items. The scale sum up experiences of parents which can be stressful or tough for instance behaviour and communication, supporting for a child with autism, parental care giving, and personal and family life. Parent's responsibility for the child's socialization, teaching, caring and protecting are included in the scale. Parents rate the stress they feel on a 1 - 5 scale. Greater scores reveal high level of stress. For the current study the Cronbach's alpha was 0.92. Parents' age ranged between 25 and 54 years.

Data collection was started after the approval of research work by the Board of Studies (BOS) of the Department of Psychology, GC University, Lahore. Written permission was taken from the heads of the institutes of Special Education and heads of Psychiatry wards of hospitals for data collection. Consent of parents was taken before data collection and they were informed regarding their right to withdraw at any stage of data collection. Before starting data collection, permission to translate and use the research instruments was sought from the authors. All the research instruments were forward and backward translated via a committee of five bilingual experts and best translated items were included in final Urdu versions of research instruments. English and Urdu versions of CARS, TOPSE, SOC-SF, PSS-A were completed by parents of autistic children (n = 20), who could understand questionnaires in English and Urdu. Correlations appeared as (rₛ = .87, .90, p < .000) between instruments consecutively for English and forward translated version; English and backward translated version, which supports the reliability of translated versions of our research instruments. Parents of children with autism were approached after contacting the special education schools/centers for autistic children and outpatient child Psychiatry of Children Hospital, Lahore. More than 200 parents were contacted and 100 parents showed consent and completed the questionnaires. Computer program Statistical Package for Social Sciences (SPSS) version 16 was used to analyze the data.
In order to explore the relative strength of risk factors of stress among parents of children with autism, a stepwise regression analysis was run. No demographic variable showed significant bivariate correlations with the dependent variable (parenting stress), so the demographic variables were not entered in regression analysis.

Table IV shows that 35% of variance in parents' stress is accounted for by severity of child's impairment, and parenting self-efficacy (F = 26.44, p < 0.001).

**DISCUSSION**

The current study was carried out to explore the relational strength of risk factors of stress among parents of children with autism. Results partially supported our hypothesized model. Demographic variables did not appear to correlate with the parenting stress, whereas, severity of child impairment, and parenting self-efficacy appeared as salient predictors of parenting stress (Table IV). Severity of impairment of child with autism appeared as the most salient predictor of stress among parents. Result coincides with the previous work. It appears that stress among parents is largely produced as a result of child's inabilities in emotional, social, and cognitive development.

Self-efficacy appeared as the second salient predictor of stress among parents. Significant inverse correlation between parenting self-efficacy and parental stress (Table IV) is supported by various researchers. Parenting stress and depression may negatively correlate with parents' perceived feelings regarding competence. These results hold up Bloomfield and Kendall's claim that parents who feel less efficacious experience higher levels of stress, while greater parenting self-efficacy is related to less stress. Hence, in the domain of caregiving and parent-child relations, parents' confidence regarding their role of parenting perhaps mitigates the perceived stress.

Significant inverse correlation between sense of coherence and stress of parents (Table III) in the present study coincides with earlier quantitative and qualitative work. Parents having powerful SOC may feel confident and perceive their role of parenting and caregiving duties as comprehensible and manageable, and may admit their caregiving situations and their children's autism-related problems through meaning-making: child acceptance. One reason of this inverse relationship might be that the SOC helps to perceive life stressors as manageable, minimize stress, and fosters health by facilitating numerous resources within the individuals in coping with life happenings. Parents who are low on SOC may not be able to make order out of chaos, identifies challenges as stressors, and do not rely on coping resources to deal with stress. However, SOC did not appear to predict parental stress when entered with the severity of child's illness and PSE in a stepwise regression analysis.

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No significant gender difference emerged in terms of PSE, and parenting stress. These results are partially consistent with the previous work. The reason for equal level of stress among both parents might be that child's health is equally important for both parents, so the problematic behaviour of a child produces equal stress in them. However, these results are not consistent with the previous work carried out in Pakistan on the parents of children with autism and intellectual disability that measured stress in both parents.

Though this study offers useful insight into the role of severity of child impairment, PSE, and parents' SOC in parenting stress, it also has some limitations. For example, the data were collected from Lahore city, so there is a need to collect data from other areas of Pakistan to generalize the results. No comparison group was used in the study, so it is recommended that parents of children with or without other behavioural problems may also be included in future work. The sample size was not large enough due to limited number of institutions for autistic children in Pakistan, so study can be replicated with a larger sample size. Data were collected from educated parents and from urban area only, so future research may also be expanded to rural areas and illiterate parents to see the role of education more visibly. As only 35% of variance is accounted for by the study variables and the rest of 65% variance is still not known, factors like, locus of control, coping, hardness, and social support may also be included in the future model. Moreover, the study may also be extended by adding qualitative work to explore the problems experienced by the parents of autistic children and antecedent of their emotional distress in the local context.

The results manifest that child impairment is the major hazard to parenting stress, since parents' potential to manage the child impairment and behavioural problems adds value to lower their stress. The study provides work plan to healthcare professionals in a sense that if they work on training / interventions to enhance the SOC, and PSE of parents, it will help to decrease the stress level of parents of children with autism and ensure their mental health. Parents' training will not only help parents to accept their child with autism, but also to utilize better parenting practices. Helping parents to manage their parenting stress more effectively may enhance their parenting behaviours and skills, and promote successful management of their child's behaviour problems. The present study validates that parents seeking support for child behaviour problems are likely to have low SOC and PSE in the daily tasks of parenting, which need to be improved. The study aslo has implications for parents of children with autism that certain proportion of their stress could be controlled, if they seek help to boost up their SOC and PSE for the better management of problematic behaviour of their children, and it may enhance the mental health of community of parents with developmental disabilities.

CONCLUSION

Despite the fact that the severity of child's impairment emerged to be the most salient risk factor for parenting stress in the present study, parents' ability and confidence in their capability of parenting a child in challenging situations seems to reduce their stress.

REFERENCES


