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A Review of Research on Mechanisms of Mindfulness Alleviating Parental Burnout—From Perspective of Risk-Resource Balance Theory (BR²)

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Abstract. With the ever-increasing social costs of raising children, the intensity of competition in the educational system, and the growing popularity of conflict between work and family, the process of parental burnout is increasingly observed throughout the world. Occupational burnout among parents is a significant issue in the globe. The proposed research has been developed according to the theoretical framework of Risk and Resource Balance (BR^2) and combines empirical studies that have been conducted recently to investigate how mindfulness lowers parental burnout. The paper concluded that mindfulness primarily has two sets of pathways: The first set of pathways is that of mediation transmission - mindfulness removes parental burnout by reducing risk factors including perfectionism, rumination thinking, and perception of stress; mindfulness removes parental burnout by increasing protective resources including self-compassion, self-efficacy, parent-child relationship, and social support. The second one is the feedback reinforcement path - mindfulness moderates the beneficial effect of resource factors by increasing the beneficial effect of protective resources, or decreasing the adverse factor is resource factors by increasing the beneficial effect of protective factors, thus decreasing parental burnout. This research has pointed me to future theoretical and empirical advancement, as well as has also given me the theoretical bases of how to construct measures of mindfulness intervention to reduce parental burnout given the BR^2 framework.

Keywords: mindfulness, parental burnout, risk-resource balance theory, BR^2 model

1. Introduction

With the soaring social costs of parenting, intensified educational competition and prominent work-family conflicts, the global incidence of parental burnout has been on a steady rise, with approximately 10% to 30% of parents experiencing symptoms of parental burnout of varying severity [1]. Parental burnout encompasses three core dimensions: emotional exhaustion in the parental role, emotional distancing from one's children, and a diminished sense of personal accomplishment in parenting [2]. Existing research has confirmed that parental burnout leads to mental health problems such as anxiety and depression in parents, has a negative impact on the physical and mental health development of children, thereby disrupting the stability of the family

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system [3]. Therefore, exploring effective ways and mechanisms to alleviate parents' burnout in parenting holds significant theoretical and practical value.

Within recent years, focus on mindfulness intervention is broadly applied regarding the issue of parental burnout. Empirical researches have found that parental burnout can be reduced dramatically through mindfulness because of better parentchild relationships, reduction of parenting stress, and increased self-compassion [4]. In comparison to other forms of interventions, such as Acceptance and Commitment Therapy (ACT) and parenting resource empowerment training, mindful based interventions have emerged as a research hotpot over the last years because of their benefits, e.g., flexibility in parenting situations and immediate regulation of stress effects by means of short self-guidings orientation. The benefits of mindfulness-based interventions of any kind can help to resolve burnout symptoms because they can raise the level of emotional regulation and optimize caregivers behaviors in parents.

Currently, research on mindfulness in alleviating parental burnout has moved beyond the early stage of "effect verification" and gradually entered a mature phase featuring "in-depth exploration of mechanisms, contextual adaptation and multi-dimensional comparison". The overall research system has become increasingly refined, all core research conclusions are supported by explicit empirical evidence, and yet certain common limitations still persist in the existing studies.First, existing studies mostly focus on the testing of single mediating variables or direct effects and lack systematic integration. Second, there is a lack of a unified framework to explain the intrinsic mechanisms of mindfulness in alleviating parental burnout, which results in fragmented research findings.

However, the core theoretical model for explaining the occurrence mechanism of parental burnout—the Risk-Resource Balance Theory (BR^2 Model), proposed by Roskam et al. provides an appropriate theoretical perspective for integrating existing research.Based on this, the core research question of this study is: How does mindfulness alleviate parental burnout through the framework of the Risk-Resource Balance Theory (BR^2)? This study will, in the form of a literature review, systematically sort out existing research findings in the relevant field and conduct integrated analysis on the action mechanisms of mindfulness alleviating parental burnout around the core research question.

2. Method

This study adopts a paradigm that combines systematic review with comparative commentary, takes the Risk-Resource Balance Theory (BR^2) as its core analytical framework, synthesizes empirical evidence from January 2019 to December 2025, and sorts out the action mechanisms of mindfulness in alleviating parental burnout.

The search databases cover core English resources including Web of Science, Scopus and PsycINFO, as well as core Chinese platforms such as China National Knowledge Infrastructure (CNKI), Wanfang Data and VIP Database. The search terms were designed in combination around core concepts (Mindfulness, Mindful Parenting, Parental Burnout), theoretical frameworks (the BR^2 Model / Balance of Risks and Resources Model) and mediating variables (Perfectionism, Rumination, Self-compassion, Parental Self-efficacy, etc.).

The inclusion criteria for literature were explicitly defined as empirical studies that focus on the association between mindfulness and parental burnout, involve variables related to the BR^2 Theory, and provide quantitative data (including cross-sectional studies, longitudinal follow-up studies, randomized controlled trials, and meta-analyses). Such studies shall have research participants being parents of children/adolescents aged 0 to 18 years, with core variables measured by standardized, reliable and valid scales, and their full texts available in both Chinese and English. Exclusion criteria

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include non-empirical studies, studies with inconsistent research samples, incomplete data, obvious methodological flaws, and duplicate publications.

3. Theoretical foundation

The Risk-Resource Balance Theory (BR² Model), proposed by Roskam and colleagues, is a key theoretical model for explaining how parental burnout happens. This model emphasizes that parental burnout stems from a long-term imbalance between "risk factors" and "protective resources" in parenting. When the accumulated effects of risk factors consistently outweigh the buffering capacity of protective resources, burnout occurs [5]. Risk factors refer to any variables that can lead to parental emotional exhaustion, emotional distance from children, and low parenting efficacy. These include personality (e.g., perfectionism), cognition (e.g., rumination), and situation (e.g., lack of social support, excessive parenting demands). Protective resources are variables that buffer the impact of risk factors and replenish psychological resources. They include internal resources (e.g., self-compassion, psychological resilience, self-efficacy) and external resources (e.g., high-quality parent-child relationships, social support).

Based on the BR² framework, mindfulness, as an active regulation strategy, can reshape the risk-resource balance through two pathways. The first is the mediating pathway, where mindfulness indirectly affects burnout through key intermediate variables. The second is the feedback reinforcement pathway, where the interaction between risks and resources amplifies the relieving effects. Using the BR² theory as a framework, this study adopts a comparative review to integrate theoretical and empirical evidence. It clarifies the core variables and mechanisms of each pathway, fills the gap in theoretical integration in existing research, and offers academic references for improving intervention programs.

Within the BR² framework, the classification of risk and resource factors has clear empirical support. Risk factors include parental traits (perfectionism, self-centeredness, anxiety/depression tendencies), cognitive patterns (rumination, negative stress appraisal), and external situations (parenting demands, lack of co-parenting support, high social expectations for parenting). Resource factors include internal psychological resources (self-compassion, self-efficacy, psychological resilience, emotional intelligence, emotion regulation) and external support resources (positive parent-child relationships, perceived social support, cooperative parenting) [6]. These variables together form the system influencing parental burnout. Mindfulness acts as a core moderating variable, running through the entire process of reducing risks and enhancing resources via the "mediating pathway" and the "feedback reinforcement pathway."

4. Findings

4.1. Mediating pathways of mindfulness in alleviating parental burnout

4.1.1. Risk side: reducing perfectionism

Parental perfectionism is a key risk factor for burnout. It appears as parents setting very high standards for their own parenting (self-oriented perfectionism) or feeling too much pressure from society or their partner (socially prescribed perfectionism) [7]. Mindfulness helps reduce burnout by changing perfectionist thinking, which lowers emotional exhaustion. One intervention study with Western middle-class parents found that an 8-week mindfulness program reduced socially prescribed perfectionism. A cross-sectional study from Finland also showed that mindfulness

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weakened self-oriented perfectionism, which then reduced parenting stress [8]. In short, mindfulness can lower risk by reducing perfectionist thoughts, thus helping with parental burnout.

4.1.2. Risk side: reducing rumination

Rumination is another important risk factor for parental burnout. A cross-sectional study with Western parents confirmed that it predicts burnout and also mediates the link between stress and burnout [9]. One longitudinal study clearly pointed out that mindfulness helps parents shift from negative, abstract rumination to more concrete, problem-focused thinking. This change reduces emotional exhaustion in parents [10]. These studies support the pathway of "mindfulness – rumination – burnout," showing that mindfulness eases parental burnout by working on the risk factor of rumination.

4.1.3. Risk side: lowering perceived stress

Perceived stress is a core risk factor that works as a mediator. A meta-analysis confirmed it is strongly linked to burnout across different cultures [11]. A North American longitudinal study showed it predicts burnout over time and found that mindfulness can shift how stress is perceived – from a threat to a challenge. This gives causal evidence for the mediating pathway. A cross-sectional study also supported stress as a factor influencing parental burnout [12].

4.1.4. Resource side: enhancing self-compassion

One of the most important internal forces on the resource side is self-compassion. In a study longitudinal study conducted in Europe, it has been noted that mindfulness has a partial mediating effect: mindfulness positively affects self-compassion which in turn reduces burnout. Technically, mindfulness offers non-judgmental acceptance on which self-compassion is established [13]. A study conducted in China demonstrates that the levels of self-compassion are lower in China. A culture-specific mechanism that aims at lessening self-criticism exists. The moderating impact of the Chinese studies is a bit weaker than of the Western ones [14]. This validates self-compassion as a mediator resource and indicates that it differs across culture.

4.1.5. Resource side: enhancing parenting efficacy

One of the resources that mediates the efficacy of parenting is parenting efficacy. Self-efficacy in parenting is the perception of the parents on whether they can effectively carry out the role of a caregiver and able to manage the issues of parenting. Mindfulness reduces parenting burnout by increasing the resource dimension of self-efficacy of parents. When parents choose the mindfulness approach, the former can concentrate on what is happening here more easily, and understand that they are capable of managing the issues that are brought about in the process of rearing children. The parents are able to see the present force of raising the children as a challenge which can be passed. Many empirical studies have confirmed the positive effect of the resources factor of the self-efficacy of parents in reducing parenting burnout.

4.1.6. Resource side: improving parent-child relationship

Positive parent-child relationships are also a valuable external source of reducing parenting burnouts. Mindfulness can improve the patterns of parent-child interactions by improving parent

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awareness (present awareness) and parent attitude (non-judgemental attitude) consequently, mindfulness training can make parents focus on the current moment during parent-child relationships, which helps to avoid communication problems with their children due to them not living to their own expectations; on the other hand, the non-judgemental attitude of mindfulness can allow parents to accept the personality and behaviour of their children, which can prevent criticism and blame because the child does not live to his/her expectations resulting in an equal and inclusive relationship between parents and children Positive and healthy parent-child relationship is also important in reducing parenting burnout and this is extensively confirmed by empirical research [15].

4.1.7. Resource side: enhancing perceived social support

Mindfulness serves to reduce the effects of parenting burnout, through increasing the perception of external resources, including social support by parents. Social support perception is a subjective perception regarding the social support an individual perceives (family support, friend support and community support) and it is a significant external resource to help in the reduction of parenting burnout [16].

Mindfulness positively influences the perception of social support at two levels, the first, mindfulness decreases the state of egocentrism and contributes to active seeking of social support by parents; the second, mindfulness increases the ability of the parents to perceive the supportive response of those around them and react positively to it, which improves perceptions of social support.

A cross sectional study that included samples of both Eastern and Western cultures established that the mediating role of the social support perception was significant across cultures. Nevertheless, in the Chinese sample, the mediation effect of the perception of the family support was stronger, which may be connected with the attribute of family-centered support system in collectivist cultures.

4.2. Feedback reinforcement pathway

Mindfulness re-tunes the interactive relationship between risks and resources by synergetic effect between possible risks decrease - resources increase or possible resources increase - risks decrease.

It is possible to use the strengthening of protective resources in the process of growing up that will lead to the weakening of the risk factors. As an example, the increase in emotional regulation skill (resource) enhances mindfulness, and, in turn, minimizes rumination and helps to weaken risk factors. The results of a randomized trial were that self-efficacy reported to improve following mindfulness-based intervention resulted in a lower rating of stress, which further decreased caregiver burnout.

Risk reduction has the potential to save on psychological energy, which in turn facilitates the accumulation of resources and in the long-run leads to parenting burnout. A longitudinal research conducted demonstrated that perfectionism can be addressed to improve self-compassion, and thus, lead to better parenting burnout. Research in China indicated that perceived stress can, indeed, be reduced with much success in facilitating the improvement in perceived social support which leads to the alleviation of parenting burnout.

Overall, the feedback reinforcement pathway underlines the two-way connection between the risks and available resources to restructure the balance.

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5. Discussion

The research uses a theory aligned with previously tested research on the usage of mindfulness to reduce parental burnout which is known as the Risk-Resource Balance (BR^2) theory. Mindfulness relieves parental burnout as it reestablishes the dynamic equilibrium between the risk and resource factors. Mindfulness is achieved in two pathways, the mediating transmission pathway and the feedback reinforcement pathway. Nonetheless, in a combination of the studies, it was discovered that the particular impact of these pathways can be different because of the differences in parental individual traits, demographic aspects, and cultural variations.

Mindfulness control of internal risk factors plays a higher role in the intermediate transmission of maternal parenting burnout. This disparity could be due to certain risk factors: Firstly, mothers are generally characterized by greater rumination thinking and conformist perfectionist behavior; Secondly, women are subject to harsher parenting demands and expectations by social and cultural influences hence increasing negative influences caused by internal risk factors like perfectionism and perceived stresses.

The social economic status and family income disparities are also influenced by these two factors to influence the alleviation effect of mindfulness on parenting burnout among parents. The parents in the low-income families also exhibit a greater change in parenting burnout reduction compared to high-income families when provided with mindfulness training. According to the analysis of BR^2 theoretical framework, this could be attributed to the fact that, families with lower social economic status have more external risks and have less external resources. The parents of high-income families experience less burnout in the early years of parenting and are more supported than the ones of the low-income families. Thus, it can cause a greater impact of mindfulness intervention.

The mindfulness is cross-culturally universal and specific in the reduction of parental burnout. The role of burnout alleviation by controlling internal resources (including self-compassion) is especially eminent in individualistic Western societies. This can be in the same manner, as Western culture which focuses on self-acceptance and individual happiness. Conversely, the impact of parents in reducing the burnout is more pronounced in China through an improvement in external resources (including perceived social support). It implies that in the future, when creating mindfulness intervention programs, one must pay more attention to the cultural differences and offer more local intervention programs.

6. Conclusion

Using the Balance between Risks and Resources theory (BR^2) and a method of comparing reviews, this research carefully combines the ways mindfulness helps lower parental burnout. These main findings are identified:

(1) Mindfulness reconstructs the dynamic balance between risks and resources through the integrated pathways of "mediating transmission"and "feedback reinforcement."

(2) Risk-side regulatory pathways: The regulation of perfectionism, rumination, and stress appraisal belongs to the mediating transmission pathway and represents core mediating nodes on the risk side. Their mediating effects demonstrate cross-cultural universality, although specific targets (e.g., types of rumination, core dimensions of stress appraisal) vary across cultures.

(3) Resource-side enhancement pathways: Both internal resources (self-compassion, parenting self-efficacy) and external resources (parent-child relationship, perceived social support) function through mediating effects. Among them, the mediating effect of self-compassion is cross-culturally universal and serves as the core internal resource. The mediating effects of the parent-child

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relationship and perceived social support are moderated by cultural context, with family-related resources (parent-child relationship, perceived family support) playing a more prominent mediating role in Eastern cultures.

(4) The feedback reinforcement pathway is central to synergistic regulation. Through the bidirectional feedback of "resource enhancement → risk reduction" and "risk reduction → resource accumulation," the alleviating effect of mindfulness is significantly greater than that of any single pathway.

(5) Significant gaps remain in current research: First, chain models within the mediating transmission pathways—such as "mindfulness → self-compassion → rumination → parental burnout" or "mindfulness → perceived social support → parent-child relationship → burnout"—have not yet been empirically validated. Second, research across cultures and within special populations remains scarce. The specificity of these pathways across different cultural backgrounds and family types (e.g., single-parent families, skip-generation families, families with children with special needs) has not been sufficiently explored.

There are still certain limitations of this study. (1) The fact that cross-sectional studies, longitudinal studies, and randomized controlled trials were incorporated complicated the establishment of causality, as the PRISMA guidelines were followed. The correlations were observed in the cross sectional data, but the order or direction was not possible. (2) English and Chinese studies only were considered. It is possible that the studies conducted in other languages (French, German, Spanish, or Japanese) were excluded. (3) Most of the studies were only conducted based on self-reporting. This enhanced the chances of methodological and reactionary bias. In addition, the sizes of certain randomized controlled trials were extremely small.

Due to the constraints of the present research, future research can also develop the theoretical and empirical studies in more detail. Improve the cross-cultural flexibility studies of the BR^2 theory, investigate the cultural peculiarities of risk and resource considerations, and refine the local use of the theory. Regarding empirical research, perform longitudinal tracking studies with high-volume samples and multiple time points to elucidate the causal time dependence of the path and assess the effectiveness of mindfulness intervention in the long-term to ensure the subjectivity of the self-reporting method and enhance the confidence of the results of the research; use a multi-method research design, which unites behavioral observations, physiological indicators, and other objective data to account for the subjectivity of the self-reporting methods.

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