SYSTEMATIC REVIEW

Psychological factors contributing to parenting styles: A systematic review [version 1; peer review: 1 approved with reservations, 1 not approved]

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Abstract

Background: The set of strategies used by parents to put their children's behaviors under control are called parenting styles, which can be influenced by numerous factors including socio-economic variables, cultural differences, personal characteristics, and psychological factors. These factors can differently contribute to parenting style. Thus, the purpose of this systematic review was to examine psychological factors affecting parenting style.

Methods: This study was a comprehensive literature review using the keywords of parenting styles, psychological factors, and parenting to search the databases of Google Scholar, PubMed, Scopus, Web of Science, and Scientific Information Database. In this respect, 416 articles were extracted. 368 articles were removed after reviewing their abstracts and full text and eventually 48 articles were selected to elicit the required data.

Results: Our findings were classified under two categories: factors related to parents (mental health status, self-efficacy, parenting stress, perfectionism, personality traits, childhood trauma, marital satisfaction, parents’ attachment style, perceived parenting style, and substance abuse); and those related to children (child developmental and mental disability, child temperament, and anxiety).

Conclusions: Considering the multiple psychological factors that affect parenting style, it is recommended to include an assessment of parent-child psychological status in family health programs in order to identify the needs for health-oriented care and take steps towards the development of parenting skills.
Introduction

Parenting styles refer to the set of strategies adopted by parents to control the behaviors of their children. It has two models: positive parenting styles, i.e. authoritative parenting style; and negative parenting styles that are authoritarian, permissive, and neglectful. In this respect, positive parenting styles are accompanied by encouraging outcomes for children such as optimism, self-esteem, and social-emotional development, while negative parenting can lead to emotional disorders, behavioral problems, aggression, as well as child anxiety. Although, previous review studies have investigated different factors contributing to raising children and child maltreatment, including socio economic factors, and parent and child characteristics, less is known about psychological factors that contribute to parenting style. The objective of this systematic review was to conduct a comprehensive literature review on the psychological factors affecting parenting styles.

Methods

In this review, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement was used as a guideline. See Supplementary File 1 for the PRISMA checklist.

Identification of the research question

Considering the “P” component of PICO (Population of interest, intervention, control, outcome) criteria and FINER (Feasibility, Interesting, Novel, Ethical, Relevant) criteria, the research question was developed as below:

What are the psychological factors contributing to parenting styles?

Search strategy

According to the research question in this study, a search was carried out in the databases of Google Scholar, PubMed, Scopus, Web of Science, and Scientific Information Database (a Persian database). In this regard, the required articles were retrieved based on the use of medical subject headings, text words, and related keywords. The search strategy was as follows:

(“Psychosocial Factors” OR Factors OR Determination OR Psychology) AND (“Child Rearing OR Child Rearing Styles” OR Parenting OR “Parent-Child Relations OR Parent-Child Relationship” OR “Parenting Styles”).

Eligibility criteria. All indexed and non-indexed original cross-sectional, longitudinal or review studies, in English or Persian, that meet the inclusion criteria, addressed the research question, reported parenting styles in at least one of the parents were retrieved, irrespective of the types of parenting style, recruitment method and instruments used for the assessment of parenting style. Studies that reported on the results of clinical trials were excluded from our review. 416 articles published within February 1984 and April 2017 were extracted. The search time lasted for four weeks between January 23rd and February 23rd in 2018.

Study selection. After removing duplicate articles (191), those remaining were examined in two stages. Firstly, the titles and a summary of all the remaining articles were independently reviewed by two authors (ZS and ZV). At this stage, 120 articles were excluded from the study.

Secondly, the full texts of all the remaining articles were examined and the items not referring to psychological factors in spite of attention to the factors related to parenting styles were excluded. Additionally, the reference lists of the selected articles were reviewed for more articles. Finally, 48 articles were used. Figure 1 illustrates the study flow.

Summarization, extraction, and data reporting

Two authors (ZH and ZV) independently extracted basic study information (author’s name, title and year of publication, sample characteristics, type of study and outcomes such as: parenting styles, parent’s behavior, parent child interaction, family interaction) for all included papers using a predefined evidence table shell. Third author (FE) reviewed the evidence tables for accuracy and completeness. The final evidence table is presented in Table 1. After selecting the final articles, the researchers carefully examined all the relevant articles, extracted the data, and then organized the information needed for the present study. The results of the literature review led to categorization of the contents on psychological factors contributing to parenting styles into several categories as presented in the Results section.

Risk of bias

Critical appraisal checklists were used to evaluate the quality of the studies. Checklists were adapted from the Newcastle–Ottawa quality assessment scale to assess three broad perspective of each study: the selection of the study groups, the comparability of the groups, and the ascertainment of either the exposure for case-control studies or the outcome of interest for cohort studies and cross-sectional studies. This checklist includes 8 questions for case control studies and cohort studies with maximum 9 score. For cross-sectional studies, this checklist includes 6 questions with maximum 7 score. Ottawa quality assessment scale has established content validity and inter-rater reliability. We used The HE QAT to assess the methodological quality of all included reviews as well. The HE QAT assesses 10 criteria to measure the extent to which the methodological approach of a review guarded against bias with maximum 10 score. In this review, studies that received ≥ 5 score from Newcastle–Ottawa scale and The HE QAT were included.

Ethical considerations

The authors assumed ethical considerations and general standards of publication including avoidance of plagiarism as well as multiple and simultaneous submissions and respect for the intellectual property rights of studies.

Results

The quality assessment of all studies presented in Table 1 is included in Supplementary File 2. The review of the literature led to the categorization of psychological factors affecting parenting styles as factors related to parents and those to children.

A summary of included studies are presented in Table 1.
Psychological characteristics relating to parents

Mental health status. Parents’ mental health status is often directly correlated with parenting styles. As can be seen, parents affected with psychological distress may treat their own children with hostility and rejection. Such parents may adopt harsh disciplinary rules and probably make use of physical punishment. In this regard, it has been shown that a history of major depressive disorders is inversely correlated with authoritative parenting styles and it is positively correlated with authoritarian parenting style. Moreover, depressed parents do not show proper sentiments or emotions towards their children or their feelings about parenting responsibilities are assumed negative. These parents may have low self-esteem, reduced self-efficacy, negative emotions, more anger and distress, as well as negative worthlessness to themselves or negative attitudes towards their parenting abilities, which have an impact on the trust between parents and children. On the other hand, mothers suffering from bipolar disorder are likely to...
<table>
<thead>
<tr>
<th>First Author and Publication Year</th>
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<th>Main Results</th>
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<tbody>
<tr>
<td>Belsky et al. [1984][1]</td>
<td>Review</td>
<td>96 Studies</td>
<td>The determinants of parenting</td>
<td>Personal psychological resources of parents, characteristics of the child (difficult temperaments) are related to parenting.</td>
<td>5</td>
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<tr>
<td>Stith et al. [2009][2]</td>
<td>Meta-analytic review</td>
<td>155 studies</td>
<td>Identifying the relative strength of various risk factors for child physical abuse and neglect</td>
<td>Child social competence, parent-child relationship, parent perceives child as problem, parent’s level of stress, parent’s level of anger and parent’s self-esteem, were risk factor for child physical abuse and neglect.</td>
<td>9</td>
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<td>Lovejoy et al. [2000][3]</td>
<td>Meta-analytic review</td>
<td>46 studies</td>
<td>Assesses the strength of the association between depression and parenting behavior</td>
<td>The association between depression and parenting was manifest most strongly for negative maternal behavior and was evident to a somewhat lesser degree in disengagement from the child.</td>
<td>8</td>
</tr>
<tr>
<td>Christian et al. [2017][4]</td>
<td>Systematic review</td>
<td>23 articles, 3 books, and various government websites</td>
<td>Explore factors that increase successful parenting skills in adult survivors of childhood trauma, neglect, and abuse</td>
<td>Childhood resilience had impact on the motivations of a parent. They avoiding the abusive or neglectful Parenting techniques that they experienced with their own children.</td>
<td>6</td>
</tr>
<tr>
<td>Oyserman et al. [2000][5]</td>
<td>Review</td>
<td>36 studies</td>
<td>Review of studies of parenting among mothers with a serious mental illness</td>
<td>Psychiatric variables (particularly depression) affect parenting and thus contribute to problem behavior in children.</td>
<td>5</td>
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<td>Berg-Nielsen et al. [2002]</td>
<td>Review</td>
<td>195 studies (1971–1999)</td>
<td>Identifying the parenting problems when children have psychiatric disorders and or with parental psychopathology</td>
<td>Parental negativity and various forms of ineffective discipline practices occur in families with child or parental psychopathology. The impact of dysfunctional parenting was non-specific for child outcome.</td>
<td>5</td>
</tr>
<tr>
<td>Troxel et al. [2004][6]</td>
<td>Review</td>
<td>22 studies</td>
<td>Review the evidence linking marital conflict and dissolution with children’s physical health status</td>
<td>The study provides evidence supporting biopsychosocial pathways may link marital conflict and dissolution with accelerated health risk trajectories across the lifespan. There is a cost of marital conflict and disruption to children’s health.</td>
<td>7</td>
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<tr>
<td>Van Der Bruggen et al. [2009][7]</td>
<td>Meta-analytic review</td>
<td>23 studies</td>
<td>Examine the relation between child anxiety and parental control</td>
<td>A substantial association was between child anxiety and parental control. No significant relation was for the relation between parent anxiety and parental control.</td>
<td>7</td>
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<td>Chang et al. [2004][8]</td>
<td>Longitudinal study</td>
<td>158 mother with a child (9 to 12 years old) and peers as well as teachers of these children</td>
<td>Examine harsh parenting, maternal depressed affect, and marital quality in relation to children’s externalizing behavior problems</td>
<td>Maternal depressed affect had both direct effects on child externalizing and indirect effects through harsh parenting. The effect of marital quality on child externalizing was mediated through harsh parenting.</td>
<td>6</td>
</tr>
<tr>
<td>Adam et al. [2005][9]</td>
<td>Longitudinal study</td>
<td>102 mothers with their Children (2year old)</td>
<td>Examines whether associations between adult attachment and parenting or parent emotional Well-being</td>
<td>Dismissing attachment was associated with lower warmth/responsiveness only among mothers with higher levels of depressive symptoms.</td>
<td>6</td>
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<td>Prinz et al. [2005][10]</td>
<td>Review</td>
<td>23 studies</td>
<td>Examines the potential roles of parental self-efficacy in parent and child adjustment</td>
<td>Some findings suggest that parental self-efficacy (PSE) impacts child adjustment directly but also indirectly via parenting practices and behaviors.</td>
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<td>Banyard et al. 2003</td>
<td>Cross-sectional study</td>
<td>152 women who had at least 1 child (1–10 years old) 76 of Women with childhood sexual abuse compared 78 women</td>
<td>Exploration the impact of complex trauma (Sexual and physical abuse, violence) and depression on parenting and protective factors</td>
<td>Higher rates of trauma exposure were related to decrease parenting satisfaction, reports of child neglect, use of physical punishment. Maternal depression was a mediator in this relation.</td>
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<td>Webster-Stratton et al. 1988</td>
<td>Cross-sectional study</td>
<td>46 depressed mothers Compared to 49 non depressed mothers with their children (3 – 8 years old)</td>
<td>Examine the relation of reported maternal depression to prior and current life stressors and to mother perceptions of child adjustment, parenting behaviors and child conduct problems.</td>
<td>Depressed mother were more critical than non depressed mothers, but the behavior of children of depressed mothers showed no differences. Depressed mothers were more likely to have experienced child abuse.</td>
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<tr>
<td>Levendosky et al. 2001</td>
<td>Cross-sectional study</td>
<td>120 women with their children (7–12 years old)</td>
<td>Examine a model of the interrelated effects of domestic violence on women and children, focusing specifically on parenting</td>
<td>Lower psychological functioning of mothers was related to poorer parenting and had direct effects on children. Child abuse was the more important predictor of children’s adjustment. Marital satisfaction had association with parenting.</td>
<td>6</td>
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<tr>
<td>Moore et al. 2004</td>
<td>Cross-sectional study</td>
<td>68 mother–child dyads with a child (7–15 years old)</td>
<td>Impacts of maternal and child anxiety on interactions between mothers and children</td>
<td>Mothers of anxious children were less warm toward their children. There was an interaction between mother and child anxiety in predicting maternal catastrophizing.</td>
<td>7</td>
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<tr>
<td>Chen et al. 2002</td>
<td>Cross-sectional study</td>
<td>463 mothers who had children (3–6 years old)</td>
<td>Examine factors related to parenting practices in Chinese mothers with preschoolers</td>
<td>Maternal depression was predictive of both authoritative and authoritarian parenting practices.</td>
<td>5</td>
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<tr>
<td>Goodman et al. 1990</td>
<td>Cross-sectional study</td>
<td>Schizophrenic (n = 53) and depressed (n = 25) women and matched control well women (n = 23 with their children (3–5 years old)</td>
<td>Asses relation between schizophrenic and depressed mothers and parenting</td>
<td>Quality of parenting was lowest in schizophrenic women and more variable in depressed women. Certain parenting practices significantly predicted children's IQ scores and social behavior.</td>
<td>6</td>
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<tr>
<td>Alavi et al. 2015</td>
<td>Cross-sectional study</td>
<td>110 mothers with their parity aggressive children</td>
<td>Explore the relationship between stress and parenting styles with marital satisfaction of mothers of parity aggressive children</td>
<td>Authoritarian parenting style had an inverse relationship with marital satisfaction. Permissive parenting style had no relationship with marital satisfaction. Authoritative parenting style had positive relationship with marital satisfaction.</td>
<td>7</td>
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<tr>
<td>Li et al. 2015</td>
<td>Cross-sectional study</td>
<td>639 father–mother dyads and their children (3–6 years old)</td>
<td>Examine the relationships between parents’ parenting stress and their harsh discipline and the moderating effects of marital satisfaction and parent gender</td>
<td>Both mothers’ and fathers’ parenting stress were directly associated with their harsh discipline. Mothers’ marital satisfaction attenuated the association between their parenting stress and harsh discipline.</td>
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<tr>
<td>Ponnet et al. 2013</td>
<td>Cross-sectional study</td>
<td>227 Couple and their children (10–18 years old)</td>
<td>Explore how various sources of stress and support experienced by fathers and mothers influence their own parenting styles and the parenting styles of the partner</td>
<td>There were actor effects of parenting stress on demanding and responsive parenting styles and there was a partner effect between positive aspects of marital relationship and responsive parenting style.</td>
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<tr>
<td>Salibi et al. /2013</td>
<td>Cross-sectional</td>
<td>200 mothers with a daughter (16 years old)</td>
<td>Relationship between mother's parenting styles and perfectionism with children's emotional and social adjustment</td>
<td>Parenting styles have a crucial role in adolescent emotional and social adjustment. In dimensions of perfectionism with increasing interpersonal sensitivity, perceived parental pressure and organization as well as emotional conflict more increased.</td>
<td>5</td>
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<tr>
<td>Besharat et al. /2010</td>
<td>Cross-sectional</td>
<td>800 parents who had high school students</td>
<td>Assess the relationship between parental perfectionism and parenting styles</td>
<td>Parenting styles were transmitted directly from the parents to the children and the parents' parenting styles would reflect the children. Emotional stability was associated with lower strict control. Extraverted, agreeable, and less emotionally stable individuals were most likely to be authoritative parenting.</td>
<td>6</td>
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<tr>
<td>Kitamura et al. /2009</td>
<td>Cross-sectional</td>
<td>663 fathers and 889 mothers with children (mean age 12.2 years)</td>
<td>Examine the relationship between parenting styles and personality traits over generations</td>
<td>Personality traits were transmitted directly from the parents to the children and the parents' parenting styles had independent effects upon the children's personality traits.</td>
<td>5</td>
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<tr>
<td>Huver et al. /2010</td>
<td>Cross-sectional</td>
<td>688 parents of adolescents (12-19 year old)</td>
<td>Explore the relation between parental personality and parenting style</td>
<td>Emotional stability was associated with lower strict control. Extraverted, agreeable, and less emotionally stable individuals were most likely to be authoritative parenting.</td>
<td>6</td>
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<tr>
<td>Auljic et al. /2011</td>
<td>Prospective</td>
<td>134 couples parents (mean ages 44.0 years)</td>
<td>Investigate the relationship between parental personality and parenting style over generations</td>
<td>Parents with agreeable personality are not more permissive than those with the other personality traits. Consistent and emotionally stable parents were related to more autonomy and openness on authoritative parenting.</td>
<td>5</td>
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<tr>
<td>Dickson et al. /2014</td>
<td>Cross-sectional</td>
<td>120 parents (3-18 year old)</td>
<td>Investigate the relationship between parental personality and parenting style</td>
<td>There is inverse relationship between neuroticism and authoritative parenting styles.</td>
<td>8</td>
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<tr>
<td>Prinzte et al. /2009</td>
<td>Meta-analytic</td>
<td>382 university students</td>
<td>Examine the relationship between parenting style and personality traits</td>
<td>Material and parental agreeableness was positively related to reports of differential positivity. Higher levels of extraversion, agreeableness, and openness were associated with lower levels of control, higher levels of agreeableness and lower levels of neuroticism were related to more autonomy and openness.</td>
<td>5</td>
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<tr>
<td>Maddahi et al. /2011</td>
<td>Cross-sectional</td>
<td>92 parents who had preschool children</td>
<td>Examine the relationship between parenting style and personality traits</td>
<td>There is inverse relationship between neuroticism and authoritative parenting, and relationship between extraversion, agreeableness, and openness and authoritative parenting.</td>
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<tr>
<td>Browne et al. /2012</td>
<td>Cross-sectional</td>
<td>867 children less than 4 years old</td>
<td>Examine the relationship between the Big Five personality dimensions and differential positivity in parenting</td>
<td>Material and parental agreeableness was positively related to reports of differential positivity.</td>
<td>6</td>
</tr>
<tr>
<td>Rezayi Aval. et al. /2016</td>
<td>Cross-sectional</td>
<td>92 parents who had preschool children</td>
<td>Examine the relationship between personality characteristics and mental health of parents on parenting styles</td>
<td>There is inverse relationship between neuroticism and authoritative parenting style.</td>
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<td>Edobor et al. /2015</td>
<td>Cross-sectional study</td>
<td>500 teenagers students</td>
<td>Investigated the influences of parenting styles on the personality traits of students</td>
<td>Students' extraversion depends on democratic parenting styles. Students' agreeableness depends on authoritarian parenting styles.</td>
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<td>Frias-Armenta et al. /2013</td>
<td>Qualitative study</td>
<td>27 couples with their firstborn children (mean age 3.5 years)</td>
<td>Explored the determinants of harsh parenting</td>
<td>There were inverse relations between mothers' and fathers' attachment, positive marital quality, and positive parenting style with their child's internalizing behavior and externalizing behavior.</td>
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<td>Bailey et al. /2012</td>
<td>Cross-sectional study</td>
<td>220 married participants aged 22–60 years</td>
<td>Examined the relationship between parenting style and marital satisfaction</td>
<td>Positive relationship was established between authoritative parenting style and marital satisfaction compared to same-gender dyads.</td>
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<td>Awuah et al. /2013</td>
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<td>27 couples, 36 fathers and mothers who had a child 4 to 6 years old</td>
<td>Assessed the impact of parental conflict on parent-child relations</td>
<td>There were inverse relations between parents' attachment histories and children's attachment security, parenting style, and children's internalizing and externalizing behavior.</td>
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<td>Osborne et al. /1996</td>
<td>Cross-sectional study</td>
<td>451, 2-parent families</td>
<td>Explored the intergenerational transmission of harsh parenting</td>
<td>Grandparents who had engaged in aggressive parenting produced parents who were likely to use similar parenting styles and harsh parenting the effect was stronger for mother than for father.</td>
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<td>Kotchick et al. /1996</td>
<td>Cross-sectional study</td>
<td>360 students</td>
<td>Examined the relationship between parenting styles and self-esteem</td>
<td>Acceptance-involvement and psychological autonomy-granting styles were positive predictors of self-esteem.</td>
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<td>Cowen et al. /1996</td>
<td>Cross-sectional study</td>
<td>105 mothers and their 560 teenagers students</td>
<td>Examined the influences of parenting styles on the personality traits of students</td>
<td>Students' extraversion depends on democratic parenting styles. Students' agreeableness depends on authoritarian parenting styles.</td>
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<tr>
<td>Booth et al. /1994</td>
<td>Cross-sectional study</td>
<td>546 university students and their children</td>
<td>Investigated the influences of parenting styles on the personality traits of students</td>
<td>Students' extraversion depends on democratic parenting styles. Students' agreeableness depends on authoritarian parenting styles.</td>
<td></td>
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<td>Simons et al. /1991</td>
<td>Cross-sectional study</td>
<td>441, 2-parent families and their children</td>
<td>Investigated the influences of parenting styles on the personality traits of students</td>
<td>Students' extraversion depends on democratic parenting styles. Students' agreeableness depends on authoritarian parenting styles.</td>
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**Quality assessment score**

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<td>Kendler et al. (1997)</td>
<td>Retrospective study</td>
<td>1033 pairs of twins (1,692 of their 1,632 Parents)</td>
<td>To understand the relationship between parenting and psychopathology of offspring</td>
<td>Warmth was most strongly predicted by parental personality and child temperament. Mother’s employment, mother’s age, parenting stress, and social support were significantly related to mother’s parenting style.</td>
</tr>
<tr>
<td>Gau et al. (2008)</td>
<td>Cross-sectional study</td>
<td>430 children (ages 2-14 years) and 460 normally developing children (3-15 years old)</td>
<td>Examining parental psychopathology, behavioral problems among children with Down’s syndrome, their siblings, and controls</td>
<td>Down’s syndrome children obtained more paternal overprotection whereas their siblings obtained less maternal care and control than normal children.</td>
</tr>
<tr>
<td>Yu et al. (2008)</td>
<td>Cross-sectional study</td>
<td>130 mothers who had a child (mean age 46 months)</td>
<td>Examining marital relationships and their association with parenting styles and sibling relationship quality</td>
<td>Positive associations between affection constraint parenting style and optimal parenting style with high ability of emotional intelligence.</td>
</tr>
<tr>
<td>McBride et al. (2002)</td>
<td>Cross-sectional study</td>
<td>100 two parent families with children (mean age 48 month)</td>
<td>Examining the association between children’s shyness and their parents’ perceptions of their shyness and their parenting styles</td>
<td>The findings support the conjecture that young children’s dispositional characteristics predict subsequent maternal and paternal behavior.</td>
</tr>
<tr>
<td>Rubin et al. (2002)</td>
<td>Longitudinal study</td>
<td>60 parents who had a child (mean age 3 years old)</td>
<td>Examining the transaction between parental involvement, parental stress, and parental style</td>
<td>The findings revealed evidence of a direct effect of parental stress and child characteristics on sibling relationships and parenting styles.</td>
</tr>
<tr>
<td>Motalebi et al. (2013)</td>
<td>Cross-sectional study</td>
<td>188 boy students (16-19 years old) and their parents</td>
<td>Examining the association between parenting styles and emotional intelligence</td>
<td>Positive association between affection constraint parenting style and optimal parenting style with high ability of emotional intelligence.</td>
</tr>
</tbody>
</table>
adopt an avoidant and insecure attachment style towards their children and show more anger in their interactions with family members. Anxiety can be also a stressor with undesirable effects on a healthy coping system and parents’ compliance problems and finally create negative parenting. Such parents may use harassment of their children as a first choice of parenting, or parents’ interactions with children and their parenting may be accompanied by excessive control and rejection.

One of the serious problems in the domain of parents’ mental health affecting parenting can be schizophrenia. In this regard, it has been shown that children that have schizophrenic parents grow up with many environmental stressors, such as parental dysfunction. Schizophrenia also has a significant effect on the ability to maintain a close and reciprocal relationship and this issue has an impact on parenting capacity. It has been observed that mothers of schizophrenic women are more remote, insensitive and it is likely to be correlated with less parenting skills. In addition, such parents may be less involved with their children and they cannot create a positive emotional atmosphere for them.

Self-efficacy. Parents with higher self-efficacy are endowed with more self-confidence in order to achieve effective parenting skills and competence and they are also likely to have more success with positive parenting. Parental self-efficacy may affect parenting satisfaction and such an impact on coping ability can be positive. These parents may proactively make efforts in problematic situations, such as lack of social support or presence of economic problems, to reduce the negative effects of these problems on their children. In contrast, parents with lower levels of self-efficacy may not be able to adopt positive parenting strategies.

Parenting stress. One of the factors associated with parents’ characteristics is parenting stress. Parenting stress arises when parenting demands exceed the actual resources available to parents that permit them to succeed in parenting. Accordingly, parents with higher parenting stress are more rejectionists and less protective. Greater parenting stress tends to use more punishment and less affection toward children. Stresses affecting parenting also include child-rearing stress as well as a sense of being restrained due to the presence of children. It has been also observed that parents with parenting stress adopt authoritarian parenting styles. Parenting stress can similarly give parents anxiety and emotional distress and cause irritability and hostile behaviors by creating negative feelings. These parents may easily react with psychological aggression and physical punishment in the case of misbehavior by children.

Perfectionism. Perfectionism is a parental characteristic and also a personality trait. Accordingly, perfectionist parents try to be perfect and flawless. They are extremely critical of themselves and their behaviors. These parents similarly consider wishes and goals they could not reach for themselves for their own children and apply their own standards to them. Moreover, these parents may show their love to their children when children act in accordance with parents expectations. In order to maintain their self-esteem, they also put more pressure on their children to avoid failures, characterizing authoritarian parenting styles. Furthermore, perfectionist parents have high expectations of their children and these parental characteristics can result in authoritative parenting styles if they are responsive to their children.

Personality traits. Parental personality traits are among the most important factors influencing parenting styles. According to the existing literature, the personality traits of extraversion, conscientiousness, agreeableness, and openness to experience can be accompanied by greater intimacy in parenting styles and a neurotic personality trait can be seen in less intimate parents. Giving a smaller amount of autonomy to children is also related to authoritarian parenting styles. Parents with agreeable personality traits, due to their ability to obtain more social support and avoid social conflicts, generally are less likely to develop depression. Agreeable parents also try to have flexible and child-centered parenting. Parents who are open to new experiences have emotionally stable personality traits and enjoy new experiences using their imagination and participate in a wide range of mental and experiential endeavors; therefore, this personality trait may be associated with positive parenting since having a child is a new experience.

As well, parents who are conscientiousness are disciplined and they are individuals with good parenting roles. Their children also accept them as an appropriate model. Moreover, extra-verted individuals have positive emotional states and feel good about themselves and the world; and ultimately neurotic-psychotic parents have much more adverse and negative emotions.

Childhood trauma. The history of physical, sexual, or emotional abuse among parents in their childhood is considered as a risk factor leading to negative parenting styles.

In this respect, perceived childhood maltreatment towards parents can have an effect on creating interpersonal problems including interactions with their own children. It is also a risk factor for subsequent emotional defects, which can result in a series of interpersonal difficulties such as distrust, uncertainty, and avoidance of intimate relationships. Also, there is a relationship between physical and emotional abuse in childhood and adverse outcomes for parents such as less parenting competence, more parenting stress, reduced use of effective parenting styles, parental hostility, use of physical punishment, and neglect towards children. In other words, a history of maltreatment can create a lasting environment during the development of children that can last until adulthood. Moreover, it has been observed that mothers with sexual abuse history in childhood may suffer from greater parenting stress, which can lead to diminished empathy with their own children.

Marital satisfaction. Among the parental characteristics contributing to parenting styles is marital satisfaction. In this respect, parents with satisfactory marital relationships may have positive behaviors with their children. Conversely, when
Parents are dissatisfied with marital relationships, negative emotions and behaviors can be transferred through parent-child interactions. Marital conflict as a stressor can affect couples and increase their anger. Consequently, this anger can spread to children and decrease affection towards them. It has been argued that marital maladjustment can lead to an increase in instability in socio-emotional domains in families resulting in ineffective and inconsistent parenting practices by parents.

**Parents’ attachment style.** Parental characteristics including their attachment style and family conditions in the past such as stress or supportive relationships in their immediate family can determine their parenting styles. People with secure attachment styles towards their own parents consider their relationships, whether positive or negative, clear, consistent and coherent. These parents have more intimate parenting style and they are responsive to their children. However, parents with insecure or anxious attachment in their childhood can have pervasive anger as well as lower intimacy and participation in their current relationships with their children. These problems can have long-term consequences in mental health and interpersonal relationships in terms of parenting or some parents showing more anger towards their own parents may make special efforts to create positive relationships with their own children.

**Perceived parenting style.** Individuals that have loving and responsive childhood with no severe restrictions on them are endowed with healthy socio-emotional development; they also have high self-esteem and internalized control. As the result of emotional security, behavioral independence and social competence created in them can lead to the formation of a healthy personality and personal maturity and these people can rely more on others. Eventually, these individuals have active interactions as well as more intimacy and acceptance towards their children in the future and ultimately adopt a positive parenting style. In contrast, there are parents with harsh parenting during their own childhood who may treat their children strictly and believe in using more physical punishment for their children as their parents believed.

**Substance abuse.** Substance abuse is considered as a factor affecting parenting. Substance abuse is also recognized as a risk factor for maltreatment of children and may cause the use of violence. Marital problems as well as psychological disorders of substance-abusing individuals are related to poor parenting.

**Psychological factors relating to children**

**Developmental and mental disabilities.** Illnesses and disabilities of children can cause emotional distress in parents, which may lead to psychopathology, such as more anxiety, in both parents. This mental disorder can also result in negative and inappropriate parenting styles. For example, children with disabilities such as Down’s syndrome may have more behavioral problems than children without this disability, and their parents overprotect them which can lead to improper parenting. On the other hand, the siblings of these children may be cared for and controlled less than children that have no disability. When parents cannot deal with emotional difficulties and control child temperament because of too much stress, they cannot have positive parenting styles, especially the ability to respond appropriately using a suitable approach towards their children. Although it is demonstrated that if parents perceive the cause of their children’s difficult emotional temperaments, it is possible that earning necessary skills to address these problems can reduce stress in parents and create a more positive parenting style.

**Child temperament.** Child temperament such as negative emotions, maladjustment, and anger can make it difficult to care for children. It can also undermine parents’ performance particularly in childhood and their behavior may become more hostile lacking love and affection. Parents of children with a difficult temperament also have higher parenting stress and psychological problems, such as feeling negative about their parenting. Some characteristics seen in children, such as hyperactivity and inability to establish suitable social relationships, are similarly considered among their temperament characteristics and can have an adverse effect on parent-child relationships. In addition, shyness is among the characteristics associated with child temperament. Thus, children with behavioral inhibition and social fearfulness are restrained and their tolerance threshold is different. Thus, parents show more intimate behaviors towards children who have more social interactions and they are more likely to adopt much more authoritative parenting styles. Finally, parents with children with higher emotional intelligence can establish a better relationship with them and they may also adopt positive parenting styles.

**Anxiety.** Anxiety disorder in children may lead to the adoption of a negative parenting style, such as more control. For example, a study revealed that parenting was significantly correlated with children’s anxiety disorder. Such a disorder, regardless of the level of anxiety in parents, is associated with a less intimate relationship with children. Moreover, children’s anxiety also causes mothers to have overprotection for their own children. As well, parents having children affected with anxiety disorder may give them less independence and show not as much of acceptance and love to them.

**Discussion**

This systematic review was an attempt to examine a range of psychological factors related to parenting styles to offer a useful collection that considers parent-child characteristics. The results of this study showed that studies that identify effective psychological factors for parenting styles were related. Consequently, increased self-efficacy and reduced parenting stress as well as lower depression and anxiety in parents could lead to the adoption of more appropriate strategies. Moreover, dimensions of perfectionism in parents and parental personality traits could effect parenting styles. The range of parents’ psychological disturbances such as depression and anxiety could also affect parental dysfunction, leading to child maltreatment; and consequently parents’ psychopathology could increase the likelihood of inappropriate and ineffective parenting.
Parenting is also influenced by the characteristics of parents’ personality traits. These characteristics are created in the process of parents’ growth and development. Therefore, parents with greater agreeableness, extraversion, who are conscientiousness and open to new experiences, with lower neuroticism, are more intimate, organized, and stable and they are also more responsive to their children.

The history of parental evolution and the way parents have interacted with their own parents can also influence how they behave with their children in the future. If parents have been mentally disturbed in these previous relationships, their parenting ability can be adversely affected. Parents experiencing love in their childhood and having a secure attachment to their parents can show more positive parenting in adulthood for their children, while insecure attachments may be a risk factor for future parenting and reduce their positive parenting capacities. Studies have also shown how childhood trauma as well as physical, sexual, and emotional abuse during childhood can shape parenting styles in the future. The experience of these injuries can similarly lead to emotional and social impairment and disturb parent-child interactions, and consequently make parents adopt negative parenting styles.

The results of this study indicated that parents having satisfactory and supportive marital relationships were more sensitive and responsive to their child’s needs. In addition, psychological factors such as depression and parenting stress can affect other types of family relationships, such as marital and parent-child relationships. Moreover, substance abuse was recognized as a risk factor for exercising violence against children.

In general, the findings suggested that children’s psychological characteristics such as developmental and mental disabilities, temperament, social fearfulness and shyness, attachment, anxiety, and emotional intelligence should be considered in determining the factors contributing to parenting styles. These factors may also bring about psychological problems in parents such as negative feelings about parenting or even lead to challenging behaviors in children or mental health problems in children or parents, which in turn can have an effect on parenting styles.

In conclusion, considering these multiple psychological factors influencing parenting styles, we recommended including parent-child psychological status assessment in family health programs in order to identify the needs for health-oriented care and take steps towards the development of parenting skills among parents.

Limitations
Although this study examined the psychological factors contributing to parenting styles, the impact of couples’ psychological characteristics on each other’s parenting styles was not elucidated. Therefore, future research can shed light on the psychological characteristics of couples interacting with each other as well as the effects on their parenting styles. Despite these limitations it seems the result of this study can be used in the development and implementation of family health intervention programs. Also clinicians, psychologists, psychiatrists, and counselors may consider the psychological factors affecting parenting styles reported in this review for further interventions; the assessment of parent-child mental health status, as well as positive parenting education and in this way help with positive parent-child interactions.

Data availability
All data underlying the results are available as part of the article and no additional source data are required.

Competing interests
No competing interests were disclosed.

Grant information
Student Research Committee of Mazandaran University of Medical Sciences for their financial support of this project (code number, 2952).

The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Supplementary material
Supplementary File 1: PRISMA checklist.
Click here to access the data.

Supplementary File 2: Quality assessment of all articles.
Click here to access the data.


Weiqiao Fan
Research Institute of International and Comparative Education, Department of Psychology, Shanghai Normal University, Shanghai, China

The topic of the manuscript is extremely important and interesting. The manuscript provided a summary for factors of parenting styles. However, the manuscript did not establish a clear research gap and a clear research purpose. The author(s) did not provide logic rationales for the research. What's more, there is not a logical introduction to deduce the research questions. In other words, more attention should be paid for the major issues. Therefore, I do not think the manuscript should be indexed.

There are some specific comments to the manuscripts, which may help the author(s) to improve the work.

1. There are many models for parenting styles in the literature. Different model may relate with different factors. However, the author(s) did not touch this issue. Or rather, this is not a logical introduction to this paper. Accordingly, this manuscript cannot have a significant contribution in theory or practice.
2. The definition of “parenting styles” in the first sentence is not liberal. And it cannot reflect the main meaning of parenting style in literature.
3. In Introduction section, the concepts and theory are not clear. Authors should clearly describe parenting styles, the factors and models. Meanwhile, the research questions and significance of the study should also be clearly stated.
4. I cannot see a thorough review for “review of parenting style” in literature. This should be the foundation of the current manuscript.
5. In Method section, each subsection is well defined with clear headings, but in “search strategy” section, I find it difficult to understand why the retrieved articles were based on medical subject headings.
6. After results, the author(s) should explain the results and compare the results to those previous review works in the literature, rather than simply repeating the results.
7. The author(s) should also add some sections as contribution and implication section to discuss the contributions of the manuscript in theory at least.
8. The authors should reorganize the paragraphs based on the importance of factors or some
other logics.
9. The writing and grammar should be improved, and the manuscript is limited by the lack of clarity in the writing.

Are the rationale for, and objectives of, the Systematic Review clearly stated?
Partly

Are sufficient details of the methods and analysis provided to allow replication by others?
Yes

Is the statistical analysis and its interpretation appropriate?
I cannot comment. A qualified statistician is required.

Are the conclusions drawn adequately supported by the results presented in the review?
Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: personality theory and assessment; career assessment

I confirm that I have read this submission and believe that I have an appropriate level of expertise to state that I do not consider it to be of an acceptable scientific standard, for reasons outlined above.

Author Response 30 Mar 2019
Zohreh Shahhosseini, Mazandaran University of Medical Sciences, Sari, Iran

The topic of the manuscript is extremely important and interesting. The manuscript provided a summary for factors of parenting styles. However, the manuscript did not establish a clear research gap and a clear research purpose. The author(s) did not provide logic rationales for the research. What's more, there is not a logical introduction to deduce the research questions. In other words, more attention should be paid for the major issues. Therefore, I do not think the manuscript should be indexed.

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  - Response: Introduction section was revised in page 2, paragraph 1, line 1-15
- The definition of “parenting styles” in the first sentence is not liberal. And it cannot reflect the main meaning of parenting style in literature.
  - Response: Introduction section was revised in page 2, paragraph 1, line 1-3
- In Introduction section, the concepts and theory are not clear. Authors should clearly describe parenting styles, the factors and models. Meanwhile, the research questions
and significance of the study should also be clearly stated.
- Response: Introduction section was revised in page 2, paragraph 1, line 1-15 and in page 2, paragraph 2, line 4-6
- I cannot see a thorough review for “review of parenting style” in literature. This should be the foundation of the current manuscript.
- Response: Introduction section was revised in page 2, paragraph 1, line 3-15
- In Method section, each subsection is well defined with clear headings, but in “search strategy” section, I find it difficult to understand why the retrieved articles were based on medical subject headings.
- Medical Subject Headings is a comprehensive controlled vocabulary for the purpose of indexing journal articles and books in the life sciences; it serves as a thesaurus that facilitates searching.
- After results, the author(s) should explain the results and compare the results to those previous review works in the literature, rather than simply repeating the results.
- Response: Discussion section was revised in page 11, paragraph 1, line 1-5 and in, paragraph 2, line 8-10 and page 12, paragraph 1, line 7-11
- The author(s) should also add some sections as contribution and implication section to discuss the contributions of the manuscript in theory at least.
- Response: Implication section was add in page 12, paragraph 3, line 1-2
- The authors should reorganize the paragraphs based on the importance of factors or some other logics.
- Response: Introduction section was revised in page 5-9
- The writing and grammar should be improved, and the manuscript is limited by the lack of clarity in the writing.
- Response: It was revised.

**Competing Interests:** No competing interests were disclosed.

Reviewer Report 02 August 2018

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Maryam Zamanian
Department of Epidemiology, School of Health, Arak University of Medical Sciences, Arak, Iran

In my view this paper is valuable and suitable for indexing after doing the comments
- The methodological quality of the study is fair but I think it should be evaluated by an expert of Psychiatry in terms of psychology concepts, classifications of Psychological
characteristics and other issues.
- Maybe the category of “Psychological factors relating to children” is not needed.
- The section of “These factors can differently contribute to parenting style. Thus,” is unnecessary in abstract section.
- The introduction section of manuscript needs more clarification on parenting styles and factors contributing to raising children and the importance of .
- The discussion section just has repeated the results, while it should compare the results with those from other studies, and provide possible reasons to explain the results with additional clarifications. Moreover it should be written in order of most to least important.
- The conclusions section is just one recommendation, not the real conclusion. It should be written more powerful and as a real conclusion of research which re-states the main points in a new concise way.
- It should be worked to improve the quality of the English grammar throughout the manuscript.

**Are the rationale for, and objectives of, the Systematic Review clearly stated?**
Yes

**Are sufficient details of the methods and analysis provided to allow replication by others?**
Yes

**Is the statistical analysis and its interpretation appropriate?**
Not applicable

**Are the conclusions drawn adequately supported by the results presented in the review?**
Partly

**Competing Interests:** No competing interests were disclosed.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

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Author Response 30 Mar 2019

**Zohreh Shahhosseini,** Mazandaran University of Medical Sciences, Sari, Iran

- In my view this paper is valuable and suitable for indexing after doing the comments
  - The methodological quality of the study is fair but I think it should be evaluated by an expert of Psychiatry in terms of psychology concepts, classifications of Psychological characteristics and other issues.
  - Maybe the category of “Psychological factors relating to children” is not needed.
  - Response: Some child psychologic factors affecting parenting styles so “Psychological factors relating to children” did not delete.
  - The section of “These factors can differently contribute to parenting style. Thus,” is unnecessary in abstract section.
  - Response: Introduction section was revised in page 1, paragraph 2, line 3
The introduction section of manuscript needs more clarification on parenting styles and factors contributing to raising children and the importance of.

Response: Introduction section was revised in page 2, paragraph 1, line 1-15 and in page 2, paragraph 2, line 4-6

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Response: The Discussion section was revised in page 11, paragraph 1, line 1-5 and in, paragraph 2, line 8-10 and page 12, paragraph 1, line 7-11

The conclusions section is just one recommendation, not the real conclusion. It should be written more powerful and as a real conclusion of research which re-states the main points in a new concise way.

Response: The conclusions section was revised in page 12, paragraph 1, line 6-7 and in,

It should be worked to improve the quality of the English grammar throughout the manuscript.

Response: It was revised.

Competing Interests: No competing interests were disclosed.