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Perceived Parental Autonomy Support, Psychological Control, and Grit among High Schoolers in Pakistan

Najia Zulfiqar, Hifza Akram, Kifayat Khan[1]

Abstract

Parent-adolescent relationships facilitate or debilitate the development of perseverance and interest to achieve long-term goals. This question is addressed by examining the role of perceived maternal and paternal autonomy support and psychological control in grit development among high schoolers. Two factors of grit, i.e., perseverance of effort and consistency of interest, are separately measured. Participants were 300 grades 9-12 high school students aged 15-19. Data were collected on self-report measures of the Perceived Parental Autonomy Scale and Grit-Original Scale. Findings show that perseverance of effort and consistency of interest have a positive relationship with parental autonomy support and a negative relationship with psychological control. Autonomy support was a positive predictor, while psychological control was a negative predictor of grit. Boys and girls had a homogenous perception of maternal and paternal behaviors. Boys exhibited more grit than girls. The findings offer practical guidelines to parents to adopt autonomy support behaviors for grit development among adolescents.

Keywords: adolescents' gender, consistency of interest, grit, parental autonomy support, perseverance of effort, psychological control.

1 Najia Zulfiqar PhD Assistant Professor, Department of Psychology The University of Haripur, KPK, Pakistan. ORCID: 0000-0002-0649-7877 Email: najia.zulfiqar@uoh.edu.pk
Hifza Akram Lecturer Department of English Abbottabad University of Science and Technology. ORCID: 0009-0008-1384-978X Email: akram.hifza@yahoo.com
Kifayat Khan Assistant Professor, Department of Education The University of Haripur, KPK, Pakistan. ORCID: 0000-0001-5826-0524 Email: kifayatkhan@uoh.edu.pk
* Corresponding Author: Dr. Najia Zulfiqar

Introduction

The study of parenting behaviors has drawn the attention of scholars in the last two decades of the twentieth century. Scholars have examined many conceptualizations of parenting behaviors, practices, and styles and their outcomes for children and adolescents. It is well-known that social context at home and school facilitates or debilitates adolescents' behavior regulation. However, less is known about the contextual effects of parents' supportive or controlling behaviors on adolescents' behaviors, such as grit. Grit is the pursuit of the highest goals of endurance. Duckworth et al. (2007, p.1088) defined grit as "an ongoing effort to achieve a long-term goal" with the help of two constructs: (a) perseverance of effort and (b) consistency of interest. Perseverance of effort refers to "an individual's innate ability to exert a high level of sustained or enduring long-term effort to pursue a personal or professional goal despite being confronted with setbacks or failures" (p.1088). Consistency of interest, on the other hand, refers to "an individual's tendency to maintain a focused interest in a personal or professional goal over time" (Duckworth et al., 2007, p.1088). Existing studies have examined grit as a unitary construct or a predictor of educational outcomes. The present study examines grit as an outcome variable and further elaborates on its two factors.

Grit is a non-cognitive factor and overlaps with other constructs. Muenks et al. (2017) observed the factor structure of grit and reported interchangeable use of grit with related concepts, such as self-regulation, self-control, and engagement. The predictive effects of grit varied across samples from high school and college students, for instance, high academic achievement, high probability of academic retention, and graduation rate (Duckworth et al., 2007; Muenks et al., 2017). Two meta-analyses concluded that grit predicts high school students' academic engagement, performance, and course or program retention without changing their goals (Lam & Zhou, 2019; Saleh et al., 2019). Hill et al. (2016) extrapolated that grittier individuals have positive emotionality and a sense of purpose in life, leading to goal direction and commitment.

Parenting is globally assessed with multiple conceptualizations of parenting behaviors. Steinberg and colleagues (1992, p.1267) defined psychological autonomy as "the extent of parents' use of democratic and noncoercive ways to discipline children and encourage independence and individuality among them." In contrast, psychological control refers to "parents' attempts to intrude on the psychological and emotional development of children" (Barber, 1996, p. 3296). Later, Grolnick and Pomerantz (2009, p. 167) categorized parenting into autonomy-supportive and controlling parenting styles. The autonomy-supportive parenting style is "where parents encourage children to take the initiative to solve problems independently

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and take children's perspective." A controlling parenting style is "forcing children to meet demands, solving problems for children, and taking a parental rather than the child perspective."

According to Grolnick and Pomerantz (2009), parental autonomy support has six factors. Autonomy support has three sub-factors: offering choice within certain limits, explaining the reasons behind the rules and demands, and being aware of, accepting, and recognizing the child's feelings. Psychological control also has three sub-factors: inducing guilt, threats to punish, and encouraging performance goals. Examples of supportive behaviors include giving children the freedom to make their own decisions, explore interests, and test their potential. Such parents acknowledge and accept their children's feelings, emotions, and opinions. Examples of controlling behavior include enforcing personal decisions on children and curbing their freedom with the use of domination and interference. Such parents rely on pressure, criticism, and punishment and induce guilt (Grolnick & Pomerantz, 2009).

Ryan and Deci's (2000) self-determination theory (SDT) postulates that an individual's social environment leads to satisfaction or frustration of the basic psychological needs, e.g., autonomy, well-being or ill-being, and growth or stagnation. From the SDT perspective, parental autonomy-granting promotes self-regulation and well-being among adolescents through motivational processes. In contrast, psychological control hinders behavioral regulation for learning, college attendance, and well-being (Niemiec et al., 2006). SDT has crucial educational implications, and empirical evidence confirms that an autonomy-supportive environment, such as grit fosters optimal development (Ryan & Deci, 2000). It also increases intrinsic motivation for learning and higher academic performance (Niemiec & Ryan, 2009).

Relationship between Perceived Parental Autonomy Support and Grit

Literature provides empirical evidence for perceived parental autonomy support as a positive correlate of grit and parental control as a negative correlate of grit. Psychologically controlling parents produce relationship insecurity and a lack of trust among adolescents that consequently impairs the development of competencies, autonomy, and relatedness. Soenens et al. (2007) and Barber (1996) have extrapolated differential outcomes of parenting behaviors for children and adolescents. More specifically, research with participants from different countries has traced the association between parental autonomy support and grit. A study with Taiwanese higher school students examined the predictive role of perceived psychological and social support from family on grit. They found that family support positively

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predicted grit, and high-performing students were grittier than the low or average performers (Lin & Chang, 2017). In another study with more than 600 Filipino high school students, parental and family relatedness significantly positively affected grit, particularly in the consistency of interest (Datu, 2017). Christopoulou et al. (2018) systematic review of 29 studies on the role of grit in predicting educational outcomes revealed that family relationships improve grit. Lan et al. (2019) reported a positive effect of parental autonomy support on grit among Tibetan and Han samples.

Howard et al. (2019) examined the role of helicopter parenting and accepting and involved parenting on grit among US college students. Findings were consistent with the existing literature that overparenting was predictive of adverse outcomes and that college students had low grit to succeed in the face of adversity and college stressors. College students who perceived their parents as more accepting and involved scored high on grit, which was predictive of their college success. Moreover, grit was a significant positive mediator in the association between overparenting and college success (Howard et al., 2019). Another study found that parents' academic socialization was a positive predictor, and parents' psychological control was a negative predictor of perseverance of effort and consistency of interest among Chinese high school students (Wei & Liu, 2022).

Tangmunkongvorakul et al. (2022) measured connectedness with parents regarding emotional and mental support among Thai students. Adolescents who perceived more parental support were grittier than those with negative parental connectedness ratings. Recently, a study found that parental autonomy support was positively correlated with grit, and grit was positively correlated with achievement motivation (Du et al., 2023). There are scant studies that have examined gender differences in grit. Tangmunkongvorakul et al. (2022) reported that adolescent girls have lower grit scores than boys. In contrast, Britto et al. (2023) found that Indian middle and high school female students' had higher grit than their counterparts.

Adolescence is a transition period marked by multiple influences from parents, peers, and the community. Literature shows many empirical studies with children and emerging adults in primary school and college years. However, there are few studies on adolescents in high school (Britto et al., 2023; Lin & Chang, 2017). Parental behaviors of autonomy support and psychological control affect adolescents more than adults, which makes it essential to explore these phenomena among adolescents. Another significance of the present study is to examine the persistence of effort and consistency of interest as factors of grit, as Duckworth et al. (2007) explained. Despite increasing interest in grit globally, studies could only trace an interconnection between parental behaviors and grit among children or adults. A meta-analysis

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shows that many previous studies have examined grit as a composite variable (Crede et al., 2016), whereas this study examines the persistence of effort and consistency of interest, addressing a gap in the research literature. The present study examines the interrelationship among perceived parental autonomy support, psychological control, perseverance of effort, and consistency of interest among Pakistani high schoolers. We also examined gender differences in the study variables in the male-dominating Pakistani society, where adolescent boys perceive and receive more autonomy support (Saleem et al., 2017). The following hypotheses are tested to investigate the intercorrelation among study variables.

1. Perseverance of effort and consistency of interest have a positive relationship with parental autonomy support and a negative relationship with psychological control among high schoolers.
2. Boys will have a higher level of perceived parental autonomy support and grit and a lower level of perceived psychological control than girls.

Method

Participants

Five high schools were shortlisted in Haripur city, and their administrators were contacted for permission to collect data. Above 300 students were selected through the purposive sampling technique in Fall 2021 and provided with data forms. The inclusion criteria were full-time high school students at a private and those living in an intact, nuclear family with both parents. Participants were in grades 9-12, aged 15-19 years. Of 326 students, 26 forms were discarded and not included in the data pool. An equal number of boys (n = 150) and girls (n = 150) were shortlisted from clean and complete data. A few students (n = 17) did not return data forms, and others (n = 9) left them incomplete.

The reason for choosing private school settings is to get a more consistent and homogenous sample, lowering the chances of variance due to varied population characteristics and participants' socioeconomic status differences. Students in government schools often have a low socioeconomic status, which influences parenting behaviors, home environment, and access to educational resources. Besides, it was easier to gain informed consent from the administrators of private schools. The rationale for selecting of adolescents in nuclear families is to gain more precise insights into the critical factors that shape parent-adolescent relationships and how autonomy support is perceived, ultimately contributing to a more comprehensive understanding of adolescent development within this family structure. The exclusion criteria included being a middle school or college student, enrolled in

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government institutions, parents not living together, having a combined family, and students living with a single parent, stepparent, grandparent, or uncle/aunt. Thus, 326 students who fulfilled the inclusion criteria were shortlisted for the study, and other students were told to leave the questionnaire blank.

Measures

Perceived Parental Autonomy Support Scale (P-PAS)

Mageau et al. (2015) developed P-PASS to examine Grolnick and Pomerantz's (2009) constructs of autonomy-supportive and controlling parenting among adolescents and emerging adults. It investigates how adolescents agree with their parents' autonomy-supporting and controlling behaviors. It has two subscales and 24 items. Each item had separate response options - one for the mother and another for the father. A sample item of the autonomy support subscale is "My parents encourage me to take an initiative." A sample item of the psychological control subscale is "My parents often threaten to punish me to keep me in line." Both subscales measure psychological and behavioral aspects of perceived parenting. A 7-point Likert scale with response options ranging from "*do not agree at all*" to "*very strongly agree*" was used. The Cronbach's alpha of the autonomy support subscale was .87, and the psychological control subscale (reverse items) was .81. In the present study, maternal and paternal autonomy support had acceptable alpha levels of .72 and .73, respectively. In contrast, maternal and paternal control had Cronbach's alpha below the acceptable level of .70 (see Table 1).

Grit-Original (Grit-O) Scale

Duckworth and Quinn (2009) developed a 12-item Grit-O scale to measure a person's consistent efforts to achieve a long-term goal. This scale measures two constructs: perseverance of efforts and consistency of interest. Both subscales had six items. Sample items of the effort subscale are " I have achieved a goal that took years of work" and "I finish whatever I begin." Sample items of the interest subscale are "my interests change from year to year" and "I often set a goal but later choose to pursue a different one." Grit-O is a self-report measure with a 5-point Likert scale. Respondents choose the best answer from "*not like me at all*" to "*very much like me.*" All items on the interest subscale are reverse scored as "*very much like me*" (1), "*mostly like me*" (2), "*somewhat like me*" (3), "*not much like me*" (4), and "*not like me at all*" (5). A high score indicates a high level of grit. In previous research, the Grit-O scale showed Cronbach's alphas of .84 on both subscales (Duckworth & Quinn, 2009). In the present study, the alpha level of effort was .68, and interest was .61 (see Table 1).

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Demographic Sheet

Participants were asked to provide information about their gender, age, grade, family type (nuclear or combined), and their parents' marital status. The demographic information was used to shortlist participants who met the stringent inclusion or exclusion criteria.

Procedure

The researcher obtained institutional approval for the conduct and data collection in the present study. The schools' principals and parents of adolescents were approached for prior permission to collect data. Researchers matched students on the inclusion criteria and shortlisted those who met the requirements and were willing to participate in the study. All participants were contacted in their respective schools for data collection. They were informed regarding the nature, purpose, and importance of research. The students and their parents signed the informed consent forms before scale administration. We provided special instructions to participants to rate their maternal and paternal behaviors separately on each parenting scale item. Participants were assured of data confidentiality and that it would be used only for research. Proper instructions were given regarding each scale. After completing the scales, the researchers checked them to ensure all the items were answered. Participants spent about 25 minutes on average responding to the scales.

Statistical Analysis

Before hypothesis testing, descriptive statistics for each subscale were examined in SPSS software. The interrelationships between parental autonomy support and grit subscales were assessed using correlation and regression analyses at the alpha level .05. Gender was dummy-coded using boys as a reference group. An independent samples t-test was run to measure gender differences on subscales of both variables, and Cohen's *d* was calculated to estimate the effect size.

Results

The perception of maternal and paternal autonomy support and psychological control among high schoolers was assessed separately. Four subscales of the P-PASS and two subscales of the Grit-O Scale were the subject of all statistical analyses.

Table 1 Cronbach's Alpha and Descriptive Statistics for P-PASS and Grit-O Scale

Subscales	*K*	a	*M*	*SD*	*Min*	*Max*	*Skew*	*Kurt*
Maternal A. Support	12	.72	60.79	10.30	24	84	-.41	.16
Maternal Control	12	.68	45.72	10.87	15	77	.25	.14
Paternal A. Support	12	.73	59.65	10.86	16	84	-.35	.34
Paternal Control	12	.62	45.06	10.71	19	79	.33	.17
Effort	6	.68	19.46	4.35	8	30	.17	-.33
Interest	6	.61	16.81	4.09	6	27	.16	-.50

Note. *K* = number of items, *M* = mean, *SD* = standard deviation, Min = minimum, Max = maximum, Skew = Skewness, Kurt = Kurtosis. The range of Parental Support and Control items was 1-7, and the range of effort and interest subscales was 1-5.

Participants, on average, reported a higher perception of parental autonomy than psychological control. The average score on perseverance of effort was higher than the average on consistency of interest. All scores were in the normal distribution range.

Table 2 Pearson's Product-moment Correlation between Study Variables (n = 300)

No.	Variables	1	2	3	4	5
1	**Maternal A. Support**	-				
2	**Maternal Control**	.11*				
3	**Paternal A. Support**	.69**	.14*			
4	**Paternal Control**	.02	.76**	.06		
5	**Effort**	.31**	-.03	.32**	-.04	
6	**Interest**	.27**	-.08	.33**	-.06	.59**

* $p < .05$, ** $p < .01$

Table 2 shows coefficients between subscales of perceived parental autonomy support and grit. Maternal autonomy support and paternal autonomy support had a significant positive correlation of .69 ($p < .01$). Likewise, the maternal psychological control and paternal psychological control had a significant positive correlation ($r = .76$, $p < .01$). The perceived maternal and paternal autonomy support had significant positive intercorrelations with grit at the alpha level .01. However, the magnitude of these correlation coefficients is weak. The intercorrelations between perceived psychological control and grit were non-significant negative. These findings partially

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support the first hypothesis about the positive relationship of grit with parental autonomy support and a negative relationship with psychological control.

Table 3 Hierarchical Multiple Regression Analysis for Grit

Variables	Effort			Interest		
	b	SE	R^2	b	SE	R^2
Maternal A. Support	.13**	.02	.10	.11**	.02	.07
Maternal Control	-.03	.02	.01	-.01	.02	.01
Paternal A. Support	.13**	.02	.11	.12**	.02	.11
Paternal Control	-.01	.02	.01	-.02	.02	.004

p < .01. Note. **B = Unstandardized regression coefficient; **SE** = Standard error of the unstandardized coefficient; **R^2** = Explained variance.

Next, hierarchal linear regression analyses were performed to examine if perceived parental autonomy support determines grit among high school students. Table 3 shows that autonomy support was a significant positive predictor of grit. With one standard unit increase in parents' autonomy support, grit increased to 11 units. Psychological control was a negative and non-significant predictor of effort and interest at the alpha level .05 , The negative direction of the effect alludes to the fact that psychological control decreases the grit development among adolescents. Still, it did not explain sufficient variance in the outcome variables because the effect sizes of autonomy support predictors are too small.

Figure 1 shows that autonomy support was a positive predictor of grit, while psychological control was a negative predictor . Both maternal autonomy support (β = .31) and paternal autonomy support (β = .32) explained a similar amount of variance in perseverance of efforts (*R2* = .10 and .11, respectively). The standardized beta coefficient of maternal autonomy support (β = .27) was lower than the coefficient for paternal autonomy support (β = .33).

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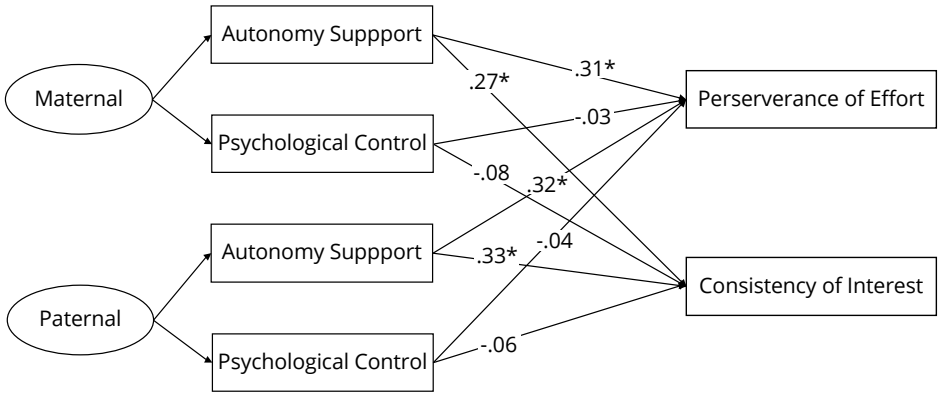
Figure 1 Perceived Maternal and Paternal Parenting Styles as Predictors of Grit



* p < .01. Note: The presented numerals are the standardized beta values.

Table 4 Gender Differences in Perceived Parental Autonomy Support and Grit among High School Students (n = 300)

Scale/ subscales	Boys (*n*=150)	Girls (*n*=150)	*t*	*p*	95% CI		Cohen's *d*
	M(SD)	*M(SD)*			*LL*	*UL*	
Maternal A. Support	61.44 (10.49)	60.14 (9.99)	1.09	.28	-3.63	1.05	.13
Maternal Control	46.46 (10.35)	44.99 (11.36)	1.17	.24	-1.00	3.94	.14
Paternal A. Support	59.48 (11.22)	59.83 (10.52)	-.28	.78	-2.82	2.12	-.03
Paternal Control	45.25 (10.85)	44.87 (10.60)	.31	.76	-2.05	2. 82	.04
Effort	19.52 (3.11)	17.84 (3.85)	5.16*	.00	2.88	1.29	.48
Interest	17.29 (4.10)	16.33 (4.04)	2.03*	.04	.03	1.88	.24

**p* < .05. *df =298.* Note. CI = confidence interval; LL = lower limit; UL = upper limit.

The findings of an independent samples *t*-test in Table 4 show non-significant gender differences in perceived parental autonomy support but significant differences in the perseverance of effort and the consistency of interest. The effect sizes for differences between boys and girls on maternal autonomy support subscales

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were small, and the effect sizes for paternal autonomy support scales were negligible. This finding refers to participants' similar perceptions of maternal and paternal autonomy support and psychological control. Boys scored relatively higher on effort and interest than girls, showing that boys stay motivated for goal achievement longer than girls. The effort subscale had a medium Cohen's *d* value, while the interest subscale did not show notable gender differences between the two groups. These findings partially support the second hypothesis for having significant gender differences in grit.

Discussion

The present study examined the role of perceived parental autonomy support and psychological control in predicting the perseverance of effort and consistency of interest among high schoolers. Specifically, the study tested two hypotheses, and findings partially supported these hypotheses, offering insights into the role of parenting behaviors in shaping grit among high school students.

The present findings have deepened the understanding of adolescents' perceptions of their parents and grit development. The correlation and regression analyses revealed significant positive relationships between both maternal and paternal autonomy support and grit, albeit with weak intercorrelations and effect sizes, which might be influenced by cultural or contextual factors mediating the influence of parenting styles on adolescents' grit. Both parents' autonomy-supportive and controlling behaviors are correlated. Maternal autonomy support positively correlates with paternal autonomy support. Maternal psychological control positively correlates with paternal psychological control. It implies that adolescents had a homogenous perception of their parents' behaviors. Both maternal and paternal autonomy support emerged as significant positive predictors of grit, with similar contributions to perseverance of effort. The standardized beta coefficients showed that paternal autonomy support had a slightly stronger predictive value for consistency of interest than maternal autonomy support.

The perceived parental autonomy support and grit were positively associated in a few ways. An insight gained from the present study is the positive association of grit with parental autonomy support but a negative association with parental psychological control. Grit increases when adolescents perceive support from their parents. These findings partially confirm the hypothesis that perseverance of effort and consistency of interest positively correlate with parental autonomy support among high schoolers. While controlling parenting behaviors may hinder grit development, this effect was not robust in this sample. Prior research on the link between parental

autonomy support and grit confirms their positive association. For instance, Du et al. (2023) reported that parental autonomy support had a positive predictive effect on grit. Individuals with higher parental autonomy support had a higher grit than their counterparts.

Nevertheless, another takeaway from the present study is the distinction between autonomy support and psychological control as separate constructs. Table 2 shows the difference in the magnitude of the correlation coefficient of both constructs. If they are the same constructs, their correlation coefficients would be the same. In everyday life, parents grant autonomy and control their adolescent children. They allow adolescents independence in specific tasks while encouraging dependence on other tasks. There are two plausible reasons for this finding: either parents do not exhibit much psychological control during interaction with adolescents, or adolescents do not perceive their controlling behaviors as thwarting and counterproductive. Because high schoolers' mean scores for autonomy support are higher than their mean scores for psychological control, it makes sense that they perceived their parents as more supportive and less controlling. Parents may not simultaneously use both behaviors of granting and controlling autonomy. Instead of it, average scores on Grit-O were also above average. It means that adolescents who perceive more parental autonomy support also have a higher level of grit than their counterparts.

The present study also examined gender differences in perceived parental autonomy support, psychological control, perseverance of effort, and consistency of interest among high school students. It was assumed that boys would exhibit higher levels of perceived parental autonomy support and grit than girls. However, findings refute the hypothesis that boys and girls have similar perceptions of autonomy support and psychological control from both parents. The mean scores of boys were relatively higher than girls on perceived parental autonomy support. Likewise, boys exhibited significantly higher grit scores and outscored girls in the perseverance of effort and the consistency of interest. This finding alludes to social norms and cultural expectations for gender roles in the Pakistani context, which value boys' education and resilience over girls' (Education Cannot Wait, 2021). This finding supports Tangmunkongvorakul et al. (2022) for higher grit scores of adolescent boys than adolescent girls.

The study had a simple research design with minimum variability related to the study group. The target population was high school students living in nuclear families with both parents. Adolescents living in extended families, single, separated, divorced, or stepparents were excluded from the study participation. The logic behind limiting the sample to the nuclear families was to directly examine the role of parental

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autonomy support with more precision and concentration. Adolescents receive care from both parents more consistently, which is easier to isolate than extended families with different caregivers. Thus, the nuclear family is ideal for studying how parental autonomy supporting or controlling behaviors shape adolescents' grit. Likewise, the homogeneity of the sample was maximized by choosing students from private schools who have similar socioeconomic status.

Strengths and Limitations

Most of the previous studies examined parental autonomy support as a single construct. A salient contribution of the present study is to separately explore the role of maternal and paternal autonomy support in grit development. Another strength is the investigation of two factors of grit rather than a composite score. Sampling high school students to study this phenomenon adds to the body of literature because there is evidence of empirical studies with college students (Howard et al., 2019). These analyses provide a deeper understanding of the interplay between parental autonomy support and grit. The nuclear family setting is chosen as a study context so that researchers can have a concentrated setting to examine the direct role of parental autonomy support on grit. Parents are more consistent in child-rearing practices, and adolescents are not exposed to multiple caregivers, which makes it easier to isolate autonomy support and control from each parent. Nonetheless, the insight from this study with nuclear families is relevant to a larger population and can aid in designing and implementing prevention and intervention studies.

This study has certain limitations. First, the development of abilities is a long-term process. Grit among adolescents does not appear overnight but happens with the consistent interplay of numerous factors. The present study is cross-sectional and measures both variables at a one-time point that warrants care in interpreting findings. Second, the present study measured maternal and paternal autonomy support and psychological control overall scores, not breaking them down across six dimensions. Third, adolescents' self-reports of their perception of their parents' autonomy support and psychological control can introduce inaccuracy and threats to the validity of the findings. Fourth, the target population in the present study were high school students enrolled in private schools and living in nuclear families. Using non-probability sampling limits the generalizability of the findings only to the chosen population. Last, the cultural context that explains the intricacies of parent-adolescent interaction affects parenting behaviors. The foreign-made measures used in the present study might introduce linguistic and cultural differences in understanding these constructs.

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Future Recommendations

Given the study limitations, future researchers should plan longitudinal studies to underpin grit development as an outcome of parent-adolescent interaction and perception. They can examine six sub-factors of parental autonomy to gain further insight into parenting behaviors. Besides, taking parents' reports of their behaviors and investigating the agreement and disagreement between adolescents' and parents' reports of autonomy support and psychological control will minimize threats to validity and increase data reliability. Culture should be considered while studying a family's social behaviors and outcomes. Future research can adopt alternative methodological approaches, such as qualitative and mixed methods research, random sampling, and cross-cultural or comparative studies, to uncover the role of cultural and universal impacts. Finally, other contextual backgrounds (e.g., the family's socioeconomic status, family structure, parents' educational qualification) also affect adolescents' behavior development. Future researchers can also examine the role of caregivers and the family environment besides parents.

Theoretical and Practical Implications

This study extends the self-determination theory by demonstrating how perceived parental autonomy support fosters grit among high school students. It highlights the facilitative role of parental autonomy support and the debilitative role of psychological control in grit development among high school students. It can be inferred from these findings that autonomy support and psychological control are not two sides of a coin but separate constructs. They have differential roles in developing perseverance in efforts and consistency of interest. As psychological control did not appear to predict grit among adolescents, it implies that adolescents in collectivist Pakistani culture do not necessarily perceive controlling parents as counterproductive, as research with Western samples presents (Saleem et al., 2017). It is plausible that parental control is treated as a facet of parental authority.

The present findings offer practical guidelines to parents, mainly that parental autonomy support helps, whereas psychological control harms the development of positive adolescent behaviors. Therefore, parents and teachers should be trained to provide autonomy-supportive environments for adolescents at home and school to cultivate perseverance for challenges. Home-school partnerships should be encouraged to maximize the benefits of a more comprehensive support system. The frequent collaboration between parents and teachers will foster a close understanding of adolescents' emotional needs. School psychologists and counselors must educate parents about autonomy support as a healthy parenting practice. Using targeted intervention with psychologically controlling parents can promote

adolescents' personal growth and academic success; rest assured about having strong parental autonomy support and grit development. This study suggests that psychologists can help screen students with low grit and provide them with counseling sessions. Schoolwide intervention programs can be introduced to promote grit so students can achieve long-term goals despite adversities and challenges.

Conclusion

The findings highlight that parental autonomy support and psychological control, being varied constructs, have differential roles in grit development. It is vivid how parents consciously or unconsciously encourage achieving long-term goals and maintaining interest in goal achievement. Mother's and father's autonomy support positively relates to each other and to the promotion of grit. Psychologically controlling parents should reassess their rearing practices, communication patterns, and adolescent interactions because creating a conducive family environment promotes healthy personality development of adolescents, where they can maximize their potential for goal achievement. Gender differences in grit offer additional insights for educators and policymakers to tailor interventions fostering grit among high school students.

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4. **Authors Contribution:**

- **NZ**: Research idea/conceptualization, research design, data analysis and interpretation, writing original draft, APA formatting, critical revision for important intellectual content, final approval, and submission.
- **HA**: Data acquisition, data entry, conducting and writing review of literature, language quality check, and editing the manuscript.
- **KK**: Drafting the manuscript, help in literature review, and revision.

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