SYSTEMATIC REVIEW

Psychological factors contributing to parenting styles: A systematic review [version 2; peer review: 1 approved, 2 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. 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 , 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 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 programs in order to identify the needs for -oriented care and take steps towards the development of parenting skills.
Introduction

Parenting styles consist of a constellation of parental behaviors, beliefs, and attitudes displayed across a variety of parent-child interactions and so specific parenting behaviors that parents use to socialize their child. Baumrind (1971) develop a popular theory of parenting styles in which she identified three different parenting styles are mostly used in literature. Later, (in the 1980s) a fourth was added to her theory. The parenting styles’ framework encompasses 4 distinct parenting categories that are derived from two dimensions of interaction: (1) parental control and (2) parental warmth. Authoritative parents are warm and communicative, but they also exert appropriate control. Authoritarian parents exert control while lacking warmth, while permissive parents show warmth but do not exert control). Finally, parents with lacking warmth and control have neglectful parenting. Some researchers define parenting styles as specific interpersonal parental behaviors or characteristics that influence child development. For example, sensitivity, responsiveness, affect, reciprocity, negativity, involvement, harsh discipline. In the present study, parental behaviors or characteristics were used as models of parenting styles. Authoritative parenting style considered a positive 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 or limited psychological factors were listed in studies. While parents or child psychologic factors may impact parenting abilities or led to dysfunctional parenting. Clarifying these factors is important for family therapeutic intervention. 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. A 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 the 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\(^\text{30}\) to assess three broad perspectives 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 a 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\(^\text{31,32}\). 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 scores \(^\text{33}\). In this review, studies that received ≥ 5 scores from the Newcastle–Ottawa scale and The HE QAT were included\(^\text{30,33}\).

Ethical considerations

The authors assumed ethical considerations and general standards of publication including avoidance of plagiarism as well
<table>
<thead>
<tr>
<th>First Author and Publication Year</th>
<th>Study Type</th>
<th>Population</th>
<th>Quality assessment score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belsky et al. /1984</td>
<td>Review</td>
<td>Personal psychological resources of parents, characteristics of the child (difficult temperaments) are related to parenting.</td>
<td>5</td>
</tr>
<tr>
<td>Stith et al. /2009</td>
<td>Meta-analytic review</td>
<td>96 Studies Identify the relative strength of various risk factors for child physical abuse and neglect.</td>
<td>9</td>
</tr>
<tr>
<td>Lovejoy et al. /2000</td>
<td>Meta-analytic review</td>
<td>46 studies Assess the determinants of parenting behavior depression and parenting behavior from the child.</td>
<td>8</td>
</tr>
<tr>
<td>Christian et al. /2017</td>
<td>Systematic review</td>
<td>23 articles, 3 books, and various government websites Explore factors that increase risk for child physical abuse and neglect.</td>
<td>6</td>
</tr>
<tr>
<td>Oyserman et al. /2000</td>
<td>Review</td>
<td>36 studies Review of 36 studies of parenting among mothers with serious medical illness.</td>
<td>5</td>
</tr>
<tr>
<td>Van Der Bruggen et al. /2004</td>
<td>Meta-analytic review</td>
<td>22 studies Review of 23 studies examining the relation between childhood anxiety and parental control.</td>
<td>7</td>
</tr>
<tr>
<td>Adam et al. /2004</td>
<td>Longitudinal study</td>
<td>102 mothers with their 2 year old children Examined the potential role of parental self-efficacy in parent-child adjustment.</td>
<td>6</td>
</tr>
<tr>
<td>Prinz et al. /2005</td>
<td>Review</td>
<td>Examined whether associations between adult attachment and parent emotional well-being.</td>
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</tbody>
</table>
The predominant approach was to explore the impact of complex trauma (Sexual and physical abuse, violence) and depression on parenting and protective factors.

**Main Results**

- **Banyard et al. 2003**
  - Depressed mothers 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.
  - Lower psychological functioning of mothers was related to poorer parental and direct predictors of children's social behavior.

- **Webster-Stratton et al. 1988**
  - Depressed mothers 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.
  - Maternal depression was a mediator in this relation.

- **Levendosky et al. 2001**
  - Lower psychological functioning of mothers was related to poorer parental and direct predictors of children's social behavior.
  - Maternal depression was predictive of both authoritative and authoritarian parenting styles.

- **Moore et al. 2004**
  - Maternal depression was predictive of both authoritative and authoritarian parenting styles.
  - Maternal depression was predictive of both authoritative and authoritarian parenting styles.

- **Goodman et al. 1990**
  - Quality of parenting was lowest in alcoholic women and more variable in depressed women. Certain parenting styles had a positive relationship with maternal satisfaction.
  - Authority parenting style had an inverse relationship with marital satisfaction. Permissive parenting style had no relationship with marital satisfaction.
  - Both mothers and fathers' parenting stress were directly associated with their harsh discipline. Mothers' marital satisfaction affected the relationship between their parenting stress and their harsh discipline.
<table>
<thead>
<tr>
<th>First Author and Publication Year</th>
<th>Study Type</th>
<th>Population</th>
<th>The aim of the study</th>
<th>Main Results</th>
<th>Quality assessment score</th>
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</thead>
<tbody>
<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>
<td>6</td>
</tr>
<tr>
<td>Salibi et al. /2013</td>
<td>Cross sectional study</td>
<td>200 mothers with a daughter (16 years old)</td>
<td>The 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 adjustment, but no in social adjustment. In dimensions of perfectionism with increasing interpersonal sensitivity, perceived parent pressure and organization as well as emotional conflict more increased.</td>
<td>5</td>
</tr>
<tr>
<td>Besharat et al. /2010</td>
<td>Cross sectional study</td>
<td>800 parents who had a high school students</td>
<td>Assessing the relationship between parental perfectionism and parenting styles.</td>
<td>The dimensions of parental perfectionism affect the characteristics of parenting styles.</td>
<td>6</td>
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<tr>
<td>Kitamura et al. /2009</td>
<td>Cross-sectional study</td>
<td>663 fathers and 889 Mothers with children (mean age 12.2 years)</td>
<td>Examine the relationships 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>
</tr>
<tr>
<td>Huver et al. /2010</td>
<td>Cross-sectional study</td>
<td>688 parents of adolescents (12–19 years old)</td>
<td>Examined 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 styles.</td>
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<tr>
<td>Aluja et al. /2007</td>
<td>Prospective study</td>
<td>134 couples parents of Adolescents (mean ages 14.04 years)</td>
<td>Explore the relation between personality, social values, and marital satisfaction on parents' rearing styles</td>
<td>Warmth and acceptance are related to a responsible and emotionally stable personality profile, high marital satisfaction, and the preference for prosocial values.</td>
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<tr>
<td>Dickson et al. /2014</td>
<td>Cross-sectional study</td>
<td>120 parents (≥18 years old)</td>
<td>Investigate the relationship between parental personality and parenting style</td>
<td>Parents with agreeable personality are not more permissive then those with the other personality traits. Conscientious parents were significantly higher than extraversion, and agreeableness but not from neuroticism and openness on authoritative parenting.</td>
<td>6</td>
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<tr>
<td>Prinzie et al. /2009</td>
<td>Meta-analytic review</td>
<td></td>
<td>Investigate the association between big five personality factors and three dimensions of parenting</td>
<td>Higher levels of extraversion, agreeableness, conscientiousness, and openness and lower levels of neuroticism w related to more warmth and behavioral control, higher levels of agreeableness and lower levels of neuroticism w related to more autonomy support.</td>
<td>8</td>
</tr>
<tr>
<td>Maddahi et al. /2011</td>
<td>Cross-sectional study</td>
<td>382 university students</td>
<td>Examine the relationship between Parenting styles and personality traits</td>
<td>There is an inverse relationship between neuroticism and authoritative parenting style and the relationship between neuroticism with (authoritarian and permissive) parenting styles. There is a relationship between agreeableness, extraversion, and openness with authoritative and permissive parenting styles.</td>
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<tr>
<td>First Author and Publication Year</td>
<td>Study Type</td>
<td>Population</td>
<td>The aim of the study</td>
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<tr>
<td>Browne et al. /2012</td>
<td>Cross-sectional study</td>
<td>867 children less than 4 years and their parents (1–5 years old)</td>
<td>Examine the relationship between the Big Five personality dimensions and differential positivity.</td>
<td>Maternal and paternal agreeableness was inversely related to reports of differential positivity. Agreeableness predicted observed differential negativity.</td>
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<tr>
<td>Rezayi Aval et al. /2016</td>
<td>Cross-sectional study</td>
<td>92 parents who had preschool children (mean age 7.8 years old)</td>
<td>Examine the relationship between five dimensions of personality characteristics and mental health of parents on parenting styles.</td>
<td>There is a relationship between neuroticism with (authoritarian and permissive) styles and an inverse relationship with the authoritative style. Neuroticism predicts observed parenting styles.</td>
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</tr>
<tr>
<td>Edobor et al. /2015</td>
<td>Cross-sectional study (Ex-Post Facto)</td>
<td>105 mothers and their children (mean age 3.5 years)</td>
<td>Investigate the determinants of harsh parenting styles.</td>
<td>Family dysfunction had an indirect effect through parenting styles. Some demographic variables also indirectly influenced the use of beliefs in harsh parenting.</td>
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<tr>
<td>Frias-Armenta et al. /1998</td>
<td>Qualitative study</td>
<td>15 families with children (mean age 15 years)</td>
<td>Explore the determinants of harsh parenting styles.</td>
<td>Family dysfunction had an indirect effect through parenting styles. Some demographic variables also indirectly influenced the use of beliefs in harsh parenting.</td>
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<tr>
<td>Bailey et al. /2012</td>
<td>Cross-sectional study</td>
<td>93 mothers who had a child age 3–6 years old</td>
<td>Assess the impact of childhood maltreatment history on parenting behavior.</td>
<td>Childhood maltreatment, specifically witnessing family violence, was associated with increased child internalizing and externalizing behavior problems.</td>
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<tr>
<td>Awuah et al. /2013</td>
<td>Cross-sectional study</td>
<td>200 married couples (mean age 54 years old)</td>
<td>Explore the relationship between marital conflict and parenting styles.</td>
<td>Marital conflict negatively impacted perceptions of father-child relationships. Positive relationships were established between authoritative parenting style and parenting style.</td>
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<tr>
<td>Osborne et al. /1996</td>
<td>Cross-sectional study</td>
<td>169 children (mean age 154 months)</td>
<td>Children's perceptions of parenting styles, maternal conflict, and measures of child behavior problems were examined.</td>
<td>Marital conflict negatively impacted perceptions of father-child relationships. Positive relationships were established between authoritative parenting style and parenting style.</td>
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<tr>
<td>Tavassolie et al. /2016</td>
<td>Cross-sectional study</td>
<td>27 couples with their firstborn children (mean age 35 years)</td>
<td>Examine the literature on variables and contextual factors that shape parenting practices.</td>
<td>Marital conflict negatively impacted perceptions of father-child relationships. Positive relationships were established between authoritative parenting style and parenting style.</td>
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<tr>
<td>Kotchick et al. /2002</td>
<td>Review</td>
<td>53 studies</td>
<td>Explore the relationship between parents' attachment styles and children's behavioral problems.</td>
<td>Perinatal factors, family socialization, and parenting practices were associated with increased child internalizing and externalizing behavior problems.</td>
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</tr>
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<td>Quality assessment score</td>
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<tr>
<td>Booth et al. /1994</td>
<td>Longitudinal study</td>
<td>79 children and their mothers</td>
<td>Children's social and emotional adjustment at age 8 were examined in relation to</td>
<td>Internalizing problems, externalizing problems, and social engagement were related at the two ages. Attachment security at age 4 was the strongest predictor of internalizing problems and social engagement/acceptance at age 8.</td>
<td>8</td>
</tr>
<tr>
<td>Zakeri et al. /2011</td>
<td>Cross-Sectional study</td>
<td>546 university 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 the self-esteem.</td>
<td>6</td>
</tr>
<tr>
<td>Simons et al. /1991</td>
<td>Cross-Sectional study</td>
<td>451, 2-parent families and their children</td>
<td>Examine intergeneration transmission of harsh parenting</td>
<td>Grandparents who had engaged in aggressive parenting produced parents who were likely to use similar parenting practices and harsh parenting the effect was stronger for mother than for father.</td>
<td>6</td>
</tr>
<tr>
<td>Kendler et al. /1997</td>
<td>Retrospective study</td>
<td>1033 pairs of twins (17–55 years old) with</td>
<td>To understand the relationship between parenting and psychopathology in offspring</td>
<td>Warmth was most strongly predicted by parental personality and psychopathology, parental marital quality, and child temperament.</td>
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</tr>
<tr>
<td>Nam et al. /2014</td>
<td>Cross-sectional study</td>
<td>470 mothers children with developmental delay and their mothers and their 12–23 months of children</td>
<td>Assess the influencing factors on mothers' parenting style of young children at risk for developmental delay</td>
<td>Mother’s employment, mother’s age, parenting stress, and social support was significantly related to the mother’s parenting style.</td>
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<tr>
<td>Gau et al. /2008</td>
<td>Cross-sectional study</td>
<td>45 families of children with Down syndrome (2–14 years old) Compared to 50 families of normally developing Children (3–15 years old)</td>
<td>Examine parental psychopathology, parenting style and emotional/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>
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<tr>
<td>Yu et al. /2008</td>
<td>Cross sectional study</td>
<td>130 mothers who had a child(mean age = 4.6 years)</td>
<td>Examine marital relationships and their association with parenting styles and sibling relationship quality</td>
<td>The findings revealed evidence of a direct effect of marital relationships on sibling relationship quality and bidirectional relations between sibling relationships and parenting styles.</td>
<td>6</td>
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<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>Examine variations in the relationship among child characteristics, parenting stress, and parental involvement</td>
<td>For both fathers and mothers children perceived less emotionally intense were less stressful. Less active girls experienced lower levels of maternal involvement than more active girls.</td>
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<tr>
<td>Rubin et al. /1999</td>
<td>Longitudinal study</td>
<td>60 parents who had a child (2 years old)</td>
<td>Examined the transaction between parents' perceptions of their children's 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>
<td>6</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>Examined the association between perceived parenting styles and emotional intelligence</td>
<td>positive associations between affectionate constraint parenting style, and optimal parenting style with high ability of emotional intelligence,</td>
<td>6</td>
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</table>
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 the included studies is 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 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 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 the first choice of parenting, or parents’ interactions with their 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.

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.

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, extraverted 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\textsuperscript{25}. Marital conflict as a stressor can affect couples and increase their anger. Consequently, this anger can spread to children and decrease affection towards them\textsuperscript{11,51}. 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\textsuperscript{56}.

**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\textsuperscript{37,54}. 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\textsuperscript{38}. 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\textsuperscript{37,58}. These problems can have long-term consequences in mental health and interpersonal relationships in terms of parenting\textsuperscript{8} or some parents showing more anger towards their own parents may make special efforts to create positive relationships with their own children\textsuperscript{18}.

**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\textsuperscript{35}.

**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 the\textsuperscript{44}. Moreover, these parents may show their love for 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\textsuperscript{11}.

**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\textsuperscript{49}. As a 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\textsuperscript{14}. 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\textsuperscript{51,52}.

**Substance abuse.** Substance abuse is considered as a factor affecting parenting\textsuperscript{20}. Substance abuse is also recognized as a risk factor for maltreatment of children and may cause the use of violence\textsuperscript{53}. Marital problems, as well as psychological disorders of substance-abusing individuals, are related to poor parenting\textsuperscript{20}.

**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\textsuperscript{1}. 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\textsuperscript{16}. 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\textsuperscript{30}. 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\textsuperscript{11}.

**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\textsuperscript{50,64}. 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\textsuperscript{65}. 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\textsuperscript{66}. 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\textsuperscript{67}. Finally, parents with children with higher emotional intelligence can establish a better relationship with them and they may also adopt positive parenting styles\textsuperscript{67}.

**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 in
22,39. As well, parents having children affected with an anxiety
disorder may give them less independence and show not as
much acceptance and love to the parents adopt negative parenting styles
injuries can similarly lead to emotional and social impairment
shape parenting styles in the future. The experience of these
Studies have also shown how childhood trauma, as well as
future parenting and reduce their positive parenting capacities
ing ability can be adversely affected
interacted with their own parents can also influence how they
The history of parental evolution and the way parents have
In Berg-Nielsen’s review, mothers with depression and anxiety, as well as parents with certain personality disorders, have a
parental style often characterized by some aspect of negativity30.
In a systematic review by Christian, 2017, depression and anxiety
were noted as a direct link to difficulties in the parent-child relationship and poor parent-child interactions18. In a meta analytic review by van der Bruggen et al., 2008, direction association between child anxiety, and parental control was unknown32. 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 future61. If parents have been mentally disturbed in these previous relationships, their parenting ability can be adversely affected16,54. 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 capacities59. 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 styles59,62.

Contrary with present review systematic, review by Christian, 2017 parents who themselves experienced abuse as children may be effective and engaged parents to their own children

even if they did not have that experience with their own family of origin. When clients through the therapeutic process build
skills that lead to successes in their parenting relationships they gain the confidence needed to keep improving the parent-child relationship33.

The results of this study indicated that parents having satisfactory and supportive marital relationships were more sensitive and responsive to their child’s needs24,25. In addition, psychological factors such as depression and parenting stress can affect other types of family relationships, such as marital and parent-child relationships23,18,31. In line with our study, in the Erel and Burman, 1995 meta-analytic review, there was a positive relationship between the quality of the marital relationship and the quality of the parent-child relationship56. Parents with a satisfying marital relationship may receive more support from their spouse; the positive feeling from a satisfying marital relationship may spill over to a parent-child relationship31. Moreover, substance abuse was recognized as a risk factor for exercising violence against children63.

In line with Berg-Nielsen’s review30, our study association between maternal drug use and dysfunctional parenting was reported. 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 styles56,64,67.

In Berg-Nielsen’s review, anxiety in children has been correlated with parental negative control, rejection, and inconsistency. And parents of depressed children may be less warm and supportive, less communicative, and more critical20.

In conclusion, the review showed that some child or parental psychopathologic factors contribute to dysfunctional parenting.

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.
Implication of findings
Consultants, psychologists, and therapists can use the findings of this study to provide services to families.

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

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.

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26. Hemati Alamdarloo G: A comparison of parenting styles of mothers of

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Luísa Barros
Faculty of Psychology, University of Lisbon, Lisbon, Portugal

Introduction: This study aims to describe a systematic review of the diverse psychological factors that may influence or determine parenting styles. However, there are three critical problems in this article that limit its relevance and quality. These pertain to 1) the definition of the central concept—“parenting styles”—its delimitation, and the significance of the study. Through the text, parenting styles are used as equivalent to parenting (e.g., parenting quality, or parenting dysfunction). 2) The second major limitation derives from the first one. As the concept is not well defined, the research question is too broad. It is as if the authors aimed to conduct a systematic review on all parent and child dimensions influencing parenting, which would be an impossible endeavor for this type of article; 3) The third major limitation is the quality of the systematic review that does not follow all the fundamental requirements. For example, the search strategy is not fully described, at least for one database; PICOS or other criteria were not entirely used to define the research question. In the eligibility criteria, there is no mention of the types of studies to be accepted; only the exclusion of clinical trials is referred, without justification. If the study aimed to identify possible factors contributing to parenting styles, what is the rationale for accepting qualitative studies? What was the rationale for retrieving previous systematic reviews and meta-analysis? There was no time limit for the search so that theoretically, you would expect many more, which raises some issues concerning the selection process. Although several systematic reviews were retrieved in the search, the authors do not specify the differences between their review and the existing ones. Results for the risk of bias are not described. Only the main results of the studies are described, but not, for example, the type of study, the instruments used to measure the primary outcome.

Some other details:
- The introduction is not clear about what will be considered as a parenting style. In the first paragraphs, the definition of the central concept of “parenting styles” is ambiguous. It starts with a correct description, but ends up identifying parenting styles as behaviors, which is a serious limitation. The first reference is not appropriate to define the concept, and most references about this concept are secondary. The authors present Baumrind’s definition, then state they will use a different definition, very similar to the one described in Nam &
Chun, 2014, but immediately afterward, they describe Baumrind's dimensions and typologies. It is essential to state clearly what definition will be used and why to define the appropriate strategy then.

- A reasonable rationale about the innovation and relevance of the review is not presented. Why is studying the factors that affect parenting style useful for therapeutic intervention; interventions with whom?

- The sentence “While parents or child psychologic factors may impact parenting abilities or led to dysfunctional parenting” seems incomplete.

- The method has several problems that hinder the quality of the study and does not allow it to qualify this study as a systematic review. In the title, the authors state this is a systematic review, and in the aims, they define the study as a comprehensive review?

- The authors state they use only the P from the PICO criteria and the Finer criteria, but the application of these criteria is not specified.

- The search criteria are too broad and seem incomplete (the full strategy should be present, at least for one database) as it does not account for all variations in the search terms. If you want to study parenting styles as the primary outcome, this needs to be evident in the search criteria. It this is substituted by such a broad term a “parenting,” it is difficult to retain the specific articles that are relevant to your question.

- In the eligibility criteria, it seems that articles need to report on “parenting styles.” However, this does not apply to the search strategy (as already mentioned), and in fact, many of the articles retained have as outcomes too broad concepts of parenting quality and not specific parenting styles, whatever the used definition for this concept.

- What was the time frame for the articles selected? What was the rationale for retrieving meta-synthesis and meta-analysis or qualitative studies?

- The risk of bias explanation is confusing.

- Results - are incomplete; only the main conclusions are presented. One of the critical issues would be to describe how parenting styles were assessed, what instruments were used. In the risk of bias supplementary material, there is a table with the criteria used for “cohort studies,” but in Table 1, no study is identified as cohort studies.

- Discussion: The discussion lacks organization. For instance, in the 1st paragraph, there is a mention of a personality trait (perfectionism), and then in the 2nd paragraph, there is another mention of personality. In the 1st paragraph, the sentence “The results of this study showed that studies that identify effective psychological factors for parenting styles were related” needs clarification. Also, it is essential to clearly distinguish what the results of this review are and what are other articles referenced to discuss these results. Many sentences relate to extensive aspects of parental quality and not to specific parenting styles. Child abuse and neglect is the outcome of several studies. Is this considered an equivalent to parenting styles?
What are the implications of the risk of bias analysis for the interpretation and discussion of results? Most studies are cross-sectional, which is a serious limitation to conclude about determinants, but this is never discussed.

Conclusions are very general and do not add to what is already stated in the aims of the study. As this is a systematic review, it is essential to conclude what the specific results of this review add to other syntheses already published. What is specific and novel? What are the limitations of the literature in this domain? What is needed for the research to advance relevant knowledge?

**Are the rationale for, and objectives of, the Systematic Review clearly stated?**
No

**Are sufficient details of the methods and analysis provided to allow replication by others?**
No

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

**Are the conclusions drawn adequately supported by the results presented in the review?**
No

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

**Reviewer Expertise:** My areas of expertise are psychology, child development, child health, parenting, psychological methods

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.

Reviewer Report 13 May 2019
https://doi.org/10.5256/f1000research.20568.r46914

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

**Are the rationale for, and objectives of, the Systematic Review clearly stated?**
No
Are sufficient details of the methods and analysis provided to allow replication by others?
No

Is the statistical analysis and its interpretation appropriate?
No

Are the conclusions drawn adequately supported by the results presented in the review?
No

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.
The 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.
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.

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.

Response: Method section was revised in page 2, paragraph 1, line 3-15

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.
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.

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.
- 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.
- 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.
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