



RESEARCH ARTICLE / ARAŞTIRMA YAZISI

# The Role of Child Emotion Regulation, Parent Emotion Regulation, and Co-Parenting in the Behavioral Problems of Preschool Children

## Okul Öncesi Çocuklarının Davranış Problemlerinde Çocuk Duygu Düzenleme, Ebeveyn Duygu Düzenleme ve Birlikte Ebeveynliğin Rolü

Zehra Ertuğrul Yaşar<sup>1</sup>, Neslihan Yaman<sup>2</sup>

### Abstract:

Studies on behavioral problems in early childhood typically focus on the mother-child relationship, children with special needs, and emotion regulation skills. However, other factors have not been sufficiently addressed. This research aims to expand the scope of variables traditionally examined in the context of dyadic relationships, by investigating the role of children's and parents' emotion regulation skills and co-parenting in predicting behavioral problems in Turkish preschoolers. Data were collected from 502 parents of children aged three to six. To measure the parents' emotion regulation skills, the Difficulties in Emotion Regulation Scale Short Form was used, while co-parenting was assessed using the Co-parenting Scale. The children's emotion regulation skills were measured using the Emotion Regulation Checklist, and any behavioral problems in children were assessed using the Preschool and Kindergarten Behavior Scale. Analyses revealed that behavioral problems were significantly related to the child's and parents' emotion regulation skills, and co-parenting. It was found that 22% of preschool children's behavioral problems were explained by the child's emotion regulation skills, the emotion regulation difficulties experienced by the parents, and co-parenting. In families where the child's emotion regulation skills were high, parents had fewer emotion regulation difficulties, and where co-parenting existed, preschool children had fewer behavioral problems. These results highlight the role of the emotion regulation skills of children and parents, as well as the quality of co-parenting, in the behavioral problems of preschool children which suggests a family centered perspective on prevention and intervention for preschool children's behavioral problems.

**Keywords:** Preschool period, Emotion regulation, Co-parenting, Behavioral problems.

<sup>1</sup>Asst. Prof., Yalova University, Faculty of Humanities and Social Sciences, Department of Psychology, E-mail: zehra.yasar@yalova.edu.tr, Orcid Id: 0000-0003-4543-3662

<sup>2</sup>Asst. Prof., Yalova University, Faculty of Humanities and Social Sciences, Department of Psychology, E-mail: neslihan.yaman@yalova.edu.tr, Orcid Id: 0000-0003-0324-2390

**Address of Correspondence/Yazışma Adresi:** Zehra Ertuğrul-Yaşar, Yalova University, Faculty of Humanities and Social Sciences, Department of Psychology, Yalova, Türkiye, zehra.yasar@yalova.edu.tr.

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**Öz:**

Okul öncesi dönemde davranış problemleri üzerine yapılan çalışmaların genellikle anne-çocuk ilişkisine, özel gereksinimli çocuklara, duygu düzenleme becerilerine odaklandığı, ancak aile bağlamında diğer faktörler üzerinde yeterince durulmadığı görülmektedir. Bu araştırma bugüne kadar ikili ilişkiler olarak ele alınan söz konusu değişkenleri daha geniş bir yelpazede ele alarak, çocukların ve anne babaların duygu düzenleme becerilerinin ve birlikte ebeveynliğin, okul öncesi çocukların davranış problemlerini yordama gücünü ortaya koymayı amaçlamaktadır. Araştırmanın verileri 3-6 yaş arası çocuğu olan 502 ebeveynden toplanmıştır. Ebeveynlerin duygu düzenleme becerilerini ölçmek için Duygu Düzenleme Güçlüğü Ölçeği Kısa Formu, birlikte ebeveynliği ölçmek için Birlikte Ebeveynlik Ölçeği, çocukların duygu düzenleme becerileri ölçmek için Duygu Düzenleme Ölçeği ve çocukların davranış problemlerini ölçmek için Okul Öncesi ve Anaokul Davranış Ölçeği kullanılmıştır. Analizler davranış problemlerinin, çocuğun ve ebeveynin duygu düzenleme becerileri ve birlikte ebeveynlik ile ilişkili olduğunu göstermiştir. Analizler sonucunda çocuğun davranış problemlerinin %22'sinin; çocuğun duygu düzenleme becerileri, ebeveynlerinin duygu düzenleme güçlükleri ve birlikte ebeveynlik ile anlamlı olarak yordandığı bulunmuştur. Buna göre çocuğun duygu düzenleme becerileri yüksek, ebeveynlerin deneyimlediği duygu düzenleme güçlükleri düşük ve birlikte ebeveynlik kalitesi yüksek olduğunda, okul öncesi çocuklarda görülen davranış problemleri azalmaktadır. Tüm bu sonuçlar okul öncesi dönemdeki çocukların davranış problemlerinde, çocukların ve ebeveynlerinin duygu düzenleme becerileri ile birlikte ebeveynlik kalitesinin rolüne dikkat çekerek, okul öncesi çocukların davranış sorunlarına yönelik önleme ve müdahale çalışmalarında aile merkezli bir bakış açısı önermektedir.

**Anahtar Kelimeler:** Okul öncesi dönem, Duygu düzenleme, Birlikte ebeveynlik, Davranış problemleri

**Introduction**

Parent-child interactions, along with parental cooperation, play a crucial role in shaping children's ability to understand, express, regulate, and control emotions. These emotional competencies are fundamental to children's overall development, behavioral characteristics, and the formation of their social relationships (Garner et al., 2007). Behavior, as the expression of emotions and thoughts in action, may result in various forms of maladaptation when there is a disruption in the balance between an individual's characteristics and their environment (Öz, 2005). Behavioral problems, which reflect socially unacceptable actions, are influenced by numerous factors (Gomby et al., 1999), including parenting stress (Mak et al., 2020), parental attitudes (Sangawi et al., 2015), child maltreatment (Misheva et al., 2017), and social environment (Paz et al., 2005). Understanding and preventing childhood behavioral problems is of great importance, as these issues can serve as significant predictors of various challenges in adolescence and adulthood (Moffitt et al., 2002). Studies on childhood behavior issues emphasize the role of parenting practices, family interaction types, and the determinants of emotion regulation skills. The appropriate expression of positive and negative emotions, the ability to control the accompanying behavior, and the exhibition of socially appropriate behavior depend on emotional regulation (Bronson, 2000). Deficits in emotion regulation during early childhood serve as critical predictors of behavioral problems (Eisenberg & Fabes, 1992; Eratay, 2011; Güven & Erden, 2017).

Studies on emotion regulation in preschool typically focus on the mother-child relationship (Paley & Hajal, 2022; Seçer, 2017) but with the development of the family systems theory, there has been a shift toward recognizing that families consist of interdependent members, and each member influences the others. Research suggests that the quality of the parent-child relationship and the attachment bond formed in early childhood are crucial for the child's emotional development (Calkins, 2007). Another important contribution is the parents' efforts to manage their child's emotions. Considering the family's overall

emotional climate, it becomes evident that the parents' ability to regulate their own emotions is another important factor in the child's emotional development. Studies have shown that children of parents who struggle with emotion regulation also face difficulties in regulating their own emotions, leading to increased behavioral problems (Crespo et al., 2017; Hajal & Paley, 2020). Children learn emotion regulation by observing their parents and being influenced by the family's emotional climate and their parents' emotional responses (Morris et al., 2007). Research findings emphasize that both parents serve as significant role models, regardless of whether they are mothers or fathers. While maternal parenting practices and emotional socialization behaviors are considered key predictors of children's emotion regulation development (Denham et al., 1991), existing studies—though relatively limited in number—suggest that fathers' emotion regulation skills and their interactions with their children play a crucial role in shaping children's own emotional competencies (Crespo et al., 2017; Karaduman & Şahin Zeteroğlu, 2024). However, research also indicates that fathers may respond differently to their children's emotional expressions compared to mothers, often aiming to minimize problems or encouraging inhibitory responses to their children's displays of distress (Cassano et al., 2007). The existing literature predominantly focuses on the influence of mothers' emotion regulation skills on children's emotional development, while studies directly examining the role of fathers remain limited. This disparity makes it challenging to directly compare the effects of mothers and fathers. However, some research has explored the impact of parental emotion socialization behaviors on children's emotion regulation skills. For instance, one study found that both mothers' and fathers' punitive, magnifying, neglectful, and soothing responses were negatively associated with children's emotion regulation abilities (İnce, 2020). This finding suggests that negative emotion socialization behaviors from both parents can adversely affect children's emotion regulation development. Additionally, a study by Jeon and Lee (2016) investigating the relationship between father-child

interactions and children's emotion regulation in the preschool period revealed that positive parenting and engagement by fathers significantly predicted better emotion regulation in children. These findings underscore the crucial role of fathers' parenting practices in fostering children's emotional development. In short, parents' expression of emotions and regulation of their feelings offer significant learning opportunities as children model how to experience and cope with emotions.

Just as children have various determinants of their emotional regulation abilities, so do parents. One such determinant is the concept of co-parenting, which refers to the relationship between parents and/or individuals assuming parenting roles. Co-parenting encompasses mutual agreement, cooperation, reciprocal support, joint action, and harmony between partners in raising children (McHale & Fivaz-Depeursinge, 2010). Research indicates that co-parenting increases children's sense of predictability, order, and security (McHale et al., 2000), and that there are significant relationships between co-parenting and children's internalizing and externalizing issues as well as their social functioning (Teubert & Pinquart, 2010). The lack of effective co-parenting can lead to conflict between partners (Fincham & Hall, 2005), increase parenting stress (Kang et al., 2020), and directly and indirectly affect the child's social, emotional, and behavioral development (Fincham & Hall, 2005). High levels of parenting stress are associated with dysfunctional parenting behavior, such as punishment toward the child (Sanders & Woolley, 2005), and such dysfunctional parenting can lead to emotional and behavioral adaptation problems in children (Crnic et al., 2005). Better emotion regulation traits in parents are linked to better parenting quality and positive co-parenting characteristics as well as lower levels of negative emotional and behavioral responses in children (Yan et al., 2021). Moreover, studies showed that supportive co-parenting is associated with positive emotions, while poor co-parenting characteristics can lead to various emotional issues in children (Feinberg, 2003; Karreman et al., 2008).

Despite significant theoretical contributions, few studies have directly examined the role of parental emotion regulation in the development of children's emotion regulation. Existing research has primarily focused on mother-child relationships, children with special needs, and emotion regulation skills, while other factors within the family context have not been sufficiently addressed. In this regard, investigating the concept of co-parenting—specifically how parents collaborate and share responsibilities alongside their emotion regulation skills—appears to be crucial for achieving a more comprehensive understanding of parent-child relationships. This study aims to broaden the scope of previously examined variables, which have typically been considered in dyadic relationships, and to explore the predictive power of emotion regulation skills in both children and parents, as well as co-parenting, in forecasting behavioral problems in preschool children. Accordingly, the research seeks to answer the question: 'Do children's emotion regulation skills, parents' emotion regulation skills and co-parenting significantly predict behavioral problems of preschool children?', thereby contributing to prevention and intervention efforts for children's behavioral issues, as well as to the promotion of functional emotional socialization activities.

## Method

Since the correlational survey method does not aim to determine the existence and/or degree of change between two or more variables, the correlational survey model was utilized in this study. Predictive correlational research examines relationships between dependent and independent variables to estimate one variable based on another (Karasar, 2008). Accordingly, this study's independent variables were children's and parents' emotion regulation skills, and co-parenting, while the dependent variable was children's behavioral problems.

## Participants

Data were collected via an online questionnaire using the convenience sampling technique. A total of 502 parents participated in the study, including 83 fathers (average age = 34.5) and 419 mothers (M = 33.5), all of whom had children aged 3-6. 42% of the children were boys, and 58% were girls. Of the children 27% were three, 29% were four, 29% were five, and 15% were six years old. A total of 65% of the parents had at least a bachelor degree. Of the parents, 41% worked and 96% were married. Of the participants 6% indicated a low, 86% indicated a medium, and 8% indicated a high socioeconomic level. 42% of parents had one, 36% had two, 13% had three, and 9% had four or more children. Among the participants 61% of the fathers and 55% of the mothers stated that they shared the responsibility of childcare with their spouses.

## Measures

### Demographic Information Form

This form is used to collect demographic information regarding the child (age and gender) and parents (education, occupation, marital status, SES and number of children).

### Difficulties in Emotion Regulation Scale Short Form

This scale was used to identify parents' difficulties in emotion regulation. It was developed by Bjureberg et al. (2016) and adapted and validated for reliability and validity by Yiğit and Guzey-Yiğit (2019). The Cronbach's alpha coefficient value for the scale is .92. It is composed of the sub dimensions of Clarity, Goals, Impulse, Strategies, and Non-acceptance. Parents were asked to rate sixteen statements on a 5-point Likert scale (1=almost never and 5=almost always). In this study, the Cronbach's alpha coefficient of the scale was calculated as .94.

### Co-Parenting Scale

The Co-parenting Scale (Özdemir et al., 2021) was used to measure the level of co-parenting relationships among parents. The scale consists of forty-six items and six dimensions, namely Co-parenting Agreement, Co-parenting Conflict, Co-parenting Support, Co-parenting Undermining, Co-parenting Division of Labor, and Joint Management of Family Relationships. The Cronbach's alpha coefficients for the subdimensions of the scale range from .87 to .95. The parents were expected to rate the statements on a 4-point Likert scale (1 = not at all suitable for us and 4 = extremely suitable for us), with higher scores indicating a higher level of co-parenting. In this study, the total Cronbach's  $\alpha$  value was calculated as 90.

### The Emotional Regulation Checklist

The Emotion Regulation Checklist was used to measure the children's emotion regulation skills. The scale was developed by Shields and Cicchetti (1997), and adaptation, validity, and reliability studies were completed by Batum

and Yağmurlu (2007). The internal consistency coefficient of the scale was determined as .75. The scale consists of twenty-four items and two subscales, namely Lability/Negativity and Emotion Regulation/Control. Parents are asked to evaluate statements on a 4-point Likert scale (1 = never and 4 = almost always). High scores on the negativity dimension of the scale indicate high emotion regulation problems, whereas high scores on the emotion regulation dimension indicate high emotion regulation skills. In this study, the Cronbach's alpha coefficient was .72 for the Lability/Negativity subscale and .71 for Emotion Regulation/Control subscale.

#### Preschool and Kindergarten Behavior Scale

This scale was developed by Merrell (2003) and is used to identify behavioral problems and social abilities in children aged 3-6. Adaptation, validity and reliability analyses were conducted by Fazlıoğlu et al. (2011). The Cronbach's alpha reliability values for the scale and its subscales were found to be above .70. The scale consists of two subscales; namely social skills and problem behavior. Since we focus on problem behavior rather than social abilities in this study, only a 41-item problem behavior scale was used. Parents were asked to rate statements on a 4-point Likert scale, where 0=never and 3=often. In this study, the Cronbach's alpha value was calculated as .91.

#### Procedure

Approval from Yalova University Ethics Committee was obtained (Number: 2024/122, Date:16.05.2024). Data was collected via Google Forms through social media. Participation was voluntary, and confidentiality was assured. Informed consent was obtained from all the participants.

#### Data analysis

In this study, the data collected through the scales were analyzed using SPSS 22. To evaluate whether the data are suitable for multiple regression analysis, the normality and outliers were examined. The Mahalanobis distance identified outliers, leading to the removal of fourteen items of data. In addition, data point with a Z-score greater than 3 (or less than -3) is considered an outlier and eliminated. To check normal distribution, Kurtosis and Skewness values were examined, and the results revealed that these values were normally distributed between -1 and +1 (Tabachnick & Fidell, 2013). Before the analysis, the VIF and TV values were checked for multicollinearity. The results show that the tolerance values of the independent variables are high, and the VIF values are less than ten. These findings indicate that there is no multicollinearity issue among the independent variables. Therefore, it has been deemed appropriate to use parametric tests. Pearson correlation analysis was conducted to determine the relationships between the variables, followed by multiple linear regression to examine predictive relationships.

#### Results

First, the relationships between the demographic and the main variables were examined by Pearson correlation analysis (see Table 1). The education level was associated with lability/negativity ( $r = -.22, p = .000$ ), emotion regulation ( $r = .25, p = .000$ ), and coparenting ( $r = .13, p = .004$ ). There is a significant positive relationship between the number of children in the family and the child's lability/negativity scores ( $r = .11, p = .01$ ). SES was linked with both the child's lability/negativity ( $r = -.13, p = .004$ ) and co-parenting ( $r = .11, p = .013$ ). As behavioral problems showed no significant relationships with demographic variables, the demographic variables were not included in the subsequent analyses.

**Table 1.** *The relationship between the Selected Demographics, Children's and Parents' Emotion Regulation, Co-parenting and Behavioral Problems.*

Variables	1	2	3	4	5	6	7	8	9
<b>1. Gender</b>	1	-0.029	0.038	-0.005	-0.056	-0.015	-0.003	0.061	-0.056
<b>2. Education</b>	-	1	0.17**	-0.029**	-0.22**	0.25*	0.13**	0.03	-0.063
<b>3. SES</b>			1	-0.082	-0.13*	0.081	0.11*	-0.025	-0.043
<b>4. Number of children</b>				1	0.114*	-0.059	-0.026	0.021	0.025
<b>5. The Child's Lability/Negativity</b>					1	-0.434**	-0.118**	0.247**	0.396**
<b>6. The Child's Emotion Regulation/Control</b>						1	0.258**	-0.11*	-0.256**
<b>7. Co-parenting</b>							1	-0.091*	-0.162**
<b>8. The Parents' Emotion Regulation Difficulties</b>								1	0.33**
<b>9. Behavioral Problems of the Children</b>									1

Note. \* $p < .05$ ; \*\* $p < .01$

A significant positive correlation was found between the children's behavioral problems and the lability/negativity subscale of the children's emotion regulation scale, as well as the parents' emotion regulation difficulty scores. The scores of the emotion regulation control subscale of the children's emotion regulation scale and the coparenting

scores were significantly negatively correlated with behavioral problems.

Multiple linear regression analysis was applied to determine the predictive effect of the independent variables on the children's behavioral problems. The results of the regression analysis are presented in Table 2.

**Table 2.** Summary of Multiple Regression Analysis in which Problem Behavior was predicted from the Child's and the Parents' Emotion Regulation and Coparenting.

Predictor	B	SE	Beta	t	p	CI
Constant	22.70	9.42		2.40	.02	[4.18-41.222]
The Child's Lability/Negativity	14.05	2.21	.28	6.34	.00	[9.70-18.405]
The Child's Emotion Regulation/Control	-3.11	1.77	-.08	-1.76	.08	[-6.59-.365]
Co-parenting	-.11	.05	-.09	-2.29	.02	[-.20--.016]
The Parent's Emotion Regulation Difficulties	.38	.06	.25	6.03	.00	[.26-.385]

According to the model, 22% of the preschool children's behavioral problems were explained by the child's emotion regulation skills, the emotion regulation difficulties experienced by the parents, and coparenting;  $F(498,4) = 37.09, p = .000$ . The model indicates that the parents' difficulties in emotion regulation, and children's lability/negativity positively and co-parenting negatively predict the children's behavioral problems.

### Discussion

This study aims to investigate the relationship between children's and parents' emotion regulation skills, co-parenting and behavioral problems in Turkish families. Since studies have focused mostly on mother-child dynamics, this study also investigates co-parenting to take a family centered perspective on behavioral problems of preschoolers. The results revealed that the children's behavioral problems were significantly predicted by both their own and their parents' emotion regulation skills, as well as coparenting. It was found that children in families with better emotion regulation and higher co-parenting quality exhibited fewer behavioral problems.

No significant relationships were found between the demographic variables (such as the child's age, gender, parents' education, SES, number of children) and behavioral problems. However, education was negatively related to the parents' emotion regulation problems and positively related to the children's emotion regulation/control and co-parenting. As the number of children increases, so does the children's emotional regulation problems. As the socioeconomic level increases, the children's emotional regulation problems decrease, and co-parenting increases. Although no direct relationship is observed between behavioral problems and the demographic variables, these variables seem to affect distal outcomes.

The finding that a child's emotion regulation skills are related to behavioral problems is consistent with the literature (Batum & Yağmurlu, 2007; Eisenberg et al., 2010; Thomsen & Lessing, 2020). Behavioral problems were found to be negatively correlated with the lability/negativity (for example, exhibits wide mood swings; is easily frustrated) and positively correlated with the emotion regulation/control (for example, can say when s/he feels sad, angry or mad, fearful or afraid; responds positively to neutral or friendly overtures by peers). This study showed that the children's behavioral problems were significantly predicted by their lability/negativity level. This result suggests that emotion regulation/control and lability/negativity have unique relations to behavioral problems, in which a lack of flexibility, mood lability, and

the dysregulated negative affect are especially a risk factor for Turkish preschoolers' behavioral problems.

Parents' emotion regulation difficulties also predicted children's behavioral problems, which is consistent with previous research linking parental difficulties to attention deficits and hyperactivity, behavioral, emotional and peer problems (Oddo et al., 2020); emotion regulation problems (Bilge & Sezgin, 2020); and aggressive behavior (Ramsden & Hubbard, 2002). In contrast, parents with high emotion regulation skills have been found to have children who exhibit fewer problematic behavioral incidents (Kara & Dikici-Sığırmaç, 2022). Parents with poor emotion regulation may struggle to teach their children emotion regulation strategies, provide external emotional social support, and serve as role models for learning alternative emotion regulation strategies, potentially affecting the overall emotional climate of the family (Morris et al., 2007).

This study found that children in families with high co-parenting quality experience fewer behavioral problems. High quality of co-parenting involves support, harmony, agreements, and co-operation between parents, as well as their joint actions, rather than the equal sharing of parenting roles and responsibilities. In the literature, co-parenting has been found to be associated with behavioral problems. In their meta-analysis Teubert and Pinquart (2010) report that an increase in authoritative parenting predicts both internalizing and externalizing behavioral problems, and this predictive relationship continues in the long term. In another meta-analysis, a significant relationship was found between co-parenting and behavioral problems (Zhao et al., 2022). In this relationship, it seems possible to think both of direct and indirect effects. The inability to achieve co-parenting increases conflict between spouses (Fincham & Hall, 2005), parenting stress (Kang et al., 2020), and anxiety (Metz et al., 2018) and determines marital satisfaction and parenting behavior (Pedro et al., 2012). In turn, this may indirectly determine a child's behavioral problems.

In conclusion, this research has shown that members of a family system predict a child's behavioral problems, leading to several important implications for future theoretical and practical studies. In the practical field, the results of this research highlight the importance of parents' emotion regulation strategies as well as the quality of co-parenting in reducing or preventing behavioral problems in children. The development of a child's emotion regulation skills, particularly the monitoring, control, and management of negative emotions, can be effective in reducing the child's behavioral problems. In future

research, examining certain concepts, such as the sibling effect, co-parenting with grandparents, genetic-environment interactions is valuable for understanding emotional regulation and behavioral problems in children.

This study also has several limitations. Research data were collected online via self-reports. Considering the high educational levels of the parents in this study, in future research, working with participants from different socioeconomic backgrounds is necessary for the generalizability of the findings. The number of participating fathers is quite low compared to mothers. When analyses were conducted separately for mothers and fathers, it was found that the parents' co-parenting scores had different relations with children's behavioral problem scores. In line with the overall analysis, only mothers' co-parenting scores significantly predicted children's behavior problems. The higher number of mothers compared to fathers may have led to a more pronounced effect of mothers and caused the overall analysis to reflect a greater influence of mothers. The fathers' co-parenting may not have reached statistical significance due to the lower power resulting from the smaller sample size of fathers. The lower number of fathers may make it more difficult to detect a meaningful effect. Alternatively, the influence of fathers' co-parenting perceptions on children's behavioral problems may not be as pronounced as that of mothers' perceptions. However, this does not imply that fathers' co-parenting perceptions are unimportant. The effect of fathers' co-parenting on children's behavioral problems could be more indirect or less pronounced compared to mothers. Due to the disparity in the number of mothers and fathers, the total group analysis is statistically stronger and reflects the combined effect of both parents. Future studies should aim for a more balanced distribution of mothers and fathers. Additionally, the research link was distributed by university students from different hometowns via social platforms, resulting in a representative and geographically spread sample. However, the exact number of samples from different locations is unclear, since our demographic questions do not address this aspect. The cross-sectional design

prevents causal inferences. The relationship between the parents and children may be bidirectional, and while the parents' emotion regulation skills can affect the children's problematic behavior, the presence of behavioral problems in the children can also increase the emotion regulation difficulties experienced by the parents, thereby reducing the overall quality of parenting. In the future, longitudinal studies are needed to clarify the causal relationships.

## Declarations

### Ethical Approval

This research was conducted in accordance with the guidelines published by the American Psychological Association and was approved by Yalova University Ethics Committee (Number: 2024/122, Date:16.05.2024) Informed consent was obtained from all the individual participants included in the study.

### Consent for publication

Not applicable.

### Data Availability

The data that supports the findings of this study are available from the corresponding authors upon reasonable request.

### Conflict of interest

The authors declare that they have no conflict of interest.

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### Author Contributions

ZEY contributed to the conceptualization, data collection, analysis, writing, translation and editing. NY contributed to the conceptualization, data collection, writing, translation and editing. All authors read and approved the final version of the manuscript.

### Thanks

Not applicable.

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