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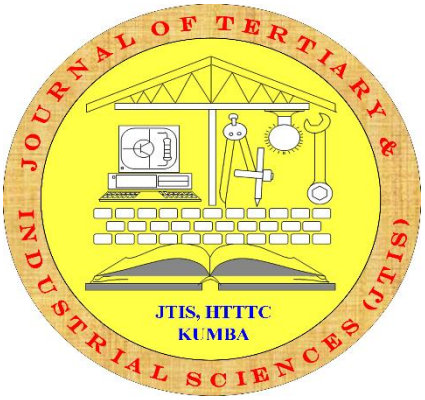

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Youth Risk Behaviors and School Engagement: Perceived parental support and hardiness as mediators

By

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Abstract
Academic disengagement in Cameroon is an issue especially due to crisis in some parts of the country. It is evident that youths get more involve in delinquency and substance use over time making them become less engage with school activities. The current study investigates how perceived parental support and students' hardiness could be use as mediators in the relation between youth risk behaviors and school engagement, and also the variables relationship as perceived by some high school and undergraduate university students in Cameroon. Using a status cross-sectional quantitative research design, data for 425 students was collected with the use of self-reporting questionnaires using online and paper survey. The data was then analyzed using SPSS PROCESS macro, where descriptive statistics, correlation and mediation analysis using ordinary least squares path analysis were performed. Findings revealed that perceived parental support and student hardiness play significant partial mediating roles in the link between youth risk behavior and school engagement. Further findings revealed all main constructs were significantly related to each other. These findings add to the existing body of literature on ways to improve students school engagement, and further suggest the need for campaigns for the use of perceived parental support and hardiness as critically vital constructs that reduces students' involvement in risky behaviors and improves the extent of students' engagement with school.
Keywords: **school engagement, youth risk behavior, perceived parental support, student hardiness, mediation analysis.**

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1. Introduction

Students' behaviors and academic successes has been strongly linked with school engagement (Fredericks et al., 2004; Kamah et al., 2022; Upadyaya & Salmela-Aro, 2013). It is evident that students who are actively committed to their studies, connect strongly with what they learn, and who display positive, meaningful relations at school, most likely end up doing very well academically. This in turn opens opportunities, helps them adapt in the future, and provides the youths with positives choices in their academic development (Masten et al., 2006). Cameroon amongst many other countries are faced with the challenge of youths getting disengaged and unmotivated with school activities. Youths disengagement from school activities is a matter of utmost concern. When youths disengage from school, they cease to be involved in school activities and begin to respond to maladaptive ways instead of respecting their obligations of being committed to school (Wang et al., 2015), which might lead to poor academic performances (Wang et al., 2019). Globally, UNESCO (2022) reported that 132 million boys are out of school. That's more than half of the global out-of-school youth population and more than the 127 million girls who are also out of school. Concomitantly, it is not new that there is increasing global concern that many of the increasing numbers of students in schools across many societies are disengaged, with potential consequences that are long-lasting for the future success of youth as well as the societies in which they belong (Motti-Stefanidi & Masten, 2013).

Many risky behaviors that youths get involved with such as, delinquency, drug and alcohol use, unprotected sex are initiated during these adolescent developmental periods (high school through undergraduate). Though many youths are able to navigate this period successfully, without encountering significant problems, many other youths in Cameroon and other parts of the world are face with increased risks of delinquency and health compromising behavior (Schwartz et al., 2010). Thus, the identification of these factors that prevent problematic and risky behaviors, and which also promote youth's engagement with school activities in Cameroon would have vital implications that enhances positive youth development.

The role of parental involvement as a significant predictor of students` school engagement is critical. The rich empirical support for parental involvement as a significant predictor for students` school engagement cannot be neglected. Scribner et al. (1999) indicated that the lack of cooperation among schools and parents causes low achievement and higher rates of behavioral problems among students. Moreover, there is evidence that children whose parents involve frequently in their education become more socially and academically successful in school (Epstein, 2001; Hill & Craft, 2003; McWayne et al., 2004). It is equally important to understand that the students themselves have personality traits that influences their behaviors (Cress & Lampman, 2007) and attitude. Educating these children on how to deal with challenges and other stressors is critical for their academic, social and human development. On this basis, this study considers the use of students` hardiness as critical for its strong ability to buffer the negative effects of stressors (Eschleman & Bowling, 2010) to students` school engagement.

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The study of the relationship between adolescents' involvement in risky behaviors and how these affects their participation in school activities is not new (Klein et al., 2012; Reid et al., 2006). However, no study has investigated the use of hardiness and perceived parental support as intervening constructs in the relationship between youths' risky behavior and their engagement in school with Cameroon youths (i.e., *research gap*). Thus, the main goal of the present study was to investigate whether creating interventions for promoting high extent of perceived parental support and student hardiness can prevent or reduce youth's involvement in delinquent and health related behaviors, and to examine whether these interventions promote youth school engagement. Firstly, we investigate how perceived parental support and student hardiness correlates with youth risk behaviors and school engagement. Then, later examine whether perceived parental support and student hardiness mediates (originality of the study) the link between youth risk behaviors and school engagement as perceived by some high school and undergraduate university students in some selected schools in Cameroon. Thus, in order to pursue these objectives, we examine two research questions. (1) How do perceive parental support and hardiness correlate to youth risk behavior and school engagement? and secondly (2) Do perceived parental support and student hardiness mediate the relation between youth risk behaviors and school engagement?

2. Literature Review

2.1. Theoretical background

2.2.1 Consequent variable – School Engagement

The major premise of *engagement theory* is that students must be engaged in their course work in order for effective learning to occur. This theory puts forward three preliminary ways to accomplish engagement: (1) an emphasis on collaborative efforts; (2) project-based assignments; and (3) non- academic focus. This theory suggest that these three methods will result in learning that is meaningful, creative and authentic (Kearsley & Scheiderman, 1999). This theory is based on the idea of creating successful teams that collaborate and work on meaningful tasks to someone outside the classroom. Its core principles are summarized as 'relate' – that emphasizes on characteristics of communication and social skills that are involved in team efforts; 'create' – which looks at learning as a creative purposeful activity; and 'donate' – which encourages learners to position their learning from the perspective of a wider community involvement (Miliszewska & Horwood, 2006). Student engagement has been defined and understood from varying perspectives. For instance, Fredericks and colleagues identified three elements of students` engagement; behavior, emotion and cognitive, which are all shaped by multiple factors that are related to teachers, students, institutions, communities and families, as well as resources and curriculum. Thus, in this study, `School engagement refers to the extent of attention, interest, passion, curiosity and optimism that students show when they are being taught or when learning, which extends to the level of motivation they possess to learn and progress in their education' -GER (Glossary of

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Education Reforms, 2016). GER reiterates that in several other context, student engagement refers to ways in which school administrators, parents, educators and other adults might engage students more fully in the governance and decision-making process in the schools' design of programs, learning opportunities or in their community's civic life.

In Cameroon youths school disengagement is not an exception. For instance, Sobngwi-Tawbekou et al. (2022) reported school disengagement due to adolescent pregnancy, while Djibril et al. (2017) found out that adolescent school disengagement in Batouri area (East region) was due to artisan mining with majority of its workers (45%) being youths (15 to 20 years of age).

2.1.2. ***Main antecedent variable – Youth Risk behavior***

Theories of adolescents' behaviors are many, however, in this study, the foundation that motivated the investigation of youth risk behaviors is based on **Jessor's** ***Problem Behavior Theory***. This theory works strongly in line with Piaget`s theory as it links the unconventionality in personality (with perceived environmental and behavioral systems) with adolescents increased likelihood of engaging in problem behaviors which includes precocious sexual activities, delinquency, and substance use (Jessor & Jessor, 1977). Jessors' defines problem behavior as any behavior that deviates from both social and legal norms. This model consists of three systems of psychosocial influences which includes; personality systems, perceived environmental (family and peers- systems) and behavior system (problem and conventional behavioral structures)- ([1]***H1***).

The term youth risk behavior or risk-taking behavior has been widely used and link conceptually to a number of potentially health-damaging behaviors, which includes amongst others, precocious or risky sexual behaviors, suicidal or homicidal behavior, reckless vehicle use, substance use and delinquency. Linking these behaviors under a single domain has a strong theoretical base as it allows investigation of particular behaviors in the context of other behaviors (DiClemente et al., 2013). With risk been defined as a chance of loss, risky behaviors are characterized as behaviors entailing the possibility of subjective loss (Furby & Beyth-Maron, 1992). Thus, risk taking implies engaging in risky behaviors, and adolescent risk taking or youth risk behavior is defined as those behaviors undertaken volitionally, with outcomes that remain uncertain and with the possibility of an unidentifiable negative health outcome (Irwin, 1990).

In Cameroon, some researchers reported youths' involvement in risky behaviors such as scamming (Abia et al., 2010), sexual risks (Rossem & Meekers, 2011; Moore et al., 2004), drug abuse (Mbanga et al., 2018; Cumber & Tsoka-Gwegweni, 2016), delinquency and gun violence (Ekah, 2019; Agwanda et al., 2020).

It is important to understand that risk taking behaviors are serious threats to youths` health and wellbeing. Once these behaviors are established during their youthful stages, they often remain as major contributors to health problems in the future (U.S. Preventive

[1] Hypothesis 1: Perceived parental support and hardiness significantly negatively correlates with youth risk behaviors among.

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Services Task Force, 1989). Some of these potential negative consequences includes; sexually transmitted diseases, unwanted pregnancy, crimes, severe disability and death. Several empirical evidences reported sexual activity, substance use, delinquency and reckless vehicle use increases with increasing age during youthful development (Kawaleski-Jones & Mott, 1998; Millstein et al., 1992). Thus, research on ways to reduce youths' involvement in risky behaviors remains critical.

2.1.3. Theories on perceived parental support

Cognitive Development Theory – Piaget (1972; 1981) introduced a theory of cognitive development in children, that emphasizes constructive role of experience with peers and family members. The basic assumption of Piaget's theory was that 'young children are active learners having a constant drive to match their own view of the real world (internal constructions), and the external realities that they face with their surroundings (external construction)'. Furthermore, Athey (2007) articulated that children learn new things and can accommodate their own perspectives of incorrect issues of the world more quickly if they are more actively involved with things and the people within their environment. Additionally, Bailey et al. (2004) reported that – 'the involvement of parental activities such as interactive homework practicing creates opportunities for the children to meaningfully interact with their parents, therefore, Piaget's development theory supports the idea that parental involvement is a vital factor in children's achievement and development opportunities for the children to meaningfully interact with their parents ([2]***H2***).

2.1.4. Kobasa's theory of hardiness

The concept of hardiness has strong foundation as was introduced by Kobasa (1979). Kobasa defined hardiness as a personality structure that comprises of three dispositions; commitment, control and challenge that functions as a resistive factor to stress. Kobasa further noted that non-hardy individuals display lack of commitment (alienation), a tendency in viewing change as undesirable, and an external locus of control. Commitment here is the tendency where one gets involved in life`s activities with a genuine interest in it and with a strong curiosity with the environment (people, things, activities etc.). On the other hand, control (internal locus) refers to the tendency where one beliefs and act in a manner as if she /he can influence the activities or events around oneself through one`s effort. Lastly, challenge refers to the beliefs that change in the contrary to stability is a normal way of life, and also constitutes opportunities for normal growth against threats. Thus, student hardiness is critical.

2.2. Conceptual framework

2.2.1. Relation between youth risk behaviors and school engagement

This subsection presents empirical research with respect to the relation between youth risk behaviors and school engagement of youths in Cameroon and other parts of the

[2] Hypothesis 2: Perceived parental support and hardiness significantly positively correlates with school engagement.

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world. Literature that includes any of the risky behaviors executed in relation to school engagement or disengagement are considered suitable.

2.2.1. Substance use and school engagement

Drug abuse in Cameroon recently has become an alarming situation and a critical issue to be reckoned with. Adolescents increase rates of substance use (tobacco, marihuana, tramadol, alcohol etc.) has serious repercussions on their academic career. For instance, according to Cameroon National anti-drug commission report (Bakari, 2018), 21% of the population had consumed a substance, while 60% of these population are youths between 20 to 25 years of age (students inclusive). The commission further reported that more than 12000 youths (less than 15 years of age) use narcotics and other psychotropic substance.

Similarly, a recent study by Metuge et al. (2022) with sampled students from University of Buea, reported 89.9% prevalence of substance use which had negative influence on their academic career. Additionally, Fon et al. (2014) on students' alcohol intake, found out that beer consumption by university students was significantly negatively associated with students learning attitude. Similarly, Emile (2023) recently reported that absenteeism in university students was strongly related to their involvement in enjoyable activities while socializing with peers during school periods.

Furthermore, Henry et al. (2012) revealed that the school disengagement warning index is robustly related to dropout as well as serious problem behaviors across the three developmental stages (middle adolescents, upper adolescents, & early adulthood) even after controlling for important potential confounders. Similarly, Li et al. (2011) in a discrete-time survival analysis study with U.S. adolescents reported that higher levels of emotional and behavioral school engagement was significantly associated to lower risk of substance use and delinquency.

2.2.2. ***Delinquency and school engagement***

Previous studies reported significant relation between youth delinquency and school engagement. For instance, Hirschfield and Gasper (2011) posited significant link between adolescents' school engagement and delinquency in a study with early adolescents' students in Chicago – [3]U.S.A. Hirschfield and colleague further revealed that emotional and behavioral school engagement were significantly associated with decrease school and general delinquency, whereas, high extent of cognitive school engagement was associated with increase school delinquency. Additionally, Aldridge et al. (2018) found out a significant negative association between youths' school connectedness with delinquency.

2.2.3. ***Sexual risk behaviors and school engagement***

There is huge empirical evidence in Cameroon about adolescent's students' involvement into risky sexual practices (Dupas et al., 2018; Sidze & Defo, 2013; Essiben et al., 2019), but there is limited research that addresses the direct influence on school engagement. However, Donatus et al. (2018) in a study carried out in Kumbo East Health district (North West Region - Cameroon), reported 60.75% teenage school girls' pregnancy rate in clinics within this district. Similarly, Noubiap et al. (2015) in a study with students in Medical

[3] USA: United States of America

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and social welfare center of the University of Maroua, revealed alarming levels of risky sexual behaviors amongst the students.

After careful review of related literature of the relationship between youth risk behaviors and school engagement, [4]H_3 was formulated.

2.3. Mediating variable – Perceived parental support

The definition of perceived parental support used in this study is adopted from the 'Institute for Educational Research' (IER) in Iceland – it is how adolescents perceive their accessibility to the general support they receive from their parents (Sigfúsdóttir et al., 2009). The construct parental support has rich literature on its key role in children`s academic development. For instance, Napper et al. (2015) revealed that students who reported low levels of parental monitoring were likely to report high use of cannabis. Additionally, Ryan et al. (2010) posited that parental modelling, parents' disapproval of adolescents drinking, parental monitoring and support predicted lower levels of reduced alcohol consumption by adolescents' students. Thus, it is evident in the literature that perceived parental support helps to reduce adolescents' involvement in risky behaviors. Similarly, on the aspect of adolescents' involvement in precocious sexual activities, Tarkang (2014) in a study with female students in Limbe Municipality revealed that female students who freely discuss with their parents about safe sex practice (e.g., use of condoms) reported more condom use compared to students who do not discuss freely with parents.

Regarding perceived parental support and its impact on students' school engagement, previous studies supports a significant positive relation. For example, Wang and Sheik-Khalil (2014), asserted that parental involvement improved adolescents' students' academic and emotional functioning. Wang and colleague further reported that parents' involvement in adolescents' education predicted the students behavioral and emotional school engagement.

Furthermore, perceived parental support as a mediator construct has some empirical support. For instance, Wilk et al. (2018) found out that children`s perception of parental support acted as a significant mediator in the link between parental support and parents' physical activity. Similarly, a study on Chinese adolescents' career (Wang et al., 2019) revealed that perceived parental support significantly mediated the link between adolescents' self-oriented and social oriented personality factors on adolescents' environmental exploration for grade 11 students. Thus, the use of perceived parental support as a mediator in the current study is empirically supported.

2.4. Mediating variable – Hardiness

According to Maddi (1999), hardy people try to influence the outcomes of life events and they become engage very actively in activities, and irrespective of their positivity or negativity, they still try to learn something from them. On the contrary, Maddi further

[4] H3: Hypothesis 3: Youth risk behaviors significantly influences school engagement among high school and undergraduate university students.

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explains that individuals with low levels of hardiness are more likely to withdraw from challenging life situations, perceiving these situations as life threatening.
There is rich evidence of hardiness been used as an intervention construct to stressful situations. For instance, Abdollahi et al. (2014) reported that academic hardiness helped to reduce students' stressors to their wellbeing. Similarly, Abdollahi and Noltemeyer (2018) in a study with high school students in Tehran – Iran asserted that academic hardiness was a mediator in the relation between students sense of belonging to school and their academic achievement. Therefore, hardiness as mediator in this study has empirical support.

2.5. Hypotheses

After careful review of the literature, the hypothesized model can be gleaned in figure 1. The model proposes that youth risk behaviors as the main antecedent construct (X) will have a significant direct influence on students' school engagement (main outcome variable - Y). The model further proposes that perceived parental support (mediator M1) and hardiness (mediator M2) will mediate the relationship between youth risk behaviors and school engagement among high school and undergraduate university students in some selected schools in Cameroon.
Thus, the following hypothesis were formulated;

Hypothesis 1: Perceived parental support and hardiness will significantly negatively correlate with youth risk behaviors among the students.
Hypothesis 2: Perceived parental support and hardiness will significantly positively correlate with school engagement among the students.
Hypothesis 3: Youth risk behaviors significantly influences school engagement.
Hypothesis 4: Perceived parental support and hardiness mediates the relationship between youth risk behaviors and school engagement.

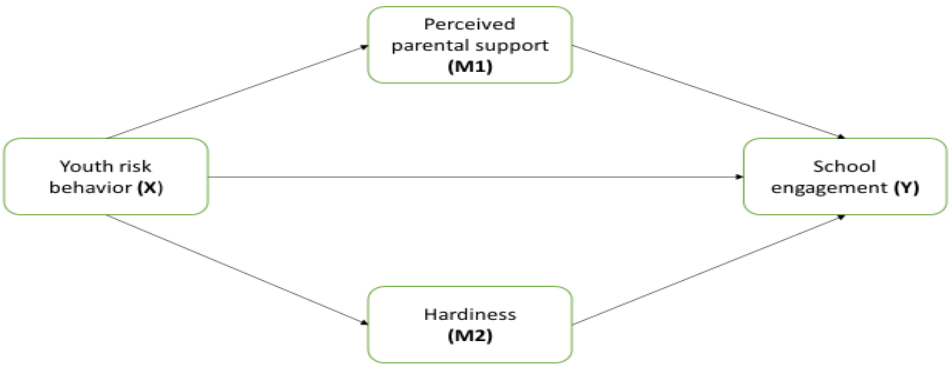

Figure 1. Conceptual Model

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3. Method

3.1. Participants

A total of 425 students from seven high schools and one university in the city of Douala took part in this study with females occupying more than half (63.7%) of the participants, age range from 15 to 29 years and average age of 19.74 (SD = 2.579) years. Regarding education level majority of the students were in high school (68.7%). With regard to parental status, more than half of the participants (68.3%) had both parents alive. Regarding students' accommodation, majority of them (80%) were living with their parents during this period when the study was conducted (table 1).

Table 1. Socio-demographic characteristics of Participants

Constructs	**Sub-category**	**n = 425**	%
Gender	Male	156	36.7
	Female	269	63.3
Age (years)	15 – 19	230	54.1
	20 – 24	173	40.7
	25 – 29	22	5.2
Education levels (School levels)	Lower sixth	13	3.1
	Upper sixth	279	65.6
	University Undergraduate	133	31.3
Parental status	Single mother	88	20.7
	Single father	18	4.2
	Both parent	290	68.3
	No parent	29	6.8
Accommodation	With parent	340	80.0
	Without parent/guardian	41	9.6
	With friends	13	3.1
	Alone	31	7.3

Source: fieldwork (2022); n: sample size

Procedure

After obtaining permission from the heads of institution from the seven bilingual high schools and the University of Douala, a total of 450 questionnaires were distributed to the student participants. Purposive sampling technique was used for schools' selection because bilingual high schools were the target, while university of Douala was also the target as the state university in the city of Douala, while simple random sampling technique was use for students' respondents. Ethical issues concerning human subjects in research were strictly considered in this survey. Participants were informed about the research purpose and all participation was voluntary and anonymous with participants free to withdraw at any time. The study employed a cross-sectional quantitative design with the collection of data done in one session. Inclusion criteria for participants were; firstly, participants should be a regular student enrolled in either high school or undergraduate university level; secondly, student must be between the age of 15 and 29

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years. Questionnaires contained a consent letter with clear explanations about the aims of the study. The questionnaire was designed to gather demographic data of the participants in one part, and the other part designed to gather data for participants self-responses with respect to main constructs of the study (school engagement, youth risk behaviors, perceived parental support, and hardiness). Of the 450 questionnaires distributed among the students, data for 425 (94.4% response rate) respondents were used for analysis, while data for 25 (5.6%) respondents were removed from analysis due to incomplete responses.

3.3. Measures

In addition to questionnaire that gathered data with respect to respondents' demographics (Gender, age, education levels, parental status, and accommodation), data with respect to participants self-responses for the main constructs were gathered using the tools described herein.

School Engagement Scale as adopted from Indiana University Bloomington (2012) was used. It consists of 23 items measured in a 5 – point Likert – type scale that measures students school engagement with three primary components (cognitive, social and emotional). Sample questions include 'there is an adult in my school I can talk to about my problems". A total score is obtained by summation of all individual items scores after all negatively worded questions have been reverse coded. Higher scores indicate higher levels of student school engagement and vice versa. The Cronbach alpha (α) for this measure in this study was 0.708 which indicates good reliability.

Youth Risk Behavior Scale as adopted from Lowry et al. (2018) was used to investigate students' involvement in risky behaviors. The original scale of 14 items was adapted to 7 items in this study for suitability. This study adapted a 4 - point Likert scale measure to gather data of risky behaviors (substance use, alcohol abuse, sexual risks, suicidal ideation, delinquency etc.). Sample item include "during the past 30 days how often did you use marijuana?" Total score is obtained by summation of all individual item scores. Higher scores imply higher level of students' involvement in risky behaviors and vice versa. The Cronbach alpha (α) value for this measure in this study was 0.726 which indicates good reliability.

The perceived parental support scale adopted from Kristjansson et al. (2010) was used. It is a 5 – item questionnaire designed to gather data from students about how they perceive their parents support. Sample item includes 'How easy or hard is it for you to receive advice about your studies from your parents?'. Responses were measured in a 4 – point Likert type scale, with highest scores obtained by summation of all individual item scores. Higher scores indicate higher levels of perceived parental support and vice versa. The cronbach alpha value for this measure in this study was 0.734 which indicates good reliability.

DRS – 15 Scale as adopted from Bartone (1991) was used to gather data about students extent of hardiness. It is a 15 – item scale designed to gather data in a 4 – point Likert type measure. Sample item is 'I really look forward to my work activities'. Hardiness total score is obtained by summation of all individual item scores. Higher scores indicates higher level

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of hardiness and vice versa. The cronbach alpha value for this measure in this study was 0.716 indicating good reliability.

3.4. Data analysis

SPSS PROCESS macro was used to analyze the data for this study. Accordingly, descriptive statistics, correlation analysis, and mediation analysis (Hayes, 2018) using ordinary least squares path analysis was performed. Descriptive statistics was used as it enables us to analyze the characteristics of the variables (Haneem et al., 2017), while mediation analysis was used as it enables the (a) testing of muliple relationships simultaneously, (b) test more complex models, and (c) improves statistical estimation. Mediation analysis using bootstrap method was performed and results were considered significant if at 95% confidence level based on 10,000 bootstrap samples there was no zero between the lower and upper confidence limits (Preacher & Hayes, 2008).

Prior to data analysis internal consistency and data adequacy were tested for fitness. Data adequacy was tested using [5]KMO, while composite reliability and cronbach alpha tests were used to examine the reliability of the measures. Furthermore, Harman`s Single Factor test revealed there was no common method bias (CMB) in the research tools used since the common method variance (CMV)[6] was 12.630% which is less than 50% (Podsakoff et al., 2003; Podsakoff et al., 2012). All KMO values were above 0.5 which makes the data suitable for factor analysis (Kaiser & Rice, 1974). All composite reliability and Cronbach alpha values were above 0.7 (Fornell & Larcker, 1981), indicating good reliability for the measures (table 2). Therefore, the data for this study was suitable to test the statistical hypotheses. Lastly, prior to regression analysis, all continuous variables were mean centered and all negative items were reverse coded.

Table 2. KMO`s, composite reliability, reliability and CMV values for main constructs

Constructs	KMO	Composite reliability	Reliability (α)	Common Method Variance (CMV)
ScE	0.824	0.940	0.708	12.630%
YRB	0.840	0.880	0.726	
PPS	0.766	0.828	0.734	
Hardiness	0.794	0.777	0.716	

Source: author. ScE: School engagement; YRB: Youth risk behaviors; PPS: Perceived parental support

4. Results

4.1 Correlation and descriptive statistics (*Research question one – H1 & H2*).

Other preliminary test results involved descriptive statistics. As can be seen from table 3, descriptive statistics revealed that all absolute values of skewness were less than 3 and all

[5] KMO: Kaiser, Meyer, Olkin measure of sampling adequacy for factor analysis. A test that determines how suited the data is for factor analysis.

[6] CMV: common method variance used to test if there exists a common method bias due to tools used for collecting data.

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absolute values of kurtosis were less than 7 (George & Mallery, 2010; Byrne, 2013), which implies that the data points were normally distributed. Descriptive statistics further revealed that the students reported high levels of school engagement (m=3.654, sd = 0.426), low levels of youth risk behaviors (m= 1.339, sd = 0.384), high levels of hardiness (m= 2.969, sd = 0.297) and moderate levels of perceived parental support (m= 2.848, sd =0.637).

Bivariate correlation analysis (table 3) revealed that perceived parental support and hardiness were significantly negatively correlated to youth risk behaviors (r= - 0.227, p<0.001; and r = - 0.245, p<0.001 respectively- *H1 accepted*), and were significantly positively correlated to school engagement (r = 0.277, p<0.001, and r = 0.258, p<0.001 respectively- *H2 accepted*). Further correlation analysis revealed that youth risk behaviors was significantly negatively correlated to school engagements among these students (r = - 0.257, p<0.001). The negative correlation between perceived parental support and youth risk behaviors indicate that the higher the extent of perceived parental support by the students, the lesser they get involved in risky behaviors. Similarly, the negative correlation between student hardiness and their involvement in risky behaviors implies that more hardy students become the lesser they get involve in risky behaviors. Lastly, the negative correlation between youth risk behaviors and school engagement indicate that the more students get involve in risky behavioral practices the lesser they become engage in school activities. Thus, all constructs in this study were significantly correlated to one another and there was no multicollinearity.

Table 3. Correlation and descriptive statistics

Variables	**1**	**2**	**3**	**4**
1. ScE	1			
2. YRB	-0.257***	1		
3. PPS	**0.277*** **	**-0.227*** **	1	
4. Hardiness	**0.258*** **	**-0.245*** **	0.132**	1
Mean	3.654	**1.339**	2.848	**2.969**
Standard deviation	0.426	0.384	0.637	0.297
Skewness (SE)	-0.066 *(0.118)*	2.720 *(0.118)*	-0.364 *(0.118)*	-0.485 *(0.118)*
Kurtosis (SE)	1.035 *(0.236)*	6.692 *(0.236)*	-0.069 *(0.236)*	0.931 *(0.236)*

*Source: author. **P: <0.01; ***P: <0.001; ScE: School engagement; YRB: Youth risk behaviors; PPS: Perceived parental support; SE: standard error*

4.2 Mediation Analysis (*research questions 2 – H3 & H4)*

After controlling for all demographic variables, mediation analysis was performed. From the mediation analysis conducted using ordinary least square path analysis, as reported among the students, youth risk behaviors indirectly influenced students school engagement through its effect on perceived parental support and through its effect on hardiness. As can be seen in figure 2 and table 4, youth risk behavior showed a significant negative influence on perceived parental support (a1= - 0.227, p<0.001), and controlling for youth risk behavior and hardiness, students perceived parental support had a

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significant positive influence on their school engagement (b1= 0.215, p < 0.001). Similarly, youth risk behaviors had a significant negative influence on students' hardiness (a2= - 0.245, p < 0.001), and hardiness in turn had a significant positive influence on students' school engagement (b2 = 0.190, p < 0.001). Mediation analysis further revealed there was evidence that students' involvement in risky behaviors directly affects students school engagement negatively (c'= - 0.161, p <0.01). Overall, as seen in table 4, 15% of the variance observed in school engagement was explained by the antecedents – youth risk behaviors, perceived parental support and hardiness when taken as a set.

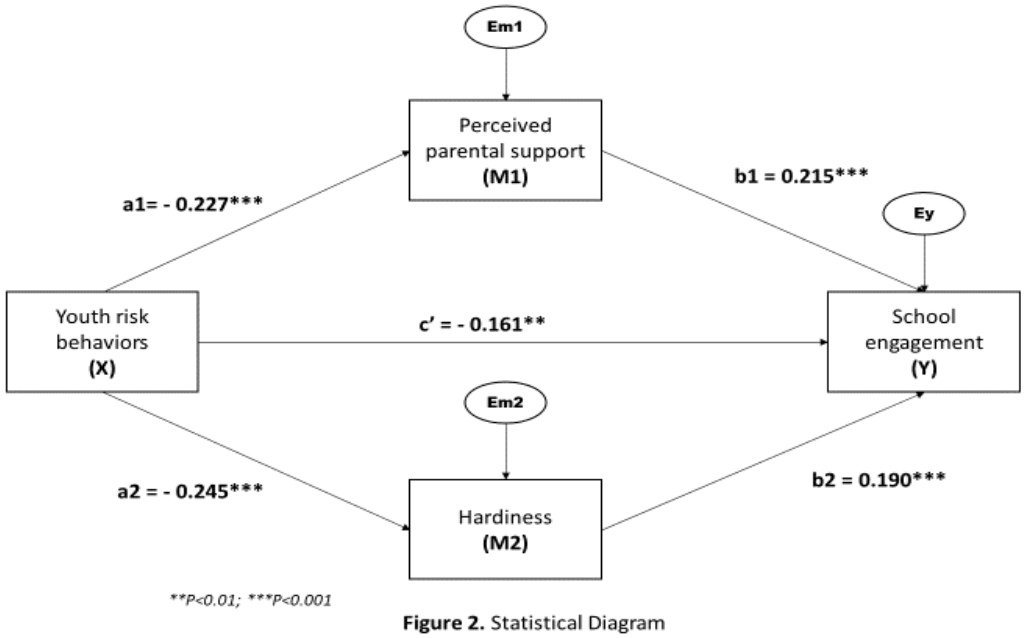

Figure 2. Statistical Diagram

Table 4. Model coefficients

	Consequent								
	M1 (PPS)			**M2 (hardiness)**			**Y (School engagement)**		
Antecedent	**B**	**SE**	**P**	**β**	**SE**	**P**	**β**	**SE**	**P**
X (YRB)	-0.227	0.076	<0.001	-0.245	0.036	<0.001	**-0.161**	0.052	<0.01
M1 (PPS)	-	-	-	-	-	-	**0.215**	0.031	<0.001
M2 (Had.)	-	-	-	-	-	-	**0.190**	0.067	<0.001
Constant	3.351	0.109	<0.001	3.222	0.051	<0.001	**2.675**	0.241	<0.001
	R^2=0.051 F (1, 423) =22.886, p<0.001			R^2=0.060 F (1, 423) = 26.946, p<0.001			**R^2=0.150** **F (3, 421) = 24.827, P<0.001**		

Source: authors. PPS: perceived parental support; YRB: Youth risk behaviors

4.2.1. Verification of the mediating effects of perceived parental support and hardiness *(research question 2 – H4)*

In order to verify whether perceived parental support and hardiness mediates the relationship between youth risk behavior and school engagement, bootstrap analysis was

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performed. As can be seen from table 5, a bootstrap confidence interval for the first indirect effect (Ind1: YRB→PPS→ScE: - 0.049) based on 10,000 bootstrap samples was entirely below zero (- 0.095 to – 0.022), which indicates perceived parental support significantly mediated the relationship between youth risk behaviors and school engagement. Similarly, the mediating role of students' hardiness was verified to be true because the bootstrap confidence interval for the second indirect effect (Ind 2: YRB→Had→ScE: - 0.047) based on 10,000 bootstrap samples was entirely below zero (- 0.102 to – 0.014).

Therefore, since there was evidence that students' youth risk behaviors directly influence their school engagement (c'= - 0.161, p<0.01) independent of its effects on perceived parental support and hardiness, then this study verified that perceived parental support and hardiness partially mediated (*H4 accepted*) the relationship between youth risk behaviors and school engagement. The results indicate that students with high levels of perceived parental support were associated to low levels of youth risk behaviors, and high levels of school engagement. On the other hand, that more hardy students were associated to low levels of youth risk behaviors, and high levels of school engagement.

Table 5. Bootstrap estimates for indirect effects of youth risk behaviors on school engagement

	Effect (B)	**SE**	**t**	**P**	**LLCI**	**ULCI**
Total effect	-0.285	0.052	-5.473	<0.001	-0.388	-0.183
Direct effect	-0.180	0.052	-3.421	<0.01	-0.283	-0.076
Indirect effects	**Effects β**	**Boot SE**	**Boot LLCI**	**Boot ULCI**		
Total indirect effect	-0.095	0.027	**-0.153**	**-0.047**		
Ind 1: YRB→PPS→ScE	- 0.049	0.017	**-0.086**	**-0.019**		
Ind 2: YRB→Had→ScE	-0.047	0.020	**-0.091**	**-0.013**		
C1	-0.002	0.025	-0.052	0.048		

Source: author; ScE: school engagement; YRB: youth risk behavior; PPS: perceived parental support

5. Discussion and Conclusion

5.1 Discussion

Either for researchers, practitioners, students, education administrators or education policy makers, it is vital to understand when, how and what to do when younger students involvement in risky behaviors becomes a threat to their school engagement. The main aim of the present study was to investigate whether students perceived parental support and hardiness mediates the relation between students' involvement in risky behaviors and their school engagement, as well as how perceived parental support and hardiness are related to youth risk behavior and school engagement.

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In particular, perceived parental support and hardiness were evident to be significantly negatively correlated to youth risk behavior, and significantly positively correlated to school engagement. The negative correlation between perceived parental support and youth risk behaviors implies that the more college and undergraduate university students perceive high parental support the lower they get involve in risky behaviors. This finding is consistent with previous studies. For instance, a systematic review study in African countries (Cameroon inclusive) reported that family structure was associated to youth health risk behaviors (Frantz, Sixaba, & Smith, 2015). Additionally, the positive relation between perceived parental support and school engagement suggest that the more college and undergraduate students perceived high parental support, monitoring and guidance, the more committed they would be with school activities. Empirical evidence supports this finding. For example, significant association between parenting styles and students' academic achievement (Igbo & Ihejiene, 2014), and parental control on adolescents use of smartphones with respect to engagement in school activities (Poon et al., 2019). It is also evident in Cameroon that parental monitoring and support to adolescents' academic development contributes positively to students' commitment to learning of French and English languages (Kuchah, 2018). Therefore, academic institutions need not only monitor and control students practices of risky behaviors, but should also emphasize the creation of parental educational programs on educating parents about their responsibilities of supporting their children in their academic development.

Furthermore, the negative relation between student hardiness and youth risk behavior implies more hardy students turns to be less involve in risky behaviors. This relation is in line with Kobasa`s theory of hardiness with more hardy individuals more optimistic about their environment with view of stressful situations as less threatening. Additionally, the positive relation between hardiness and college students school engagement as reported in this study suggest that more hardy students become the more engage the will be with school activities. This is in line with theory and practice, since academic development might be very challenging, students with low levels of hardiness might easily disengage from school or perform low in state exams (Likhacheva et al., 2013). Therefore, academic hardiness is critical for academic institutions.

This study found evidence that students' involvement in risky behavioral practices have negative repercussions on their engagement with school activities. This assertion has rich empirical support, for example, bullying was significantly positively associated to high school students school disengagement (Mbah, 2020), and substance use disorder (Filiatreau et al., 2021).

Regarding the significant mediating role of perceived parental support, this study suggest that perceived parental support is a protective construct that buffers the negative effect youths risk behaviors has on school engagement among students. This finding is empirically supported. For instance, Gonida and Cortina (2014) posited that parental interference on their children homework mediated parents' beliefs for child efficacy and student academic efficacy. Children academic development is not just limited to school

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heads and teachers, parents have a very great role to play. Some parents think their obligation is limited to paying of school fees and provision of learning materials. On the contrary, in addition to providing these needs, parents are required to monitor (Livingston et al., 2015), control, and support (Boonk et al., 2018) their children throughout the education career. The mediating role of perceived parental support as seen in the current study is one of the originality values of the study. Therefore, creation of parent education centers, seminars or workshops in educating parents on their role in children`s educational development is critical.

The mediating role of hardiness in this study suggest that hardiness is a significant buffer to the negative effects youth risk behaviors has on their school engagement. College students with high levels if hardiness were associated to low levels of risky behaviors, and also that more hardy students were associated to high levels of school engagement. Hardiness needs to be understood as a protective construct that can decrease the likelihood of students' involvement in risky behaviors. Hardiness being a good predictor of school engagement is vital and strongly supported by theory and practice. Hardy students believe that the outcomes of schooling are positive and promising (Maddi et al., 2009) and this may provide a sense of resilience when they encounter difficult situations, and thus, this will increase the students' extent of commitment with school activities.

5.1.1 Strengths and Limitations

Primarily, the strength of the current study is the mediating roles of perceived parental support and hardiness in the link between youth risk behaviors and school engagement among high school and university undergraduate students. Findings revealed that perceived parental support and student hardiness as students' protective constructs of the negative effects that risky behaviors have on the students' school engagement, and also the evidence that perceived parental support and student hardiness enhances the predictive validity on school engagement.

The first limitation of the current study is the reliance on self-reporting measures only for data gathering. However, although the research instruments proved to be psychometrically adequate, the use of mix method design would have been better as it would have incremental validity. Secondly, since the study used a status cross-sectional design, which limits causal assertions with respect to change with time, future studies should focus on a longitudinal design.

5.2. Conclusion

The current study provides strong support to empirical research on the significant relationships observed among the main constructs – youth risk behaviors, perceived parental support, hardiness and school engagement among students of high school and university undergraduate. In review of empirical literature, there was a research gap in the use of perceived parental support and student hardiness as mediators in the relation between youth risk behaviors and school engagement among student participants. However, this study tries to fill this gap as it is evident that perceived parental support and hardiness are protective constructs to the negative effects youth risk behaviors has

on students' school engagement. Thus, as implication, student academic hardiness and perceived parental support are critically important constructs that should be used as interventions in academic institutions, due to their protective nature against involvement in risky behaviors, and their enhancing nature in making them more engage in school activities.

Some recommendations include – incorporation of parent education programs in academic institutions that focuses on educating parents about their key role in providing support and monitoring of their children throughout their academic career. In addition, academic institutions should emphasize the need to increase the levels of student academic hardiness through seminars and workshops. Lastly, school administrators should put in measures to regularly evaluate students' extent of school engagement and their involvement in risky behaviors.

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